

1 **Final**  
2 **Administration Area Soil Vapor Investigation**  
3 **Work Plan**

4  
5 **Fort Wingate Depot Activity**  
6 **McKinley County, New Mexico**  
7

8 **March 15, 2024**

9  
10 **Contract No.: W912PP22-D0014**

11 **Task Order: W912PP23F0040**  
12  
13  
14

15 **Prepared for:**  
16



17  
18  
19 **U.S. Army Corps of Engineers,**  
20 **Albuquerque District**  
21 **4101 Jefferson Plaza NE**  
22 **Albuquerque, NM 87109-3435**  
23  
24  
25

26 **Prepared by:**  
27

28 **PARSONS**  
29 **999 18<sup>th</sup> St., Suite 1555N**  
30 **Denver, CO 80202**

*This Page Intentionally Left Blank*

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
<p>The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p> <p><b>PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.</b></p>				
1. REPORT DATE (DD-MM-YYYY) 15-03-2024		2. REPORT TYPE Soil Vapor Investigation Work Plan		3. DATES COVERED (From – To) July 2014 – March 2024
4. TITLE AND SUBTITLE Final Administration Area Soil Vapor Investigation Work Plan Fort Wingate Depot Activity McKinley County, New Mexico			5a. CONTRACT NUMBER W912PP22D0014	
			5b. GRANT NUMBER N/A	
			5c. PROGRAM ELEMENT NUMBER N/A	
6. AUTHOR(S) Dr. Mark Rigby Hao Zhang Abby Bazin			5d. PROJECT NUMBER N/A	
			5e. TASK NUMBER W912PP23F0040	
			5d. WORK UNIT NUMBER N/A	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Parsons Government Services, Inc. 999 18 <sup>th</sup> St., Suite 1555N Denver, CO 80202			8. PERFORMING ORGANIZATION REPORT NUMBER N/A	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) United States Army Corps of Engineers, Albuquerque District 4101 Jefferson Plaza NE Albuquerque, NM 87109-3435 Project Manager: Alan Soicher, PG (CESPA)			10. SPONSOR/MONITOR'S ACRONYM(S) USACE	
			11. SPONSOR/MONITOR'S REPORT NUMBER(S) N/A	
12. DISTRIBUTION/AVAILABILITY STATEMENT Unlimited				
13. SUPPLEMENTARY NOTES				
14. ABSTRACT This Administration Area Soil Vapor Investigation Work Plan describes additional investigation activities within the Administration Area within Parcel 11 at Fort Wingate Depot Activity, McKinley County, New Mexico. This document has been prepared for submission to the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB), as required by Section VII.F.1 of the Resource Conservation and Recovery Act (RCRA) Permit, No. NM6213820974 and in response to a Notice of Disapproval dated 25 January 25 2022 for Final Northern Area Groundwater RCRA Facility Investigation Report and a Notice of Disapproval dated 25 July 25 2022 for Revised Final Northern Area Groundwater RCRA Facility Investigation Report..				
15. SUBJECT TERMS Fort Wingate Depot Activity, Parcel 11, Administration Area Soil Vapor Investigation				
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT SAR	18. NUMBER OF PAGES 141
a. REPORT U	b. ABSTRACT U	c. THIS PAGE U		
			19b. TELEPHONE NUMBER (Include area code) 703.455.3234	

**PLACEHOLDER PAGE FOR:**

**Documentation of New Mexico Environmental Department Approval of Final Document**

*(Documentation to be provided once approval is issued)*

**DOCUMENT CERTIFICATION**

**Administration Area Soil Vapor Investigation Work Plan**

**Fort Wingate Depot Activity, McKinley County, NM**

**40 CFR 270.11**

**March 2024**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

*George H. Cushman IV*

---

Mr. George H. Cushman IV  
Base Realignment and Closure Division (BRAC), Environmental Coordinator  
Fort Wingate Depot Activity, BRAC Operations Branch  
DCS G-9, Environmental Division

*This Page Intentionally Left Blank*

1 **Final**  
2 **Administration Area Soil Vapor Investigation**  
3 **Work Plan**

4 **Fort Wingate Depot Activity**  
5 **McKinley County, New Mexico**

6 March 15, 2024

7 Contract No.: W912PP22-D0014  
8 Task Order: W912PP23F0040

9 **Prepared for:**  
10 U.S. Army Corps of Engineers  
11 Albuquerque District  
12 4101 Jefferson Plaza NE  
13 Albuquerque, NM 87109-3435

14 **Prepared by:**  
15 Parsons  
16 999 18<sup>th</sup> St., Suite 1555N  
17 Denver, CO 80202

*This Page Intentionally Left Blank*



## DOCUMENT DISTRIBUTION

Organization (Name)	Number of Printed Copies	Number of Electronic Copies
Ricardo Maestas, NMED HWB	2	2
Benjamin Wear NMED HWB	with Maestas	with Maestas
Michiya Suzuki, NMED HWB	with Maestas	with Maestas
Dale Thrush, USEPA Region 6	0	1
FWDA BEC c/o Admin Record OH	1	1
FWDA c/o Admin Record NM	1	1
Ian Thomas, BRAC	0	1
Alan Soicher, USACE Albuquerque District	0	1
Behnaum Moayyad, USACE Albuquerque District	0	1
Douglas Hickman, BIA Zuni	1	1
George Padilla, BIA-NRO	1	2
Sharlene Begay Platero, NN	1	7
Arden Kucate, Zuni Tribe	1	8
<b>Totals</b>	<b>8</b>	<b>26</b>

**Notes:**

BEC = Base Environmental Coordinator  
 BIA = Bureau of Indian Affairs  
 BIA-NRO = Bureau of Indian Affairs – Navajo Regional Office  
 BRAC = U.S. Army Base Realignment and Closure Division  
 COR = Contracting Officer’s Representative  
 FWDA BEC = Fort Wingate Depot Activity Base Realignment and Closure Environmental Coordinator  
 NM = New Mexico  
 NMED HWB = New Mexico Environment Department, Hazardous Waste Bureau  
 NN = Navajo Nation  
 OH = Ohio  
 PDT = Project Delivery Team  
 USACE = U.S. Army Corps of Engineers  
 USEPA = U.S. Environmental Protection Agency

*This Page Intentionally Left Blank*

## EXECUTIVE SUMMARY

### ES.1 EXECUTIVE SUMMARY INTRODUCTION

This Administration Area Soil Vapor Investigation Work Plan (Work Plan) was prepared by Parsons Government Services, Inc. (Parsons) for the U.S. Army Corps of Engineers (USACE) for submission to the New Mexico Environment Department (NMED) Hazardous Waste Bureau, as required by Section VII.H.1.a of the Resource Conservation and Recovery Act (RCRA) permit (NM 6213820974) effective December 31, 2005, and last revised February 2015 (NMED, 2015).

This Work Plan has been written to address NMED (2022a) comments #27, #42, and #50 from January 25, 2002, NMED (2022b) comments #17 and #50 from July 25, 2022, NMED (2023a) comment #18 from March 27, 2023, and NMED (2023b) comment #25 from October 19, 2023 (see **Appendix A**) on the Northern Area Groundwater RFI (HDR, 2023) requesting a separate work plan to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building 5 and Building 6.

### ES.2 PURPOSE AND SCOPE

The purpose of this Work Plan is to:

1. Address NMED's directive to assess the extent of the soil vapor plume and the potential for vapor intrusion in the Administration Area;
2. Evaluate existing data and identify data gaps; and
3. Present a sampling approach to address data gaps to complete the Administration Area Soil Vapor Investigation Report.

This Work Plan contains investigative information for two solid waste management units (SWMUs) and one area of concern (AOC) in Parcel 11:

- SWMU 5: Building 5;
- SWMU 45: Building 6; and
- AOC 49: Building 39.

This Work Plan has been prepared separately from the Northern Area Groundwater RCRA Facility Investigation (RFI), as agreed in NMED's (2022a, 2022b) disapproval letters (**Appendix A**). Investigation activities that are not related to the soil vapor investigation in the Administration Area are discussed in the Parcel 11 Phase 2 RFI Work Plan.

### ES.3 PROPOSED INVESTIGATIONS

Existing data have been evaluated to identify any remaining soil vapor data gaps that must be addressed in order to refine the previous soil contamination data, address the soil vapor migration pathways, and evaluate potential for vapor intrusion in the Administration Area.

1 To assess the extent of the soil vapor plume and the potential for vapor intrusion in the  
2 Administration Area, eight soil vapor probes will be installed near Building 5, Building 6, and  
3 Building 39. Two rounds of soil vapor samples will be collected and analyzed for the following:

- 4 • Total Petroleum Hydrocarbon (TPH); and
- 5 • Volatile Organic Compounds (VOCs)

6 Although not the focus of this Work Plan, soil samples will also be collected and analyzed for TPH  
7 and VOCs. As soil samples can't be used to quantitatively evaluate vapor intrusion, the soil  
8 analytical results will be used in the Parcel 11 Phase 2 RFI.

9 **Section 2** summarizes data from previous investigations, **Section 3** summarizes the investigation  
10 rationale, and **Section 4** summarizes the proposed investigation activities. Parsons, under the  
11 direction of the USACE, will conduct the soil vapor investigation activities in accordance with the  
12 RCRA permit (NMED, 2015) and this Work Plan, once approved by the NMED.

#### 13 **ES.4 POST-IMPLEMENTATION REPORTING**

14 The activities conducted as part of this Work Plan will be documented in a table, so that the need  
15 for step-out samples can be evaluated. If the preliminary data exceeds screening levels, step-out  
16 sampling may be performed.

17 Once both rounds of soil vapor sampling and any step-out sampling are complete, the results will  
18 be summarized in a report. The report will contain a detailed schedule of completed activities, a  
19 summary of the analytical data, and a comparison of the analytical data to the appropriate screening  
20 levels. As part of the report, a qualitative vapor intrusion pathway evaluation will be conducted to  
21 assess the potential for exposure to the volatiles detected in soil vapor via inhalation of indoor air.

**TABLE OF CONTENTS**

1

2 **FRONT COVER PAGE ..... 1**

3 REPORT DOCUMENTATION PAGE ..... 3

4 PLACEHOLDER PAGE FOR: DOCUMENTATION OF NEW MEXICO

5 ENVIRONMENTAL DEPARTMENT APPROVAL OF FINAL DOCUMENT ..... 4

6 DOCUMENT CERTIFICATION..... 5

7 **SUBCOVER PAGE ..... 7**

8 DOCUMENT DISTRIBUTION TABLE..... 9

9 **EXECUTIVE SUMMARY ..... 11**

10 TABLE OF CONTENTS ..... 13

11 LIST OF TABLES..... 15

12 LIST OF FIGURES ..... 16

13 LIST OF APPENDICES ..... 16

14 **ACRONYMS AND ABBREVIATIONS..... 17**

15 **1.0 INTRODUCTION ..... 19**

16 1.1 PURPOSE AND SCOPE..... 19

17 1.1.1 Scope of Activities..... 20

18 1.2 DOCUMENT ORGANIZATION ..... 20

19 **2.0 BACKGROUND..... 21**

20 2.1 SITE DESCRIPTION AND OPERATIONAL HISTORY ..... 21

21 2.2 SITE CONDITIONS..... 21

22 2.2.1 Climate..... 21

23 2.2.2 Topography..... 22

24 2.2.3 Vegetation/Habitat ..... 22

25 2.2.4 Soils..... 22

26 2.2.5 Geology and Hydrogeology ..... 22

27 2.3 HISTORICAL USES ..... 23

28 2.3.1 Building 5 (SWMU 5) ..... 23

29 2.3.2 Building 6 (SWMU 45) ..... 23

30 2.3.3 Building 39 (AOC 49) ..... 23

31 2.4 PREVIOUS INVESTIGATIONS..... 24

32 2.4.1 UST Removal at Building 6..... 24

33 2.4.2 UST Investigation at Building 6 ..... 25

34 2.4.3 RCRA Facility Investigation (RFI)..... 26

1           2.4.4 Northern Area Groundwater RFI..... 27  
2           2.4.5 Groundwater Periodic Monitoring Reports ..... 28  
3        2.5 ASSESSMENT OF DATA GAPS..... 28  
4   **3.0 SWMU-45 SOIL VAPOR INVESTIGATION RATIONALE ..... 31**  
5   **4.0 INVESTIGATION METHODS ..... 33**  
6        4.1 SITE SAFETY AND AWARENESS..... 33  
7        4.2 SOIL VAPOR PROBE INSTALLATION, SAMPLING AND ANALYSIS ..... 33  
8           4.2.1 Pre-Drilling Activities..... 33  
9           4.2.2 Drilling, Soil Sampling, and Soil Vapor Probe Construction..... 34  
10          4.2.3 Soil Vapor Sampling ..... 34  
11          4.2.4 Boring Logs ..... 38  
12          4.2.5 Decontamination Procedures ..... 40  
13          4.2.6 Sample Analysis..... 40  
14        4.3 QUALITY CONTROL..... 41  
15           4.3.1 Field and Laboratory Quality Control Samples ..... 41  
16           4.3.2 Data Accuracy, Representativeness, Comparability and Completeness... 42  
17           4.3.3 Data Verification and Data Review Procedures ..... 45  
18           4.3.4 Data Assessment ..... 46  
19        4.4 CHAIN OF CUSTODY ..... 46  
20        4.5 PACKAGING AND SHIPPING PROCEDURES ..... 47  
21        4.6 SAMPLE DOCUMENTATION..... 47  
22        4.7 FIELD INSTRUMENT CALIBRATION ..... 47  
23        4.8 SURVEY OF SAMPLE LOCATIONS ..... 47  
24        4.9 SAMPLE IDENTIFICATION..... 47  
25        4.10 INVESTIGATION-DERIVED WASTE ..... 48  
26   **5.0 POST-IMPLEMENTATION ACTIVITIES..... 49**  
27        5.1 CONCEPTUAL SITE MODEL ..... 49  
28        5.2 SELECTION OF SCREENING LEVELS ..... 49  
29        5.3 PRELIMINARY DATA EVALUATION ..... 50  
30        5.4 REPORTING ..... 50  
31   **6.0 SCHEDULE..... 51**  
32   **7.0 REFERENCES ..... 53**

**LIST OF TABLES**

1

2 Table 2.1 – USTs Removed from the Building 6 Area.....57

3 Table 2.2 – 1993 UST Removal Confirmation Sample Results .....59

4 Table 2.3 – 1993 UST Investigation PID Results.....61

5 Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation.....63

6 Table 2.5 – Soil Data from the Northern Area Groundwater RCRA Facility Investigation .....85

7 Table 2.6 – 1,2-Dichloroethane Soil Vapor Results ( $\mu\text{g}/\text{m}^3$ ) from the Northern Area

8 Groundwater RCRA Facility Investigation.....87

9 Table 2.7 – 2022 Groundwater Data.....89

10 Table 3.1 – Summary of Samples to be Collected.....93

11 Table 4.1 – Summary of Analytical Methods, Sample Containers, Preservation, and

12 Holding Times.....95

13 Table 4.2 – Summary of Samples Collected per Sampling Event.....96

14 Table 4.3 – Quality Control Samples for Precision and Accuracy .....97

15 Table 4.4 – Data Validation Codes and Definitions .....98

16 Table 4.5 – Comparison of VISLs to Laboratory Quantitation Limits for Soil Vapor.....99

17 Table 4.6 – Evaluation of Analytes with LOQs Greater than Screening Levels .....102

18 Table 4.7 – Comparison of Screening Levels to Laboratory Quantitation Limits for Soil .....103

**LIST OF FIGURES**

1

2 Figure 1.1 – Facility Location Map .....109

3 Figure 1.2 – Parcel Map.....111

4 Figure 1.3 – Parcel 11 AOC and SWMU Locations.....113

5 Figure 1.4 – Soil Vapor Investigation Area .....115

6 Figure 2.1 – Former USTs, Piping, and Excavation Extent at Building 6.....117

7 Figure 2.2 – Maximum Photoionization Detector Reading from USACE (1993)

8 Investigation.....119

9 Figure 2.3 – Historic Soil Boring Locations.....121

10 Figure 2.4 – Groundwater Monitoring Well Locations .....123

11 Figure 2.5 – Northern Area Groundwater RFI 1,2-Dichloroethane Soil Vapor Results .....125

12 Figure 2.6 – 1,2-DCA and TPH (µg/L) in Groundwater, October 2022.....127

13 Figure 3.1 – 1,2-DCA Source Area Evaluation and Proposed Soil Vapor Probe Locations .....129

14 Figure 4.1 – Example Soil Vapor Probe Diagram .....131

**LIST OF APPENDICES**

15

16 APPENDIX A – Response to NMED Comments .....133

17 APPENDIX B – Soil Vapor Probe Field Sampling Form .....139



## ACRONYMS AND ABBREVIATIONS

1		
2	≤	Less than or equal to
3	%	Percent
4	%R	Percent recovery
5	1,2-DCA	1,2-dichloroethane
6	AHA	Activity Hazard Analysis
7	AOC	Area of Concern
8	APP	Accident Prevention Plan
9	Army	U.S. Department of the Army
10	BTEX	Benzene, toluene, ethylbenzene, and total xylenes
11	bgs	Below ground surface
12	BRAC(D)	Defense Base Realignment and Closure Act (Division)
13	COC	Chain of custody
14	COPC	Chemical of potential concern
15	DL	Detection limit
16	DOI	Department of the Interior
17	DPT	Direct push technology
18	DRO	Diesel-range organics
19	Eco	Eco & Associates
20	FWDA	Fort Wingate Depot Activity
21	GPS	Global Positioning System
22	GRO	Gasoline-range organics
23	HDR	HDR Environmental, Operations and Construction
24	Hg	Mercury
25	HQ	Hazard quotient
26	HWB	Hazardous Waste Bureau
27	ID	Identification
28	IDW	Investigation-derived waste
29	LCS	Laboratory control sample
30	LOD	Limit of detection
31	LOQ	Limit of quantitation
32	µg/m <sup>3</sup>	Microgram(s) per cubic meter
33	µg/kg	Microgram(s) per kilogram
34	µg/L	microgram(s) per liter
35	mg/kg	Milligram(s) per kilogram
36	mmHg	Millimeter(s) of mercury
37	mL/min	Milliliter(s) per minute
38	MS	Matrix spike
39	MSL	Mean sea level

1	MTBE	Methyl tert-butyl ether
2	N/A	Not applicable
3	NAPL	Nonaqueous phase liquid
4	NMED	New Mexico Environment Department
5	ORO	oil-range organics
6	OSHA	Occupational Safety and Health Administration
7	Parsons	Parsons Government Services, Inc.
8	Permit	RCRA Permit NM 6213820974 for the FWDA Permit
9	PID	Photoionization detector
10	PPE	Personal protective equipment
11	ppmv	Part(s) per million by volume
12	QA	Quality assurance
13	QC	Quality control
14	QSM	Quality Systems Manual
15	RCRA	Resource Conservation and Recovery Act
16	RFI	RCRA Facility Investigation
17	RPD	Relative percent difference
18	SSHO	Site Safety and Health Officer
19	SSHP	Site Safety and Health Plan
20	SWMU	Solid Waste Management Unit
21	TEAD	Tooele Army Depot
22	TIC	Tentatively identified compound
23	TPH	Total petroleum hydrocarbons
24	TPMC	TerranearPMC
25	U.S.	United States
26	USACE	United States Army Corps of Engineers
27	USEPA	United States Environmental Protection Agency
28	UST	Underground storage tank
29	VISL	Vapor intrusion Screening Level
30	VOC	Volatile organic compound
31	VMP	Vapor monitor probe
32	Work Plan	Administration Area Soil Vapor Investigation Work Plan

## 1.0 INTRODUCTION

This Administration Area Soil Vapor Investigation Work Plan (Work Plan) describes soil vapor investigation activities to be completed within the Administration Area at Fort Wingate Depot Activity (FWDA), in McKinley County, New Mexico (**Figure 1.1**). The potential impacts to be investigated by this Work Plan for the Administration Area are located entirely within Parcel 11 (**Figures 1.2 through 1.4**).

This Work Plan has been prepared for the Army for submission to the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB), as required by Section VII.H.1.a of the Resource Conservation and Recovery Act (RCRA) Permit (Permit) (NM 6213820974) for FWDA, which became effective December 31, 2005, and was most recently modified in February 2015 (NMED, 2015).

This Work Plan describes the soil vapor investigation to be completed in response to NMED comments received in the following disapproval and approval with modifications letters:

- First disapproval letter dated January 25, 2022 (NMED, 2022a) on the *Final Northern Area Groundwater RCRA Facility Investigation Report*;
- Second disapproval letter dated July 25, 2022 (NMED, 2022b) on the Revised *Final Northern Area Groundwater RCRA Facility Investigation Report*;
- Third disapproval letter dated March 27, 2023 (NMED, 2023a) *Final Northern Area Groundwater RCRA Facility Investigation Report [Revision 2]*; and
- Revised *Final Northern Area Groundwater RCRA Facility Investigation Report*, dated May 6, 2022, the *Final Northern Area Groundwater RCRA Facility Investigation Report Revision 3*.

This Work Plan also incorporates methodologies from the latest NMED (2022c) Risk Assessment Guidance for Site Investigations and Remediation: A Response to Comments for the NMED comments from the Disapproval letters that are related to soil vapor in the Administration Area is provided in **Appendix A**.

## 1.1 PURPOSE AND SCOPE

This Work Plan has been written in response to NMED (2022a) comments #27, #42, and #50 from January 25, 2002, NMED (2022b) comments #17 and #50 from January 25, 2022, NMED (2023a) comment #18 from March 27, 2023, and NMED (2023b) comment #25 from October 19, 2023 (see **Appendix A**) on the Northern Area Groundwater RFI (HDR, 2023) requesting a work plan to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building 6. The purpose of this Work Plan is to identify any remaining soil vapor data gaps that must be addressed in order to refine the previous soil contamination data. This information will be used to address the soil vapor migration pathway, as well as to evaluate the potential for vapor intrusion from past releases of volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) at Building 5, Building 6, and Building 39. This Work Plan presents a sampling approach to address those data gaps. In response to NMED's (2022a, 2022b,

1 2023a, 2023b) comments (**Appendix A**), this Work Plan has been prepared separately from the  
2 Northern Area Groundwater RCRA Facility Investigation (RFI). Investigation activities that are  
3 not related to the soil vapor investigation in the Administration Area are discussed in the Parcel 11  
4 Phase 2 RFI Work Plan.

### 5 **1.1.1 Scope of Activities**

6 The scope of this Work Plan includes the following:

- 7 • Address NMED’s directive to assess the extent of the soil vapor plume and the potential  
8 for vapor intrusion in the Administration Area,
- 9 • Evaluate existing data and identify data gaps (see **Section 2.5**), and
- 10 • Present a sampling approach to address data gaps to complete the Administration Area Soil  
11 Vapor Investigation Report (see **Section 3.0**).

## 12 **1.2 DOCUMENT ORGANIZATION**

13 The remainder of this Work Plan is organized into the following sections.

- 14 • Section 2 presents FWDA installation background information, and describes previous  
15 investigations, and general site conditions.
- 16 • Section 3 describes the proposed site-specific investigation, including sample locations and  
17 the rationale for the sample locations.
- 18 • Section 4 presents general investigation and data validation methods.
- 19 • Section 5 summarizes how the data will be evaluated and reported.
- 20 • Section 6 provides the approximate project schedule.
- 21 • Section 7 presents references for documents cited in this Work Plan.

## 2.0 BACKGROUND

This section describes conditions at FWDA and summarizes historical information and findings of previous investigations in the Administration Area.

### 2.1 SITE DESCRIPTION AND OPERATIONAL HISTORY

The FWDA installation is located approximately eight miles east of Gallup, New Mexico, and currently occupies approximately 15,277 acres of land in McKinley County, New Mexico (**Figure 1.1**). The installation is almost entirely surrounded by federally owned or administered lands, including both national forest and tribal lands.

The FWDA installation (the installation) was originally established by the U.S. Department of the Army (Army) in 1862 at the southern edge of the Navajo territory. In 1918, the mission of FWDA changed from tribal activities to World War I related activities. Beginning in 1940, FWDA's mission was primarily to receive, store, maintain, and ship explosives and military munitions, as well as to disassemble and dispose of unserviceable or obsolete explosives and military munitions. In 1975, the installation came under the administrative command of Tooele Army Depot (TEAD), located near Salt Lake City, Utah.

In January 1993, the active mission of FWDA ceased, and the installation was closed as a result of the Defense Base Realignment and Closure Act of 1990 (BRAC). Beginning in 2002, the Army reassigned many FWDA functions to the BRAC Division (BRACD), including caretaker duties, property transfer, and performance of environmental compliance and remediation activities. Command and control responsibilities were retained by TEAD until January 31, 2008, when these responsibilities were transferred to White Sands Missile Range (AMEC, 2013).

The installation is currently undergoing environmental characterization and remediation activities prior to final property transfer and reuse. Since the 1980s, when FWDA became subject to Permit requirements, it has transferred 8,351 acres to the U.S. Department of the Interior (DOI).

### 2.2 SITE CONDITIONS

#### 2.2.1 Climate

Northwestern New Mexico is characterized by a semi-arid continental climate. Mean annual rainfall for the area ranges between 10 and 16 inches but can fluctuate from 8 to 20 inches depending on elevation. Most of the precipitation in this region occurs as rain or hail in summer thunderstorms from May through October. Some additional precipitation falls in the form of light winter snow. Spring and fall droughts are common (USACE, 2014).

The average seasonal temperatures also vary with elevation and topographic features. Average temperatures in winter are about 27 degrees Fahrenheit (°F) and about 70°F in summer. Extreme temperatures range from -30°F in winter to 100°F in summer. During winter, daily temperatures can fluctuate as much as 70°F in a 24-hour period. There are approximately 100 to 150 frost-free days during the year from the middle of May to the middle of October (USACE, 2014).

1 **2.2.2 Topography**

2 The elevation of FWDA ranges from approximately 6,660 feet above mean sea level (amsl) in the  
3 north to about 8,200 feet amsl in the south. Topographically, FWDA can be divided into three  
4 areas:

- 5 • The southwestern area where the north-to-south trending Nutria Monocline (also known  
6 as the Hogback) is present,
- 7 • The southern portion of the FWDA, which is characterized by the northern hill slopes of  
8 the Zuni Mountains, and
- 9 • The northern portion of the FWDA, which contains alluvial plains marked by bedrock  
10 remnants.

11 Drainages generally flow from south to north and follow the topography. However, many  
12 tributaries follow the regional trend, flowing from southwest to northeast. Drainages discharge to  
13 the South Fork of the Puerco River near the northern boundary of FWDA. During rainfall and  
14 snowmelt events, streams transport sediment to low-lying areas in the northern part of FWDA,  
15 creating an extensive alluvial deposit among remnants of bedrock (USACE, 2014).

16 The Administration Area is relatively flat, and the majority of the area is paved. Surface runoff  
17 drains into arroyos that flow only during precipitation events or pool locally in low areas where it  
18 evaporates or infiltrates (USACE, 2014).

19 **2.2.3 Vegetation/Habitat**

20 The Administration Area is primarily paved with asphalt, but some areas in the immediate vicinity  
21 are landscaped with grass and trees. The vegetation cover for the Administration Area includes  
22 moderate grasslands and sagebrush (USACE, 2014). Outside of the developed areas, there is  
23 potential habitat for antelope, prairie dogs, rattlesnakes, badgers, field mice, the occasional  
24 mountain lion or bear, and various other insects and animals.

25 **2.2.4 Soils**

26 The major soil types at FWDA are variants/complexes of sands, loams, clays, and rocks. These  
27 soils are reported as being relatively thin, and the parent bedrock is either at or near the surface in  
28 more than a quarter of the installation (USACE, 2014).

29 The primary soil type in the southern portion of Parcel 11 is the Aquima-Hawaikuh silt loams (soil  
30 map unit 225; 1 to 5 percent slopes), and the primary soil type in the northern portion of Parcel 11  
31 is the Rehobeth silty clay loam (soil map unit 212; 0 to 1 percent slopes). A small area of Zia sandy  
32 loam (soil map unit 352; 1 to 5 percent slopes) is present in the western portion of the parcel, and  
33 a small area of Bamac extremely gravelly sandy loam (soil map unit 566; 5 to 50 percent slopes)  
34 is present on the eastern portion of the parcel (USACE, 2014).

35 **2.2.5 Geology and Hydrogeology**

36 The following is a brief description of the geology at FWDA and Parcel 11. A detailed description  
37 of the structural geology and stratigraphy can be found in the Parcel 11 RCRA Facility  
38 Investigation Report (USACE, 2014).

1 Recent alluvial sediments cover much of the Administration Area. These sediments consist  
2 predominately of silts and clays, with discontinuous bodies of sand and occasionally gravel. To  
3 the north of the developed portion of the Administration Area, the near surface sediments are  
4 dominated by the substantially sandier riverine deposits associated with the Puerco River (USACE,  
5 2014).

6 A water bearing zone is present in the alluvium throughout Parcel 11. Groundwater is typically  
7 encountered at depths of 10 to 60 feet below ground surface (bgs) (USACE, 2014). Groundwater  
8 near Building 5, Building 6, and Building 39 has been observed at 40-45 ft bgs during periodic  
9 groundwater monitoring events (Eco & Associates [Eco], 2023a,b).

10 Alluvial sediments are primarily underlain by Triassic mudstone and sandstone layers that dip to  
11 the northwest. However, in the western and southern portions of FWDA, Jurassic and Cretaceous  
12 sandstone and claystone layers are exposed along the Nutria Monocline, which is commonly  
13 known as “the Hogback.” The Hogback is a steeply west dipping, north trending monoclinal fold  
14 (USACE, 2014).

## 15 **2.3 HISTORICAL USES**

16 This workplan focuses on potential VOC and TPH releases from Buildings 5, 6, and 39 (**Figure**  
17 **1.4**). Each Building is discussed in terms of the processes and activities involving chemicals of  
18 potential concern (COPCs) that were conducted at these locations.

### 19 **2.3.1 Building 5 (SWMU 5)**

20 Building 5 (SWMU 5; **Figure 1.4**) is a one-story brick building built in 1941. It is approximately  
21 263 feet long by 68 feet wide. Building 5 was used for vehicle storage and maintenance operations.  
22 The building contained a hydraulic lift, a containment sump, grease rack, a truck lift, two battery  
23 charging racks, a washing/steam-cleaning rack, offices, and parts storage. A boiler is present in  
24 the basement on the east side of Building 5. This building is not currently used.

### 25 **2.3.2 Building 6 (SWMU 45)**

26 Building 6 (SWMU 45; **Figure 1.4**) is a one-story brick structure built in 1941. It is approximately  
27 20 feet long by 20 feet wide. Building 6 was equipped with two gasoline dispensers, one kerosene  
28 dispenser, two 11,750-gallon gasoline underground storage tanks (USTs), one 11,750-gallon diesel  
29 fuel UST, and one 1,000-gallon kerosene UST. Fill pipes for the USTs were located along the  
30 railroad siding at the adjacent loading docks. As described in **Section 2.4.1**, the USTs and some  
31 of the associated piping were removed in 1993 (Envirotech, 1993). Currently, Building 6 is unused.

### 32 **2.3.3 Building 39 (AOC 49)**

33 AOC 49 (**Figure 1.4**) is adjacent to SWMU 45 and includes Building 39. Building 39 is a loading  
34 dock that was built in 1941 and is approximately 60 feet long by 60 feet wide. The dock was used  
35 for loading and unloading railroad cars. No historical records were found that provide additional  
36 information on what was loaded/unloaded at Building 39 (TPMC, 2009). Based on its location  
37 within the Administration Area near vehicle and equipment maintenance operations, and that the  
38 adjacent warehouses were used for the receipt and storage of various products and materials,  
39 TPMC (2009) assumed that Building 39 were used to load and unload vehicles and equipment  
40 from railcars.

## 2.4 PREVIOUS INVESTIGATIONS

This section describes previous investigations and other remedial activities at Building 5, Building 6, and Building 39 for VOCs and TPH in soil, soil vapor, and groundwater. Activities related to other contaminants are not described here.

Although groundwater monitoring wells have been installed and sampled in the Administration Area as far back as 1993, contaminant concentrations in groundwater have changed substantially over time. Only the most recent groundwater data is relevant to this current soil vapor investigation work plan; therefore, only the groundwater results from the most recent periodic groundwater monitoring events in April and October 2022 are discussed below. Soil and soil gas sample results are discussed below as they help to identify potential release areas and source zones.

Although numerous studies have been conducted in the Administration Area, much of the data can only be used qualitatively when evaluating the soil vapor migration pathway. Data directly related to soil vapor, such as PID readings and deep soil gas samples cannot be compared directly to NMED (2022c) or USEPA (2023a) screening levels protective of the vapor intrusion pathway (i.e., vapor intrusion screening levels or VISLs), but can be used to infer the location of the contaminant source. Groundwater data, which can be compared to VISLs, are available, but the aerial extent of these data is limited. Soil analytical data have also been collected, but there are no NMED (2022c) or USEPA (2023a,b) VISLs for soil.

As outlined in the following sections, the primary COPCs for soil vapor migration are TPH and the VOC 1,2-dichloroethane (1,2-DCA) resulting from releases from underground storage tanks (USTs). In the absence of applicable screening levels, the TPH Soil Screening Levels in NMED (2022c) Table 6-2 were used as order-of-magnitude indicators to evaluate soil contaminant concentrations. While this is not reflective of the full risk that soil contaminants may pose, these indicators are helpful to identify the source areas that warrant further investigation under this soil vapor investigation work plan. Based on the contents of the former USTs (described in **Section 2.4.1**), the relevant TPH Soil Screening Levels to be used as “source indicators” are the residential exposure values, for the following:

- Gasoline: 100 mg/kg, as measured by TPH as gasoline (TPHg), gasoline-range organics (GRO), or TPH-GRO, depending on how it was reported
- Diesel #2: 1,000 mg/kg, as measured by TPH as diesel (TPHd), diesel-range organics (DRO), or TPH-DRO, depending on how it was reported
- Kerosene and jet fuel: 1,000 mg/kg, as measured by oil-range organics (ORO), or TPH-ORO, depending on how it reported

More information about how historical data and how it was evaluated is provided in the sections below.

### 2.4.1 UST Removal at Building 6

In January 1993, four USTs, including one UST containing leaded gasoline, were removed from around Building 6 (SWMU 45) (Envirotech, 1993). A lead scavenger, 1,2-DCA was often added to leaded gasoline to prevent engine fouling. Therefore, leaks from UST(s) containing leaded gasoline may have also released 1,2-DCA. A summary of the tanks that were removed is provided in **Table 2.1** and the tank locations are shown in **Figure 2.1**. The piping from the USTs to the



1 dispensers, as well as a limited amount of hydrocarbon-contaminated soils, were also removed  
2 from the UST excavation. Hydrocarbon impacted soils were encountered in the UST excavation,  
3 not all impacted soils were excavated, and the excavation was left open for additional investigation  
4 (Envirotech, 1993). Although not explicitly stated in the report, based on the depths of the  
5 photoionization detector (PID) readings from the excavation bottoms, it is assumed that the soils  
6 were excavated to 15 feet bgs beneath UST #1, the north half of UST #2, and UST #3; 14 feet bgs  
7 on the south half of UST #2; and 4 feet bgs beneath UST #4 (**Table 2.2, Figure 2.1**). Groundwater  
8 was not encountered at the maximum depth of the excavation at Building 6, which was assumed  
9 to be 15 feet bgs (Envirotech, 1993).

10 During the January 1993 UST removal, eight soil samples were collected from the tank and piping  
11 excavations and two samples were collected from the dispenser island (**Table 2.2**) (Envirotech,  
12 1993). Samples were analyzed for TPH and/or benzene, toluene, ethylbenzene, and total xylenes  
13 (BTEX). BTEX was detected in all samples collected, but samples were not analyzed for 1,2-DCA.  
14 TPHg was detected above the current 100 mg/kg indicator level under the gasoline dispenser  
15 (sample 4472; see **Table 2.2**), immediately north UST#3 (samples 4473 and 4474), and under the  
16 unleaded fuel line east of UST#3 (sample 4474). TPHd was detected above the current 1,000  
17 mg/kg indicator level under the gasoline dispenser (sample 4472) and immediately north of UST#3  
18 (sample 4474). In addition, ethylbenzene, toluene, and xylene were detected above the NMED  
19 (2022c) soil saturation concentrations (149, 292, and 81.8 mg/kg, respectively) immediately north  
20 of UST#3 (sample 4474), which potentially indicates the presence of a nonaqueous phase liquid  
21 (NAPL).

22 Additional contaminated soils were removed after sampling, but the removal was not documented  
23 in any available reports and the statement was not referenced (TPMC, 2009). Conclusive  
24 information about the excavation depths is not available.

#### 25 **2.4.2 UST Investigation at Building 6**

26 Following the UST removal near Building 6, the area around Building 6 was investigated  
27 (USACE, 1993). Sixteen borings were completed to an average depth of 50 feet. Five borings were  
28 located within the UST excavation area, and the remaining 11 borings were located within 250  
29 feet around the excavation to help define the nature and extent of potential impacts.

30 The soil cores from each boring were screened using a PID every 5 feet in length/depth of the core,  
31 and each boring was drilled until two consecutive PID readings were below 100 parts per million  
32 by volume (ppmv) (USACE, 1993). Soil samples were collected at or near the bottom of each  
33 boring and were analyzed for TPH, BTEX and methyl tert-butyl ether (MTBE). Since samples  
34 were collected from the bottom of the borings where the PID readings were below 100 ppmv, all  
35 results for TPH, BTEX, and MTBE were non-detect. However, headspace PID readings from the  
36 borings can be used to assess the vertical and lateral extent of potential impacts from the USTs.

37 A tiered approach was used for evaluating the PID measurements. New Mexico Petroleum Storage  
38 Tank Regulations (New Mexico Administrative Code (NMAC) 20.5.119.1908.B) establishes 100  
39 ppmv as a reasonable threshold for determining the extent of contaminants in soil from UST  
40 releases when using a field instrument. For the purposes of identifying potential soil impacts, a  
41 conservative value of 50 ppmv or less (1/2 the 100 ppmv threshold in NMAC 20.5.119.1908.B),  
42 was used here as an indicator that no soil impacts were present at or adjacent to the soil boring. If  
43 the PID reading was between 51 and 150 ppmv (0.5 to 1.5 times the NMAC 20.5.119.1908.B PID

1 threshold), it was assumed that impacts may be present in the boring or nearby. If the PID reading  
2 was greater than 150 ppmv, it was assumed that soil impacts are likely and that the boring may be  
3 in or near a source area. The headspace PID readings are presented in **Table 2.3**, and the boring  
4 locations are shown in **Figure 2.2**.

5 Borings FW-1 through FW-5 were located in the tank excavation area. FW-1 and FW-5 had the  
6 highest PID readings (4,029 and 4,035 ppmv, respectively), with impacts observed from 10 to 35  
7 feet bgs. Borings FW-2 and FW-3 had PID readings greater than 150 ppmv from 15 to 30 feet bgs.  
8 PID readings were below 150 ppmv at FW-4 (**Table 2.3**).

9 Impacts appear to extend north and also east from the excavation area, with PID readings greater  
10 than 150 ppmv observed in FW-7, FW-11, and FW-16 to the north and FW-13 to the east. Impacts  
11 generally occurred from 10 to 40 feet bgs, with the highest impacts observed from 30 to 35 feet  
12 bgs. No impacts were observed farther northeast in FW-14. There were no PID readings greater  
13 than 50 ppmv in Boring FW-10, located east of FW-11. To the northwest, boring FW-6 (104 ppmv  
14 at 25 to 30 feet bgs) and boring FW-15 farther northwest (79.5 ppmv at 40 to 45 feet bgs) may be  
15 potentially impacted, but did not exceed 150 ppmv and are likely not in the source zone. Farther  
16 west, FW-12 (69.2 ppmv at 25 to 30 feet bgs) may also be potentially impacted, but outside the  
17 source zone. Boring FW-9 to the southwest did not have any PID readings above 50 ppmv. A  
18 boring to the southeast (FW-8) had PID readings from 122 to 141 ppmv between 20 and 40 feet  
19 bgs (**Table 2.3, Figure 2.2**). Thus, the primary area of impacts is within the UST excavation and  
20 extends to the north and east from there.

## 21 **2.4.3 RCRA Facility Investigation (RFI)**

### 22 **2.4.3.1 Building 5 (SWMU 5)**

23 In 2010, 10 borings were advanced within Building 5 (**Figure 2.3**). From those borings, 14 soil  
24 samples were collected at up to 8 feet bgs and were analyzed for VOCs and TPH (**Table 2.4**;  
25 USACE, 2014). TPH-GRO was detected at up to 0.22 mg/kg, TPH-DRO at up to 5.8 mg/kg, TPH-  
26 ORO at up to 46 mg/kg, and tetrachloroethene at up to 11 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ). 1,2-  
27 DCA was not detected (USACE, 2014). As TPH was not detected above the current indicator  
28 concentrations (100 mg/kg for TPH-GRO, 1,000 mg/kg for TPH-DRO, and 1,000 mg/kg for TPH-  
29 ORO) and 1,2-DCA was not detected in any samples, it is assumed that soil at Building 5 is not a  
30 significant source of VOCs or TPH in soil vapor.

### 31 **2.4.3.2 Building 6 (SWMU 45)**

32 In 2010, seven soil borings (1145BLDG6-SB01 through 1145BLDG6-SB07; **Figure 2.3**) were  
33 advanced in the former UST excavation, and samples were collected from 15, 30, and 45 feet bgs.  
34 Unfortunately, the borings were not logged, so indicators about potential contamination (such as  
35 PID readings and visual observations about odors, staining, etc.) are not available. Samples were  
36 analyzed for TPH-GRO, TPH-DRO, TPH-ORO, and VOCs (**Table 2.4**; USACE, 2014).

37 Petroleum hydrocarbons did not exceed the current indicator concentrations (100 mg/kg to TPHg  
38 or GRO, 1,000 mg/kg for TPHd or DRO, and 1,000 mg/kg for TPH-ORO), except for  
39 1145BLDG6-SB07 at 15 feet bgs, where TPH-GRO was detected at 3,600 mg/kg (**Table 2.4**). 1,2-  
40 DCA was detected in all borings at 45 feet bgs (i.e., at the water table) from 0.018 mg/kg  
41 (1145BLDG6-SB03) to 0.12 mg/kg (1145BLDG6-SB07). 1,2-DCA was also detected at 30 feet

1 bgs in 1145BLDG6-SB03 at 0.044 mg/kg. This indicates that the area below the former USTs still  
2 contains a significant source of TPH and potentially 1,2-DCA that can migrate to soil vapor.

### 3 **2.4.3.3 Building 39 (AOC 49)**

4 In 2010, two soil borings (1149DOCK-SB01 and 1149DOCK-SB02; **Figure 2.3**) were advanced  
5 on the south side of Building 39. Samples were collected at depths 1, 2, and 5 feet bgs and analyzed  
6 for VOCs and TPH (**Table 2.4**). As samples were not analyzed for TPH, comparisons to the current  
7 indicator levels cannot be made. While VOCs were detected in all samples (USACE, 2014), all  
8 results were at least two orders of magnitude below saturation concentrations (NMED, 2022c). In  
9 addition, 1,2-DCA was not detected in any of the soil samples. Therefore, it is assumed that soil  
10 on the south side of Building 39 is not a significant source of VOCs or TPH in soil vapor.

### 11 **2.4.4 Northern Area Groundwater RFI**

12 In 2019-2020, an investigation was completed to define groundwater characteristics (i.e., presence  
13 of multiple aquifers, potentiometric surface, and hydraulic conductivity) and the nature and extent  
14 of groundwater contaminant plumes (Environmental, Operations and Construction [HDR], 2023).  
15 Soil vapor data was collected to help delineate the 1,2-DCA groundwater plume and select  
16 locations for groundwater well installation. The results of the VOCs and TPH analyses near  
17 Building 5 and Building 6 are discussed below.

18 The following 12 alluvial wells are located near Building 6 and were used to assess the  
19 groundwater conditions in the alluvial aquifer: MW18D, MW18S, MW20, MW22S, MW22D,  
20 MW29, MW30, MW31, MW32, TMW33, TMW34, and TMW35 (**Figure 2.4**). There are no  
21 bedrock wells<sup>1</sup> within the Building 6 VOC and TPH study area.

22 Two aquifers were identified – an alluvial aquifer and a bedrock aquifer. In the Administration  
23 Area, the alluvial aquifer is located starting at approximately 40 to 45 feet bgs. No bedrock wells  
24 were installed in the Administration Area, but the Northern Area Groundwater RFI notes that the  
25 potentiometric surface of the bedrock aquifer is slightly above the potentiometric surface of the  
26 alluvial aquifer, which implies that the vertical groundwater gradient is upward, from the bedrock  
27 aquifer towards the alluvial aquifer. The alluvial aquifer appears to flow towards Building 6 from  
28 the south, east and north, and then flows from Building 6 to the west. The bedrock aquifer also  
29 appears to flow towards Building 6 from the south, east and north, but there are no nearby bedrock  
30 wells to the west to assess groundwater flow in that direction.

31 Soil samples were collected at 10 and 40 feet bgs from the borings used to construct wells MW29,  
32 MW30, MW31, and MW32 and were analyzed for VOCs. 1,2-DCA was detected in MW31 at 40  
33 to 42 feet bgs at 0.0028 mg/kg, but not in any of the other samples. Other VOCs, such as 1,2,4-  
34 trimethylbenzene, acetone, BTEX, and tetrachloroethene were also detected, as shown in **Table**  
35 **2.5**. The samples were not analyzed for TPH (**Table 2.5**).

36 Fifty-two temporary soil vapor probes were installed and sampled from the area surrounding  
37 Building 6 and analyzed for 1,2-DCA between June and July 2019 (**Figure 2.5, Table 2.6**).  
38 Detected concentrations ranged from 0.18 to 3,325 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Soil  
39 vapor samples were not collected within the former UST excavation area, so no soil vapor data is  
40 available to assess the current soil vapor conditions in this area. The soil vapor sample with the

---

<sup>1</sup> Monitoring wells MW18D and MW22D are screened in the alluvium.

1 highest concentration was SG59 (3,325  $\mu\text{g}/\text{m}^3$ ), which is located northeast of Building 6 (**Figure**  
2 **2.5**).

### 3 **2.4.5 Groundwater Periodic Monitoring Reports**

4 Periodic groundwater monitoring was completed in April and October 2022 (Eco, 2023a,b;  
5 **Table 2.7, Figure 2.6**). Groundwater flow directions were similar to those observed in 2018  
6 (HDR, 2023). That is, alluvial groundwater flows towards Building 6 from the north, east, and  
7 southeast, and flows away from Building 6 towards the west (Eco, 2023a,b). Groundwater  
8 elevations from this report were used to draw the groundwater contours and groundwater flow  
9 direction shown in **Figure 2.4**. Groundwater flows to the northwest through the Administration  
10 Area.

11 The following wells were sampled for VOCs and TPH in the Administration Area in April and  
12 October 2022: MW18D, MW20, MW22D, MW29, MW30, MW31, MW32, TMW10, TMW33,  
13 TMW34, and TMW35. The highest concentration of 1,2-DCA occurred in MW18D (63  $\mu\text{g}/\text{L}$  and  
14 91  $\mu\text{g}/\text{L}$  in April and October, respectively) and concentrations decrease to the northwest as the  
15 plume migrates towards TMW33 and MW31. Although BTEX was initially detected at in  
16 groundwater during the UST removal (TPMC, 2009), BTEX was not detected in the wells  
17 surrounding Building 6 in 2022 (**Table 2.7**). In both sampling events, TPH-GRO was only  
18 detected in MW18D and TMW33. In April 2022, TPH-DRO was detected in MW20, MW32, and  
19 TMW-34, with the highest concentration (130  $\mu\text{g}/\text{L}$ ) detected in MW20. In October 2022,  
20 TPH-DRO was detected in MW31, MW32, TMW33, and TMW34, with the highest concentration  
21 (320  $\mu\text{g}/\text{L}$ ) detected in TMW33. The TPH-DRO detected in MW31, MW32, TMW33, and  
22 TMW34 may be from a source that is unrelated to the 1,2-DCA groundwater plume in the  
23 Administration Area.

## 24 **2.5 ASSESSMENT OF DATA GAPS**

25 The available information and boring logs from the UST removal (Envirotech, 1993), subsequent  
26 UST investigation (USACE, 1993), and RFI (USACE, 2014) are insufficient to provide a clear  
27 evaluation of the depth of the original UST excavation, which is assumed to be where the soil  
28 source zone starts.

29 The results of the UST investigation (**Figure 2.2**; USACE, 1993) indicate that the release from the  
30 USTs at Building 6 flowed to the north and east towards Building 5, but it was not determined  
31 how far the release extended to the east or whether the release extended to or underneath Building  
32 5.

33 The soil vapor investigation performed as part of the Northern Area Groundwater RFI (HDR,  
34 2023) (a) did not include boring logs, (b) collected no samples within or adjacent to the former  
35 UST excavation at Building 6, and (c), did not collect soil vapor samples at 5, 10, or 15 ft bgs  
36 (which are most useful for evaluating the vapor intrusion pathway). While the investigation  
37 determined that the release went towards Building 5 (**Figure 2.5**), the investigation did not  
38 determine whether the release extended to or underneath Building 5 and did not evaluate the  
39 potential for vapor intrusion in the source area.

40 This work plan has been prepared to address these identified data gaps. Soil vapor samples are  
41 proposed to refine the previous soil contamination data, to evaluate the soil vapor migration

- 1 pathway, and assess the potential for vapor intrusion from past releases. The rationale for the soil
- 2 vapor investigation is discussed further in **Section 3.0**.

*This Page Intentionally Left Blank*

### 3.0 SWMU-45 SOIL VAPOR INVESTIGATION RATIONALE

This section provides the rationale for why additional sampling has been proposed in the Administration Area. An explanation of the methods that will be used to conduct the investigation is provided in **Section 4**.

Investigations at Building 6 (SWMU 45) began in 1993 when four USTs containing gasoline (leaded and unleaded), diesel, and kerosene were removed from a former gasoline station (Envirotech, 1993).

Impacted soils were discovered during the removal of the USTs. Some impacted soils were left in place, and analytical results (**Table 2.2**) indicate they may have contained residual NAPL petroleum hydrocarbons. Subsequent investigations (USACE, 1993) indicate that the release migrated belowground primarily to the north and east from Building 6. Although BTEX was detected in soil samples collected from the tank excavation at concentrations exceeding saturation (**Table 2.2**), BTEX has not been detected in recent groundwater samples (**Table 2.7**). Similar to the soil investigations, the screening soil vapor results from the Northern Area Groundwater RFI (HDR, 2023; **Figure 2.5**) indicate that the release migrated belowground primarily to the north and east from Building 6.

The results from the previous investigations (Envirotech, 1993; USACE, 1993; HDR, 2023) have been combined to provide a qualitative estimate of the potential extent of the soil source area around the UST excavation area near Building 6 (**Figure 3.1**). The synthesis of these results indicate that the soil source area is immediately below the former USTs and Building 6, and extends slightly to the east, north, northwest, and south from the UST excavation. The available data indicates that the primary release of 1,2-DCA and TPH is associated with Building 6 and that Building 5 is not a source.

Although the release at Building 6 was gasoline and diesel fuels, the USTs were installed at a time when most gasoline was leaded and 1,2-DCA was used as a lead scavenger in leaded gasoline. Therefore, it is believed that the gasoline/diesel release is also the source for the 1,2-DCA that has been detected in soil vapor and groundwater in this area. Based on a review of historical data, the extent of the 1,2-DCA source area has been estimated and is presented in **Figure 3.1**. Soil vapor samples are proposed to refine the previous soil contamination data and to evaluate the soil vapor migration pathway and the potential for vapor intrusion from past releases.

The proposed locations of most soil vapor probes are in the source area. 1145BLDG6-SV01 was placed to the west of Building 6 and in the approximate center of the UST investigation. 1145BLDG6-SV02 was placed in the approximate location of the samples collected during the UST excavation that had BTEX results above saturation (sample 4474). 1145BLDG6-SV03 was placed near the highest concentration of 1,2-DCA detected in soil vapor (SG59, 3,325  $\mu\text{g}/\text{m}^3$ ) during the Northern Area Groundwater RFI. 1145BLDG6-SV04 was placed near what is assumed to be the northern edge of the source zone, but moved slightly closer to the UST as the PID data used to evaluate the extent of the soil source zone is from 1993 and the extent may have shrunk since then. The other proposed locations will help to address the lack of soil vapor data immediately east (1145BLDG6-SV06) of Building 6, as well as the potential western extent (1145BLDG6-SV05 and 1145BLDG6-SV08) and southern extent (1145BLDG6-SV07) of the soil source area.

1 The eight proposed soil vapor probe locations and associated sample numbers are presented in  
2 **Table 3.1**. Proposed sample locations are illustrated in **Figure 3.1**.

3 Soil vapor probes will be installed at 5, 10 and 15 feet bgs in all eight locations. The probes at 5  
4 feet bgs are most useful for evaluating the potential for vapor intrusion for the nearby buildings  
5 (Building 5, Building 6, and Building 39), while the probes at 15 feet bgs should be positioned  
6 above the potential soil source zone(s) to evaluate off-gassing. Together, the three probe depths  
7 can also be used to evaluate the vertical distribution of the contaminants in soil vapor.

8 Select soil samples are also planned to confirm the extent of impacts in the source area. Soil  
9 samples will be collected from the two borings in the former UST excavation area (1145BDG-  
10 SV01 and 1145BLDG6-SV02) to assess remaining impacted soil that may contribute to the soil  
11 migration pathway. As described in **Section 4.2.2**, additional soil samples may also be collected  
12 from other borings, if warranted.



## 1 **4.0 INVESTIGATION METHODS**

2 This section provides general information regarding the planned field activities to be completed  
3 as part of this Work Plan.

### 4 **4.1 SITE SAFETY AND AWARENESS**

5 All work will be performed in accordance with Army safety measures. A project-specific Accident  
6 Prevention Plan/Site Safety and Health Plan (APP/SSHP) has been developed for sampling  
7 activities at FWDA. The APP/SSHP defines the roles and responsibilities of site personnel,  
8 establishes proper levels of personal protective equipment (PPE), and describes emergency  
9 response and contingency procedures. The associated Activity Hazard Analyses (AHAs) define  
10 hazards associated with each type of work activity and how those hazards will be mitigated. The  
11 APP/SSHP will be reviewed by site personnel prior to performing any site work. In addition, task  
12 specific AHAs will be reviewed before any new tasks are performed and periodically during daily  
13 tailgate safety meetings.

14 All work will be completed by a supervisor, operators, and technicians that have successfully  
15 completed 40-hour Hazardous Waste Operations and Emergency Response training in accordance  
16 with *29 U.S. Code of Federal Regulations* 1910.120. A dedicated Site Safety and Health Officer  
17 (SSHO) will be on site during all field activities associated with implementation of this Work Plan.  
18 The SSHO will be responsible for conducting site-specific training, daily tailgate safety meetings,  
19 and periodic safety inspections.

20 The SSHO will also be responsible for ensuring site monitoring, worker training, and effective  
21 selection and use of PPE. The SSHO will have completed the Occupational Safety and Health  
22 Administration (OSHA) 30-hour Construction Safety Course prior to being tasked to fill the  
23 position.

### 24 **4.2 SOIL VAPOR PROBE INSTALLATION, SAMPLING AND ANALYSIS**

25 This section provides general information regarding the methods that will be employed during site  
26 activities.

#### 27 **4.2.1 Pre-Drilling Activities**

28 The proposed drilling locations will be marked with white paint, and New Mexico 811 will be  
29 notified of the proposed drilling locations a minimum of 72 hours prior to initiating drilling  
30 activities. The utility owners of record within the vicinity of the proposed boreholes will be notified  
31 of the planned subsurface investigation in proximity to buried utilities. The utility owners of record  
32 or their designated agents will clearly mark the position of their utilities on the ground surface in  
33 the nearest right-of-way. The proposed drilling locations will also be surveyed by a private utility  
34 locator for the presence of underground utilities using geophysical methods (including ground  
35 penetrating radar, electromagnetic utility locating, and deep search metal detector). If necessary,  
36 boring locations will be shifted to be a minimum of two feet from known utilities and five feet  
37 from buildings. Shifted locations will be as close as practicable to the original location and, if  
38 possible, will be shifted towards the former UST locations.

## 4.2.2 Drilling, Soil Sampling, and Soil Vapor Probe Construction

Eight borings will be advanced at the Site, as shown in **Figure 3.1**. The borings will be hand augered to a maximum depth of approximately 5 feet bgs for utility clearance. Then a direct push technology (DPT) rig will be used to complete the borings under the oversight of a Parsons field technician. If required, alternative drilling methods may be used, as described below. Continuous cores will be collected for lithologic logging and soils will be screened at least every five feet in depth using a PID. The results will be recorded in a boring log (**Section 4.2.4**).

The two borings located in the former UST excavation area (1145BLDG6-SV01 and 1145BLDG6-SV02) will be advanced to 25 feet bgs and one soil sample will be collected from each boring at the depth with the highest PID reading. The remaining borings will be advanced to 15 ft bgs. If PID readings exceed 100 ppmv at 15 feet bgs, the boring will be drilled deeper, until there are two consecutive PID readings of less than 100 ppmv or until the DPT rig reaches refusal. If the DPT rig reaches refusal, the boring may be redrilled deeper under a separate mobilization with a hollow-stem auger rig, or other appropriate equipment. If any of the PID readings from a boring exceed 100 ppmv, one soil sample will be collected from that boring at the depth with the highest PID reading. These soil samples will help delineate soil contamination that would act as a source of soil vapor impacts. Soil samples will be analyzed for TPH and VOCs.

At each location, nested soil vapor probes will be installed at the depths listed in **Table 3.1**. The nested probes will be used to evaluate the vertical distribution of VOCs and TPH in soil vapor.

Each probe depth will be identified by its location and depth, as outlined in **Section 4.9**.

Once the total depth has been reached, new disposable 1/4-inch outside diameter x 3/16 inside diameter Teflon tubing will be extended to the target depth and fitted with an AMS 25005 stainless steel soil vapor probe implant, or equivalent. The implant will have a 1-inch screen with a 50  $\mu\text{m}$  filter to prevent particulates from entering the sample train. A 12-inch sand filter pack will be placed in the boring, with the soil vapor probe placed midway through the filter pack sand. Following the installation of the sand pack, dry granular bentonite will be emplaced between the sand pack and the hydrated bentonite grout to prevent infiltration of the hydrated bentonite or bentonite grout into the sand pack. The borehole will be grouted to the surface in approximately 6-inch lifts with hydrated bentonite. A valve will be fitted to the aboveground end of the tubing and will be kept closed prior to purging and sampling. Following installation, a lockable, aboveground stove pipe will be constructed to protect the probe. The stove pipe will be protected by up to four yellow bollards set in concrete, as necessary. An example diagram showing the proposed nested probe construction is shown in **Figure 4.1**.

If a soil vapor probe cannot be installed at a particular location due to access limitations or other issues, alternative locations will be selected as close as practicable to the planned location.

## 4.2.3 Soil Vapor Sampling

This section provides general information regarding the methods that will be employed for soil vapor and soil sampling that will be completed during site activities. A summary of analytical methods, sample containers, preservatives, and holding times is provided in **Table 4.1**. The following sections provide details regarding sample collection and management, quality assurance (QA), and quality control (QC).

1 **4.2.3.1 Soil Vapor Sampling Procedures**

2 All soil vapor probes will be allowed to equilibrate for at least 48-hours before sampling. Soil  
3 vapor sampling will be performed in two (2) monitoring events to collect data during both the hot  
4 (May-September) and cold (October-April) seasons, or as close as possible, to evaluate seasonal  
5 variation. Soil vapor probes will not be sampled during or within 5-days of a significant rain event  
6 (i.e., rainfall of 1/2 inch or greater during a 24-hour period). Areas subject to soil vapor sampling  
7 should be free of standing or ponding water for at least five days prior to sampling.

8 The following process will be used to collect a soil vapor sample:

- 9 1. Open well box.
- 10 2. Calculate three purge volumes of the soil vapor probe, filter pack, and all tubing in the  
11 purge/sampling train to the purge pump, as shown on the Soil Vapor Probe Sampling Form  
12 **(Appendix B)**.
- 13 3. Calibrate Gilair-5 purge pump (or equivalent) to flow at a rate between 100 and 400  
14 milliliters per minute (mL/min). Document the flow rate on the soil vapor purge form.
- 15 4. Connect soil vapor probe tubing to sample train.
- 16 5. Connect a multi-gas meter to the sampling train using a t-valve and Teflon connector.
- 17 6. Place a rag saturated with a tracer (2-propanol, also known as isopropanol or rubbing  
18 alcohol) around the probe seal at the surface and near the connection from the tubing to the  
19 sample train. This leak check compound will remain in-place during purging and sampling  
20 activities at the probe.
- 21 7. Perform “shut-in” test (see below) and apply leak check compound.
- 22 8. Turn on the Gilair-5 purge pump and purge three volumes of air from the system.
- 23 9. Record total VOC, methane, oxygen (O<sub>2</sub>), and carbon dioxide (CO<sub>2</sub>) readings from the  
24 multi-gas meter.
- 25 10. Monitor the flow during purging operations to ensure that there are no blockages, and that  
26 no condensate is observed in the flow stream.
- 27 11. Document the required purge time based on the flow rate of the pump.
- 28 12. Complete purge requirements.
- 29 13. Collect soil vapor sample and close the valve to the SUMMA canister where there is  
30 between 4 and 8 millimeters of mercury (mmHg) of vacuum remaining in the canister.

31 Prior to collecting a soil vapor sample, the above-ground sampling equipment (sample train) will  
32 be leak tested. The process of leak testing ensures that the sample collected is representative of  
33 subsurface conditions. In this case, a “shut-in” test will be completed that uses a sustained vacuum  
34 in closed tubing to check for leaks at connection points along components of the sampling train.

35 The “shut-in” test will be performed using the following procedures:

- 36 1. Turn on the purge pump with the valve to the vapor monitoring probe (VMP) closed.

2. The above-ground valves, lines, and fittings downstream from the top of the probes will be evacuated to approximately 100 inches of water (approximately 11 pounds per square inch gauge) using the pump.
3. The test will be conducted while the sampling canister is attached, with its valve in the closed position. The vacuum gauge should not drop in vacuum at a perceivable rate during a one-minute observation period, indicating that the sampling train and associated valves have no leaks. The vacuum gauge should be sensitive enough to indicate a pressure change of 0.5 inches of water.
4. If the vacuum gauge indicates a consistent drop in vacuum, the valves in the sampling train will be adjusted; all fittings will be checked and tightened as necessary.
5. If leaks are persistent, the valves will be used to isolate sections of the tubing to more easily identify leak points.
6. Once leaks are repaired, steps 1 through 4 will be repeated until no leaks are observed.

After the soil vapor probe is appropriately shut-in tested and purged, the soil vapor samples will be collected as follows:

1. Samples for laboratory analyses will be collected directly into SUMMA canisters provided by the laboratory.
2. The samples will be labeled with a unique identifier, as described in **Section 4.9**, and analyzed by an off-site laboratory using the SUMMA canisters supplied by the laboratory. A chain-of-custody (COC) form will be filled out and placed with the sample to ensure there is no mix up with samples, as discussed in **Section 4.4**.
3. The field measurements, conditions and procedures will be recorded in the field log.

#### **4.2.3.2 Subsurface Soil Sampling**

Shallow subsurface samples (less than 2 feet) will be collected using a decontaminated hand auger. Deeper subsurface samples will be collected using direct-push technology or hollow-stem auger equipment utilizing decontaminated split spoons, as appropriate. All boreholes will have a complete record of borehole information as described in **Section 4.2.4**.

##### ***4.2.3.2.1 Direct Push or Hand Auger Method for Subsurface Soil***

This section provides procedures for subsurface soil sampling using a direct push type rig (e.g., Geoprobe®), hand auger, or sampling from an excavator bucket. If a direct push rig is used, it shall be operated by an appropriately licensed driller.

Soil samples will be collected as follows:

1. Spread clean plastic sheeting on the ground or table at each sampling location to keep sampling equipment clean and prevent cross-contamination.
2. Advance the hand auger, excavator, or direct push tool to the desired sample depth.
3. Collect the sample using an approved sampling tool (e.g., stainless steel or disposable spoon, trowel, or scoop) and scoop the soil from the auger bucket or acetate liner from the direct push rig. For hand augering, use a new, clean auger bucket once the top of the sampling depth is reached.

- 1 4. Transfer the sample from the auger bucket or trowel into a large disposable or stainless-  
2 steel bowl and mix the combined soil thoroughly to ensure a representative sample.  
3 EXCEPTION: If collecting subsurface samples for VOC analysis, the sample will be  
4 collected directly from the sample equipment (e.g., auger bucket or acetate sleeve) using  
5 a Terra Core® sampler as described in **Section 4.2.3.2.3**. The soil shall not be mixed  
6 before sample collection.
- 7 5. Collect suitable quantities with the approved sampling tool and transfer directly into the  
8 laboratory supplied clean containers with a moisture-tight lid (or a re-sealable plastic  
9 bag for grain size samples).
- 10 6. Repeat these steps as necessary to obtain sufficient sample volume.
- 11 7. When sample containers are filled, secure the caps tightly on the containers. Lids will be  
12 sealed by labels or custody seals to prevent tampering.
- 13 The sample containers will then be placed into a cooler with ice and cooled to less than or  
14 equal to 6 degrees Celsius ( $\leq 6^{\circ}\text{C}$ ).
- 15 8. After sampling is completed, backfill the hole with remaining soil to return the site to as  
16 close to original condition as possible.

#### 17 **4.2.3.2.2 Hollow-Stem Auger Method for Subsurface Soil**

18 Soil drilling using the hollow-stem auger method will be accomplished using a truck-mounted  
19 auger rig of sufficient size and power to advance augers to the required drilling depth operated by  
20 an appropriately licensed driller.

21 Soil samples will be collected as follows:

- 22 1. Spread clean plastic sheeting on the ground or table at each sampling location to keep  
23 sampling equipment clean and prevent cross-contamination.
- 24 2. When drilling investigation boreholes, the lead hollow-stem auger will be advanced to the  
25 top of the soil interval to be sampled.
- 26 3. The selected soil sampling device then will be inserted into the auger string and advanced  
27 to the bottom of the soil interval. When using a split-spoon sampler, this device will be  
28 advanced to the required depth using a 63.5-kg (140-lb) hammer or continuously advanced  
29 with the auger string. When using a split-barrel sampler, this device will be hydraulically  
30 pushed to the required depth. Samplers used in non-cohesive soils may require the use of  
31 a decontaminated catch basket inserted into the shoe of the sampler in order to obtain  
32 recovery. A clean sampling device will be used to collect soil core from each sampled  
33 interval of the investigation boreholes.
- 34 4. Upon retrieval of the sampling device, the percentage of recovery will be recorded, and  
35 the contained soil core will be split in half, lengthwise, using a stainless-steel knife.  
36 Samples designated for laboratory analysis will be collected from the core using a  
37 stainless-steel scoop. EXCEPTION: If collecting subsurface samples for VOC analysis,  
38 the sample will be collected directly from the sample equipment (e.g., auger bucket or  
39 acetate sleeve) using a Terra Core® sampler as described in **Section 4.2.3.2.3**. The soil  
40 shall not be mixed before sample collection.

- 1 5. Immediately after discrete or composite samples are collected and bottles are labeled, each  
2 sample container will be placed into a sealable plastic bag and then placed into an ice-  
3 filled cooler to ensure preservation. Remaining soil will be managed as IDW.
- 4 6. After soil samples are collected (to preserve sample integrity), the remaining lithologic  
5 samples will be fully described. After the contents of the sampler are measured, sampled,  
6 and described, the core will be discarded and handled as investigation-derived waste  
7 (IDW) as described in **Section 4.10**.
- 8 7. All borings will be abandoned by grouting to surface. For deeper borings (those extending  
9 into the water table), rigid tremie pipe will be extended to the bottom of the boring and  
10 pump grout through the pipe until undiluted grout flows from the boring at ground surface.  
11 For shallow borings (those not penetrating the water table), grout will be poured into the  
12 boring from the surface until grout flows from the boring at ground surface. Grout will be  
13 composed of 20 parts cement (Portland cement, Type II, or V), up to one part bentonite,  
14 and a maximum of 8 gallons of approved water per 94-pound bag of cement.

#### 15 **4.2.3.2.3 Terra Core® Sampling Method for Soil**

16 Samples requiring VOC analysis may be collected using EnNovative Technologies Terra Core®  
17 samplers. Terra Core® samplers limit the amount of volatilization that occurs during sampling,  
18 which allows for a more accurate and valid analytical result.

19 The procedure that will be used to collect soil samples with Terra Core® samplers is as follows:

- 20 1. Prepare a Terra Core® sampler, and a 40mL VOA vial containing the proper preservative  
21 (deionized [DI] water or methanol) and a magnetic stirring bar (if required).
- 22 2. With the plunger seated in the handle, push the Terra Core® sampler into the soil until the  
23 sample chamber is filled. Wipe all soil or debris from the outside of the Terra Core®  
24 sampler. The soil plug should be flush with the mouth of the sampler.
- 25 3. Rotate the plunger that was seated in the handle to 90° until it is aligned with the slots in  
26 the sampler body. Place the mouth of the sampler into the 40mL VOA vial and extrude the  
27 sample into the container by pushing the plunger down.
- 28 4. Quickly replace the lid of the 40mL VOA vial. When capping the VOA vial, be sure to  
29 remove any soil or debris from the top or threads of the vial. Place the collected sample on  
30 ice as soon as possible (if required by sample preservation method).

#### 31 **4.2.4 Boring Logs**

32 Each borehole log generated during the RFI will fully describe the subsurface environment and  
33 the procedures used to gain that description. Guidance on field logging of soil and rock may be  
34 found in ASTM (2009) D5434-09. Original borehole logs will be of sufficient legibility and  
35 contrast so as to provide comparable quality in reproduction and will be recorded directly in the  
36 field without transcribing from a field book or other document.

37 All borehole logs will contain the following:

- 38 • Unique borehole/monitoring well number and location denoted on a sketch map as part of  
39 the log.
- 40 • Depths recorded in feet and decimal fractions thereof (tenths of feet).

- 1 • Field estimates of soil classification (Unified Soil Classification System) in accordance  
2 with ASTM (2017) D2488-17e1 prepared in the field at the time of sampling by the site  
3 geologist.
- 4 • Full description of each soil sample collected.
- 5 • Visual numeric estimates of secondary soil constituents and quantitative definitions of  
6 description terms (e.g., trace, little, some) recorded on the log.
- 7 • Full description, to the greatest extent practical, of bedrock material encountered.
- 8 • Description of disturbed samples (if used to supplement subsurface description) in terms  
9 of the appropriate soil/rock parameter, to the extent practical. At a minimum, classification  
10 along with a description of drill action for the corresponding depth will be recorded.  
11 Notations will be made on the log that these descriptions are based on observations of  
12 disturbed material rather than intact samples.
- 13 • Description of drilling equipment, including such information as auger size (inner and outer  
14 diameter), bit types, compressor type, rig manufacturer, and model.
- 15 • Sequence of drilling activities.
- 16 • Any special problems encountered during drilling and their resolution.
- 17 • Dates and times for the start and completion of the borehole along with notation by depth  
18 for drill crew shifts and individual days.
- 19 • Each sequential boundary between various soil types and individual lithologies.
- 20 • For a rock core, a scaled graphic sketch of the core should be provided on or with the log  
21 denoted by depth location, orientation, and nature (natural or coring-induced) of all core  
22 breaks. If fractures are too numerous to be individually shown, their location may be drawn  
23 as a zone and described on the log.
- 24 • Intervals of lost core.
- 25 • The depth of first encountered free water along with the method of determination and any  
26 subsequent distinct water level(s) encountered thereafter. Before proceeding, the first  
27 encountered water will be allowed to partially stabilize (from 5 to 10 minutes) and recorded  
28 along with the time between measurements.
- 29 • Interval by depth for each sample collected, including the length of sampled interval, length  
30 of sample recovery, blow counts, and the sampler type and size (diameter and length).
- 31 • Total depth of drilling and sampling.
- 32 • Results of soil core organic vapor scan readings and soil sample organic vapor headspace  
33 readings. Notation will include interval sampled, corresponding vapor readings, and key to  
34 the specific instrument used to obtain readings. A general note will be made on the log  
35 indicating the manufacturer, model, serial number, and calibration information for each  
36 instrument used.
- 37 • Definition of any special abbreviations used at the first occurrence of their usage.

1 **4.2.5 Decontamination Procedures**

2 Equipment used to drill boreholes and collect soil samples during the investigation will be  
3 decontaminated within a temporary decontamination pad constructed at the near Building 6. The  
4 decontamination pad will be designed so that all decontamination liquids are contained from the  
5 surrounding environment and can be recovered for disposal as IDW. Drilling equipment will be  
6 decontaminated after each borehole is completed. The decontamination procedure that will be  
7 followed for excavation and drilling equipment is as follows:

- 8 1. Remove caked soil material from the exterior of the buckets and/or augers and cutting  
9 heads using a rod and/or brush.
- 10 2. Steam clean the equipment interior and exterior with approved water using a brush where  
11 steam cleaning is not sufficient to remove all soil material.
- 12 3. Rinse thoroughly with approved potable water.
- 13 4. Allow equipment to air dry as long as possible.
- 14 5. Place equipment on clean plastic if it will be used immediately or wrap in plastic to prevent  
15 contamination if storage is required.

16 Non-dedicated sampling equipment will be decontaminated after each use during borehole interval  
17 sampling. The procedure for decontamination of sampling equipment will be as follows:

- 18 1. Wash with approved water and phosphate-free detergent using brushes required to remove  
19 particulate matter and surface films.
- 20 2. Rinse thoroughly with approved potable water.
- 21 3. If analyzing for metals and expecting high levels of contamination, rinse thoroughly with  
22 hydrochloric acid (2% solution) or nitric acid (10% solution).
- 23 4. Rinse thoroughly with ASTM Type I or equivalent deionized/distilled water with analytical  
24 certification.
- 25 5. If analyzing for organics and expecting high levels of contamination, rinse thoroughly with  
26 solvent-pesticide grade isopropanol, acetone, or methanol, depending on analytes of  
27 interest.
- 28 6. Rinse thoroughly with ASTM Type I or equivalent deionized/distilled water with analytical  
29 certification.
- 30 7. Allow equipment to air dry as long as possible.
- 31 8. Place equipment on clean plastic if immediate use is anticipated or wrap in aluminum foil  
32 to prevent contamination if storage is required.

33 A final decontamination inspection of any equipment leaving the site at the end of field activities  
34 will be conducted to ensure proper decontamination.

35 **4.2.6 Sample Analysis**

36 Soil samples will be analyzed by Eurofins Environment Testing in Arvada, Colorado for VOCs  
37 via USEPA (2018) Method 8260D and for TPH-Gasoline-Range Organics and TPH-Diesel-Range



1 Organics via USEPA (2003) Method 8015D. Soil vapor samples will be analyzed for VOCs by  
2 Eurofins Air Toxics in Folsom, California, via USEPA (1999a) Method TO-15 full scan and for  
3 USEPA (1999b) TPH via Method TO-3. Both analytical laboratories are DoD Environmental  
4 Laboratory Accreditation Program certified laboratories. Analytical methods, sample containers,  
5 preservatives, and holding times are summarized in **Table 4.1**.

6 Up to eight primary soil samples and a total of 24 primary soil vapor samples will be collected  
7 during each sampling event (**Table 4.2**) (i.e., eight soil vapor locations will be sampled at three  
8 depths).

### 9 **4.3 QUALITY CONTROL**

10 In order to attain data of sufficient quality to support project objectives, specific procedures are  
11 required to allow evaluation of data quality. The quality assurance/quality control (QA/QC)  
12 procedures and requirements for their evaluation will comply with Quality Systems Manual  
13 (QSM), Version 5.4 (Department of Defense [DoD] 2021).

#### 14 **4.3.1 Field and Laboratory Quality Control Samples**

15 Evaluation of field sampling procedures and laboratory equipment accuracy and precision requires  
16 the collection and evaluation of field and laboratory QC samples. **Table 4.2** and **Table 4.3**  
17 summarize the planned QC samples for this project. A description of each QC sample type is  
18 provided in the following sections.

##### 19 **4.3.1.1 Quality Control Analyses/Parameters Originated by the Laboratory**

###### 20 **Method Blank**

21 Method blanks are used to monitor each preparation or analytical batch for interference and/or  
22 contamination from glassware, reagents, and other potential sources within the laboratory. A  
23 method blank is a contaminant-free matrix (laboratory reagent water for aqueous samples or  
24 Ottawa sand, sodium sulfate, or glass beads [metals] for soil samples) to which all reagents are  
25 added in the same amount or proportions as are added to the samples. It is processed through the  
26 entire sample preparation and analytical procedures along with the samples in the batch.

27 There will be at least one method blank per preparation or analytical batch. If a target compound  
28 is found at a concentration that exceeds one-half the reporting limit, corrective action must be  
29 performed in an attempt to identify and, if possible, eliminate the contamination source. If  
30 sufficient sample volume remains in the sample container, samples associated with the blank  
31 contamination should be reprocessed and reanalyzed after the contamination source has been  
32 eliminated.

###### 33 **Laboratory Control Sample**

34 The laboratory control sample (LCS) will consist of a contaminant-free matrix such as laboratory  
35 reagent water for aqueous samples or Ottawa sand, sodium sulfate, or glass beads for soil samples  
36 spiked with known amounts of compounds that come from a source different than that used for  
37 calibration standards. Target compounds will be spiked into the LCS. The spike levels will be  
38 less than or equal to the midpoint of the calibration range. If LCS results are outside the specified  
39 control limits, corrective action must be taken, including sample re-preparation and re-analysis, if  
40 appropriate. If more than one LCS is analyzed in a preparation or analytical batch, the results for

1 each LCS must be reported. Any LCS recovery outside QC limits affects the accuracy for the  
2 entire batch and requires corrective action.

### 3 **4.3.1.2 Quality Control Analyses Originated by the Field Team**

4 Field QC samples will be collected to determine the accuracy and precision of the analytical  
5 results. The QC sample frequencies are stated in the following sections.

#### 6 **Equipment Blanks**

7 Equipment blanks will be collected to monitor the cleanliness of sampling equipment and the  
8 effectiveness of decontamination procedures. Contamination from the sampling equipment can  
9 bias the analytical results high or lead to false positive results being reported. Equipment blanks  
10 will be prepared by filling sample containers with laboratory-grade contaminant free water that  
11 has been passed through a decontaminated or unused disposable sampling device. The required  
12 QC limits for equipment blank concentrations are to be less than the method's reporting limit.

13 Equipment blanks will be collected at a frequency of approximately one per week for hand  
14 augering activities and other reusable equipment. Samples associated with equipment blanks that  
15 have detected target compounds will be assessed during the data validation process. The usability  
16 of the associated analytical data will be documented and affected data will be appropriately  
17 qualified. Field corrective action to improve equipment decontamination procedures may also be  
18 implemented by the Field Lead at the request of the project chemist.

#### 19 **Field Duplicates**

20 Field duplicates are collected in the field from a single aliquot of the sample to determine the  
21 precision and accuracy of the field team's sampling procedures. Soil vapor field duplicates will be  
22 collected concurrently using a T-splitter. Field duplicates will be collected and analyzed at a  
23 frequency of 10%. Samples will be randomly labeled as either parent sample or field duplicate  
24 sample.

#### 25 **Trip Blanks**

26 Trip blanks are used to monitor for contamination during soil sample shipping and handling, and  
27 for cross-contamination through volatile component migration among the collected soil samples.  
28 They are prepared in the laboratory by pouring organic-free water into a volatile organic analysis  
29 (VOA) sample container. They are then sealed, transported to the field, and transported back to  
30 the laboratory in the same cooler as the volatile component samples. One trip blank sample set (two  
31 VOAs) will accompany each volatile component sample cooler. Trip blanks are not necessary for  
32 soil vapor samples.

### 33 **4.3.2 Data Accuracy, Representativeness, Comparability and Completeness**

34 Field QA/QC samples and laboratory internal QA/QC samples are collected and analyzed to assess  
35 the data's quality and usability. The following sections discuss the parameters that are used to  
36 assess the data quality.

#### 37 **Precision**

38 The precision of laboratory analysis for soil samples will be assessed by comparing the analytical  
39 results between MS/MSD and laboratory duplicate samples. The precision of the field sampling

1 procedures will be assessed by reviewing field duplicate sample results. The RPD will be calculated  
2 for the duplicate samples using the equation:

$$\%RPD = \{(S - D)/[(S + D)/2]\} \times 100$$

where:

S = first sample value (original value)

D = second sample value (duplicate value)

3 The precision criteria for the duplicate samples will be  $\pm 50\%$  in soil samples.

#### 4 **Accuracy**

5 Accuracy of laboratory results for soil will be assessed for compliance with the established QC  
6 criteria using the analytical results of method blanks, reagent/ preparation blanks, LCS and  
7 MS/MSD samples and surrogate results, where applicable. Laboratory accuracy will be assessed  
8 for compliance with the established QC criteria listed in Appendix C of the QSM. The percent  
9 recovery (%R) of LCSs will be calculated using the equation:

$$10 \qquad \qquad \qquad \%R = (A/B) \times 100$$

11 where:

12 A = the analyte concentration determined experimentally from the LCS

13 B = the known amount of concentration in the sample

#### 14 **Completeness**

15 The data completeness of laboratory analyses results will be assessed for compliance with the  
16 amount of data required for decision making. Complete data are data that are not rejected. Data  
17 with qualifiers such as “J” or “UJ” are deemed acceptable and can be used to make project  
18 decisions as qualified. Data qualifiers are listed in **Table 4.4**. The completeness of the analytical  
19 data is calculated using the equation:

$$20 \qquad \qquad \qquad \%Completeness = [(complete\ data\ obtained)/(total\ data\ planned)] \times 100$$

21 The percent completeness goal for this sampling event is 90% for each analytical method.

#### 22 **Representativeness**

23 Representativeness is the degree to which sampling data accurately and precisely represent site  
24 conditions and is dependent on sampling and analytical variability and the variability of  
25 environmental media at the site. Representativeness is a qualitative “measure” of data quality.

26 Soil vapor leak check analytical results for 2-propanol will be used to evaluate representativeness  
27 as follows: If the concentration of 2-propanol is greater than or equal to 10x the LOQ for target  
28 analytes, then corrective action is needed, and the analytical results should be rejected.

29 Achieving representative data in the field starts with a properly designed and executed sampling  
30 program that carefully considers the project’s overall objectives. Proper location controls and  
31 sample handling are critical to obtaining representative samples.

32 The goal of achieving representative data in the laboratory is measured by assessing accuracy and  
33 precision. The laboratory will provide representative data when the analytical systems are in

1 control. Therefore, representativeness is a redundant objective for laboratory systems if sample  
2 COC and sample preservation are properly documented, analytical procedures are followed and  
3 holding times are met.

#### 4 **Comparability**

5 Comparability is the degree of confidence to which one data set can be compared to another  
6 Comparability is a qualitative “measure” of data quality.

7 Achieving comparable data in the field starts with a properly designed and executed sampling  
8 program that carefully considers the project’s overall objectives. Proper location controls and  
9 sample handling are critical to obtaining comparable samples.

10 The goal of achieving comparable data in the laboratory is measured by assessing accuracy and  
11 precision. The laboratory will provide comparable data when analytical systems are in control.  
12 Therefore, comparability is a redundant QC objective for laboratory systems if proper analytical  
13 procedures are followed and holding times are met.

#### 14 **Sensitivity**

15 Sensitivity is the ability of the method or instrument to detect the contaminant of concern and other  
16 target compounds at the level of interest. Appropriate sampling and analytical methods have been  
17 selected that have QC acceptance limits that support the achievement of established performance  
18 criteria. Elevated sensitivities due to dilutions caused by matrix interference will be communicated  
19 in the case narrative of the laboratory report.

20 For soil vapor, the performance criteria are the NMED (2022c) VISLs modified to use a target risk  
21 of 10E-5. The NMED VISLs will be used to evaluate contaminant concentrations in soil vapor  
22 samples. For human receptors, if NMED does not have a published VISL, then a U.S.  
23 Environmental Protection Agency (USEPA) VISL will be used if one is published (USEPA,  
24 2023a). Assessment of analytical sensitivity will require thorough data validation. A comparison  
25 of the NMED VISLs (or USEPA VISLs) to laboratory quantitation limits is provided in **Table 4.5**  
26 for soil vapor.

27 Only the laboratory’s LOQ and LOD (**Table 4.6**) for 1,2-dibromoethane in soil vapor exceeds  
28 the screening level (LOQ = 3.84  $\mu\text{g}/\text{m}^3$ , LOD = 2.88  $\mu\text{g}/\text{m}^3$ , VISL = 1.56  $\mu\text{g}/\text{m}^3$ , **Table 4.6**).  
29 The analytical laboratory’s DL for 1,2-dibromoethane (0.87  $\mu\text{g}/\text{m}^3$ ) is below the VISL.  
30 Therefore, the VISL for 1,2-dibromomethane will become the LOQ value. As noted in **Table**  
31 **4.6**, this is acceptable when:

- 32 • The analytical lab is not capable of reaching the VISL.
- 33 • 1,2-Dibromoethane has not been detected in soil and groundwater and, is, therefore,  
34 unlikely in soil vapor.

35 The above justification is consistent with Tables 1h and 1i in Enclosure 1 of the Phase 3, LOD /  
36 LOQ Submission (US Army, 2023).

37 For soils, the performance criteria are the NMED (2022c) soil screening levels. If NMED does not  
38 have a published SSL, then a USEPA (2023b) Regional Screening Level (RSL) was used if one is  
39 published. A comparison of the NMED SSLs (or USEPA RSLs) to laboratory quantitation limits  
40 is provided in **Table 4.7**, which includes an evaluation of analytes with LOQs that are greater than  
41 lowest NMED SSLs (or USEPA RSLs). As soil data is not being used as part of this investigation

1 to evaluate potential human health risks, the detection limits for soil are not evaluated further here.  
2 A complete evaluation of the soil data and risk screening will be presented in the Parcel 11 Phase  
3 2 RFI.

4 Highlighted values in **Tables 4.5** and **4.7** indicate achievable laboratory LOQs, limits of detection  
5 (LODs), and/or detection limits (DLs) that are greater than the Project Quantitation Limit Goals  
6 (PQLGs). In these cases, the LOQ will become the de facto PQLG. If the analyte is never detected,  
7 it would not be considered a chemical of potential concern and would not be included in the  
8 quantitative risk assessment. This situation, while not expected, would result in an underestimate  
9 of the risk. Therefore, any analyte that is never detected, but has an LOD greater than the PQLG  
10 will be identified in the uncertainty section of the risk assessment and the potential underestimation  
11 of the risk will be acknowledged.

12 If the sensitivity requirements are not met for a particular analyte, the team will evaluate whether  
13 the data can still be used for project decisions. If non-detect values exceed the PQLGs, data are  
14 considered usable if the analyte is not a site-related compound. Analytes that are not site-related  
15 chemicals, and thus are not expected to be found, do not impact decision making. For analytes that  
16 are site-related, the team will use a “weight of evidence” approach to evaluate the likelihood of the  
17 chemical’s presence. This approach uses available data that does meet sensitivity requirements to  
18 evaluate the presence or absence of the compound in other samples or other similar compounds  
19 and/or degradation products for the analyte in question.

20 If sufficient evidence exists to determine a compound was likely not present because of the absence  
21 of similar compounds and breakdown products, the team will conclude that the analyte was not  
22 present, and thus data are usable for decision making. If it cannot be determined that the compound  
23 is likely not present, then the risk will be calculated assuming that the compound is present at the  
24 DL. This calculated risk will be presented as an uncertainty in the risk assessment, and the risk  
25 will not be included in the estimation of cumulative risk.

### 26 **4.3.3 Data Verification and Data Review Procedures**

27 Personnel involved in data validation will be independent of any data generation effort. The project  
28 chemist will be responsible for the oversight of data verification, review, and validation. Data  
29 verification and review will be performed when the data packages are received from the laboratory.  
30 Verification will be performed on an analytical-batch basis using the summary results of  
31 calibration and laboratory QC, as well as those of the associated field samples. There are five  
32 stages of review, as defined in DoD (2019) General Data Validation Guidelines:

33 **Stage 1:** A verification and validation conducted only on completeness and compliance of sample  
34 specific information and field QC: field sample IDs and target analytes verified against the chain  
35 of custody for completeness; sample conditions upon arrival at laboratory noted; sample  
36 preservation was appropriate and verified by the laboratory; holding times were met;  
37 concentrations and units for limits of detection and quantitation were appropriate; trip blanks, field  
38 blanks, equipment blanks, and field duplicates met project requirements for frequency and field  
39 quality control.

40 **Stage 2A:** Stage 1 validation plus evaluation of preparatory batch QC results: method blanks,  
41 LCSs, LCS duplicates (LCSDs), MSs/MSDs, surrogates (organics), serial dilutions, post-digestion  
42 spikes (as appropriate to the method), and any preparatory batch cleanup QC to assure project  
43 requirements for analyte spike list, frequency, and QC limits are met.

1 **Stage 2B:** Stage 2A validation plus evaluation of instrument-related QC results including  
2 Instrument Performance Samples: Tunes, breakdown standard check results, peak tailing factors  
3 (if applicable), instrument initial calibration summaries (including response factors and any  
4 regression summaries), initial calibration verification and continuing calibration verification  
5 summaries, internal standards, initial and continuing calibration blank summaries, confirmation of  
6 positive results for second column or detector including percent difference between the two  
7 analytical concentrations that are greater than the detection limit, and interference check samples  
8 to assure project requirements for frequency and quality control criteria are met.

9 **Stage 3:** Stage 2B validation plus re-quantification and recalculation of selected samples (i.e.,  
10 target analytes quantitated from appropriate internal standards) and instrument QC: Appropriate  
11 selection of curve fit type, weighting factors, and with or without forcing through zero, continuing  
12 calibration verifications and blanks, and percent ratios of tunes and performance checks including  
13 calculation of dichlorodiphenyltrichloroethane (DDT)/endrin breakdown and column peak tailing,  
14 and preparatory batch QC results (such as spike percent recoveries and serial dilution percent  
15 differences) from instrument response. Instrument response data are required to perform re-  
16 quantification and recalculation.

17 **Stage 4:** Stage 3 validation plus qualitative review of non-detected, detected, and tentatively  
18 identified compounds (TICs) from instrument outputs: Chromatograms are checked for peak  
19 integration (10% of automated integration and 100% of manual integrations where chromatograms  
20 from before and after manual integration are examined for cause and justification), baseline, and  
21 interferences; mass spectra are checked for minimum signal to noise, qualitative ion mass  
22 presence, ion abundances; retention times or relative retention times are within method  
23 requirements for analyte identification. Raw data quantitation reports, chromatograms, mass  
24 spectra, instrument background corrections, and interference corrections are required to perform  
25 review of the instrument outputs.

26 For this project, 100% of the data packages will undergo data verification and data review, 90%  
27 to Stage 2B, and 10% to Stage 4.

#### 28 **4.3.4 Data Assessment**

29 Limitations on data usability will be assigned, if appropriate, as a result of the validation process  
30 described earlier. The results of the data validation will be discussed in a separate report so that  
31 overall data quality can be verified through the precision, accuracy, representativeness,  
32 comparability, and completeness of sample results.

#### 33 **4.4 CHAIN OF CUSTODY**

34 For each sample, COC forms will be completed and will accompany each sample at all times.  
35 Data on the COC form will include the sample identification (ID) (as described in **Section 4.9**),  
36 depth interval, date sampled, time sampled, project name, project number, and signatures of  
37 those in possession of the sample. The COC forms will accompany those samples shipped to the  
38 designated laboratory so that sample possession information can be maintained. The field team will  
39 retain a separate copy of the COC form at the field office. Additionally, the sample ID, date and  
40 time collected, collection location, and analysis requested will be documented in the field  
41 logbook as discussed in **Section 4.6**.

1 **4.5 PACKAGING AND SHIPPING PROCEDURES**

2 All samples will be shipped by overnight air freight to the laboratory. Soil samples will be treated  
3 as environmental samples, shipped in heavy duty coolers, packed in materials (e.g., bubble wrap)  
4 to prevent breakage. SUMMA canisters will be shipped in cardboard boxes. Each shipment will  
5 include the appropriate field QC samples (e.g., field duplicates and equipment blanks). Trip blanks  
6 and ice cooler preservation are not applicable for soil vapor sampling with SUMMA canisters.  
7 Corresponding COC forms will be placed in waterproof bags and taped to the inside of the shipping  
8 container. All coolers/boxes will be taped shut and a custody seal will be placed over the tape to  
9 prevent tampering.

10 **4.6 SAMPLE DOCUMENTATION**

11 Sample control and tracking information will be recorded in bound dedicated field logbooks and  
12 will include the following information: sample identification number and location, date, sampler's  
13 name, method of sampling, sample depth, SUMMA canister number, sampling start and end time,  
14 initial and end vacuum reading of the SUMMA canisters, ambient weather conditions, shut-in  
15 test results, information about leak check compounds used, and miscellaneous  
16 observations. An example sample form for soil vapor sampling is included in **Appendix B.2**. At the  
17 conclusion of each day in the field, the sampling team leader will review each page of the logbook  
18 for errors and omissions. The sampling team leader will then date and sign each reviewed page.

19 **4.7 FIELD INSTRUMENT CALIBRATION**

20 All field instruments will be calibrated following manufacturer recommended calibration  
21 procedures and frequencies. Field instrument calibrations will be recorded in a designated portion  
22 of the field logbook at the time of the calibration. Adverse trends in instrument calibration behavior  
23 will be corrected.

24 **4.8 SURVEY OF SAMPLE LOCATIONS**

25 The location of each sample collected will be surveyed using appropriate instrumentation and  
26 procedures to obtain horizontal accuracy of less than 0.1 foot. A Trimble Total Station Global  
27 Positioning System (GPS), Trimble Static GPS, or equivalent, will be utilized to document each  
28 soil sample location. A North American Datum 1983 Northing and Easting in U.S. Survey Feet  
29 will be established for all surveyed points and recorded in a dedicated field notebook. Survey data  
30 will be supplied in the Final Report in New Mexico State Plane and Universal Transverse Mercator  
31 Index coordinates.

32 **4.9 SAMPLE IDENTIFICATION**

33 During sampling, unique sample ID numbers will be assigned to each sample or subsample. Each  
34 sample ID number will consist of a combination of the Parcel number, SWMU/AOC number,  
35 additional site identifier, source of sample, increment or boring number, type of sample, and depth  
36 of sample collection. Following is an example sample number and a description of the sample  
37 identifiers to be used during implementation of this Work Plan.

1 **Example Sample ID:** 1145BLDG6-SV01-5D-SV-062024

2 Parcel: 11

3 SWMU or AOC: SWMU 45

4 Additional Sample Location Identifier related to nearby Buildings: BLDG6 (Building 6)

5 Boring type: SV (soil vapor probe)

6 Increment Number: Samples collected within Parcel 11 will be assigned sequential 2-digit or  
7 3-digit numbers (in this case 01)

8 Depth Range: In feet (in this case 5 feet)

9 Type of Sample: D (discrete)

10 Matrix: SV (soil vapor) or SO (soil)

11 Date (MMYYYY): date (in this case 06/2024), for soil vapor samples only

12 QA/QC samples will carry the same sample nomenclature as the parent sample with a unique  
13 suffix and numeral (if required) to distinguish individual samples. Trip blanks and field blanks are  
14 not applicable to soil vapor sampling with SUMMA canisters, but are applicable for soil samples.  
15 Equipment blanks are applicable for any re-usable equipment that potentially comes into contact  
16 with contaminated media. Field duplicate samples will carry the sample location identifier with  
17 an additional designation of XXFD (where XX represents the sequence or increment number of  
18 the sample, such as 1145BLDG6-SV01FD-5D-SV-062024 for the above example sample ID).

19 **4.10 INVESTIGATION-DERIVED WASTE**

20 Three types of IDW may be generated during the sampling of environmental media during the  
21 Administration Area Soil Vapor Investigation activities: residual soil volume, decontamination  
22 fluids, and disposable sampling equipment/PPE. Proper management of this IDW is required to  
23 ensure compliance with federal, state, and Army regulations applicable to the collection, storage,  
24 transport, and disposal of potentially hazardous materials. Required IDW management measures  
25 for FWDA investigations or remedial activities will be waste segregation, containerization and  
26 labeling, temporary storage, waste characterization, and disposal.

27 These three IDW categories will be managed as follows:

- 28 1. Soil that remains after required samples have been collected will be emptied from sampling  
29 sleeves and placed in lidded steel 55-gallon drums for appropriate characterization and  
30 disposal. IDW drums will be placed on secondary containment pallets for temporary  
31 storage.
- 32 2. Small volumes of decontamination fluids are anticipated. Decontamination fluids will be  
33 contained within the temporary decontamination pad areas during active sampling and  
34 decontamination activities at a site. Accumulated wash and rinse water will then be  
35 containerized in lidded steel 55-gallon drums and combined with fluids produced during  
36 drilling activities for appropriate characterization and disposal.
- 37 3. Used, disposable sampling equipment and PPE are anticipated. Field personnel will place  
38 these items in polyethylene trash bags and treat them as general refuse. Field personnel will  
39 place refuse in suitable on-site covered trash receptacles daily.



## 5.0 POST-IMPLEMENTATION ACTIVITIES

The data collected from this investigation will be used to refine the previous soil contamination data from past releases of VOCs and TPH and identify areas where soil vapor migration pathway is potentially complete. The purpose of this Work Plan is to complete Step 1 of the vapor intrusion assessment in NMED's (2022c) tiered approach to human health risk assessments. That is, the maximum detected concentrations detected in soil vapor will be compared against the NMED VISLs. Then, USACE will determine what additional steps, if any, are required.

### 5.1 CONCEPTUAL SITE MODEL

While there is not yet enough data to develop a conceptual site model (CSM), a preliminary CSM was prepared in accordance with the human health risk assessment guidance (NMED, 2022c) and is described below. The primary source of potential contaminants is the release of VOCs and TPH from former USTs located near Building 6. The primary release mechanism was VOCs and TPH leaking from former USTs that impacted surrounding soils and groundwater. The primary source (the USTs) has been removed, but secondary sources of potential contaminants (impacted subsurface soils) remain in place. While impacted soil remains in place, it is generally below 15 ft bgs and, therefore, is too deep for the direct contact soil exposure pathway to be complete.

Transport mechanisms may include leaching and infiltration to subsurface soil and groundwater and volatilization of contaminants in subsurface soil to air. Due to the presence of contaminants in groundwater below Building 6, it is assumed that contamination has leached from the secondary soil source at Building 6 to groundwater. At present, groundwater impacted by contaminants from Building 6 is not used as a drinking water source and does not discharge to the surface. The focus of this investigation is the impacts to soil and the soil vapor migration pathway. Potential exposure pathways other than inhalation of volatiles that have migrated to indoor air from soil vapor will be addressed in the Parcel 11 Phase 2 RFI Report. The pathway for receptors to be exposed to contamination remaining from historical activities conducted at FWDA via the inhalation of volatiles that have migrated to indoor air from soil vapor is currently incomplete. In the future, this pathway may be potentially complete if buildings were to be constructed without a vapor barrier.

### 5.2 SELECTION OF SCREENING LEVELS

Soil vapor is the only sample matrix that will be evaluated in the Administration Area Soil Vapor Investigation Report. This section describes how screening levels will be selected for comparison to the data that is collected from the work proposed in this Work Plan. The hierarchy of soil vapor screening levels is provided below:

1. Screening levels published in Appendix A and Table 6-5 of the NMED (2022c) risk guidance will be selected as the screening levels. Both carcinogenic and noncarcinogenic endpoints will be evaluated for those analytes exhibiting both types of effect.
2. For analytes without an NMED VISL, VISLs calculated using the USEPA VISL calculator for residential receptors will be selected (USEPA, 2023a). The USEPA VISLs are based on a noncancer endpoint corresponding to the NMED target hazard quotient (HQ) of 1.0 for noncarcinogenic analytes. The USEPA VISLs based on a cancer endpoint will be adjusted to a cancer risk of  $1 \times 10^{-5}$  for consistency with NMED.

1 Analytes without screening levels published by NMED or USEPA will be evaluated using  
2 surrogate analytes that are structurally similar or that provide a conservative estimate of toxicity, as  
3 appropriate. As indicated in **Table 4.5**, four compounds on the analyte list required the use of  
4 surrogates. Surrogates in **Table 4.5** are meant to provide an approximate evaluation of the  
5 potential for risk from a particular compound. The implications of using surrogates will be  
6 discussed in the Uncertainty Section of the Administration Area Soil Vapor Investigation Report.

### 7 **5.3 PRELIMINARY DATA EVALUATION**

8 The preliminary soil vapor analytical results will be evaluated to determine whether there are  
9 exceedances of the VISLs (see **Section 5.2**). The soil vapor sample results will be compared to the  
10 VISLs in a table for USACE review. If volatiles are detected in soil vapor at concentrations  
11 exceeding residential VISLs, step-out sampling will be required to delineate the extent. If step-out  
12 sampling is warranted, the field sampling approach will be modified for additional field sampling  
13 prior to initiation of reporting. If soil vapor concentrations do not exceed the VISLs, USACE will  
14 determine what steps, if any, are necessary to complete NMED's tiered approach for a human  
15 health risk assessment (NMED, 2022c).

### 16 **5.4 REPORTING**

17 All activities conducted as part of this Work Plan will be documented in an Administration Area  
18 Soil Vapor Investigation Report. The report will contain, at a minimum, a detailed schedule of  
19 completed activities, field methods, deviations from approved work plan, a summary of analytical  
20 data, and an evaluation of data comparing results to the appropriate screening levels (see **Section**  
21 **5.1**). All soil vapor analytical results will be compared with residential VISLs, and a  
22 recommendation will be made as to whether Steps 2 through 4 of NMED (2022c) guidance for  
23 evaluating the vapor intrusion path and/or a human health risk assessment is warranted.

1 **6.0 SCHEDULE**

2 The approximate schedule for conducting the soil vapor investigation activities at the  
3 Administration Area of Parcel 11 is summarized below.

- 4 1. Submittal of Army Draft Final Work Plan – February 2024
- 5 2. Submittal of Final Work Plan to Tribes/NMED – 15 days after receipt of comments from  
6 the Army
- 7 3. Regulatory/Tribal Review – 30 days
- 8 4. Revised Final Work Plan – 15 days after receipt of comments from NMED and Tribes (as  
9 necessary).
- 10 5. Implementation of Fieldwork – Summer and Winter 2024 (two seasonal sampling events)
- 11 6. Implementation of Step-Out Sampling (if necessary) – 120 days after completion of initial  
12 sampling event
- 13 7. Submittal of Army Draft Final Report – 90 days after completion of the investigation  
14 activities, including laboratory reporting, data validation, waste disposal, and site  
15 restoration
- 16 8. Submittal of Final Report to Tribes/NMED – 15 days after receipt of comments from the  
17 Army
- 18 9. Regulatory/Tribal Review – 30 days
- 19 10. Revised Final Report – 15 days after receipt of comments from NMED and Tribes (as  
20 necessary).

*This Page Intentionally Left Blank*

## 7.0 REFERENCES

- AMEC, 2013. *RCRA Facility Investigation Work Plan and Historical Information Summary Document Parcel 7, Fort Wingate Depot Activity*. January 3.
- ASTM, 2009. D5434-09, *Standard Guide for Field Logging of Subsurface Explorations of Soil and Rock*.
- ASTM, 2017. D2488-17e1, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)*.
- DoD, 2019. *General Data Validation Guidelines, Environmental Data Qualification Workgroup*. November.
- DoD, 2021. *Quality Systems Manual (QSM) for Environmental Laboratories. Final*. Version 5.4.
- Eco, 2023a. *Groundwater Periodic Monitoring Report, January through June 2022, Fort Wingate Depot Activity*. March.
- Eco, 2023b. *Groundwater Periodic Monitoring Report, July through December 2022, Fort Wingate Depot Activity*. November.
- Envirotech, 1993. *Underground Storage Tank Closure, Fort Wingate Army Depot, Fort Wingate*. February.
- HDR, 2023. *Final Northern Area Groundwater RCRA Facility Investigation Report, Revision 3*. June 30.
- NMED, 2015. Resource Conservation and Recovery Act Permit, EPA ID No. NM 6213820974. New Mexico Environment Department Hazardous Waste Bureau, December 1, 2005, revised February 2015.
- NMED, 2022a. *Disapproval, Final Northern Area Groundwater RCRA Facility Investigation Report, Fort Wingate Depot Activity*. New Mexico Environment Department. January 25.
- NMED, 2022b. *Second Disapproval, [Revised] Final Northern Area Groundwater RCRA Facility Investigation Report, Fort Wingate Depot Activity*. New Mexico Environment Department. July 25.
- NMED, 2022c. *Risk Assessment Guidance for Site Investigations and Remediation. Volume I Soil Screening Guidance for Human Health Risk Assessments*. NMED Hazardous Waste Bureau. November.
- NMED, 2023a. *Third Disapproval, Final Northern Area Groundwater RCRA Facility Investigation Report [Revision 2], Fort Wingate Depot Activity*. New Mexico Environment Department. March 27.
- NMED, 2023b. *Approval with Modifications, Final Northern Area Groundwater RCRA Facility Investigation Report Revision 3, Fort Wingate Depot Activity*. New Mexico Environment Department. October 19.

- 1  
2 TPMC, 2009. *Summary Report of Historical Information, Parcel 11, Fort Wingate Depot Activity.*  
3 June 19.
- 4 USACE, 1993. *Investigation of Soils Contamination, Fort Wingate Army Depot Activity.* Draft.  
5 June.
- 6 USACE, 2014. *Final RCRA Facility Investigation Report, Parcel 11, Revision 2, Fort Wingate*  
7 *Depot Activity McKinley County, New Mexico.* May 23, 2014.
- 8 US Army, 2023. Phase 3, Limit of Detection / Limit of Quantitation Submission in Support of  
9 Analytical Performance Concerns at FWDA, Fort Wingate Depot Activity, McKinley  
10 County, New Mexico. April 24, 2023.
- 11 USEPA, 1999a. *Air Method, Toxic Organics-15 (TO-15): Compendium of Methods for the*  
12 *Determination of Toxic Organic Compounds in Ambient Air, Second Edition:*  
13 *Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-*  
14 *Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS).*  
15 EPA 625/R-96/010b.
- 16 USEPA, 1999b. *Air Method, Toxic Organics-3 (TO-3): Method for Determination of Volatile*  
17 *Organic Compounds in Ambient Air Using Cryogenic Preconcentration Techniques and*  
18 *Gas Chromatography with Flame Ionization and electron Capture Detection.*
- 19 USEPA, 2003. *Method 8015D: Nonhalogenated Organics Using GC/FID, Revision 4.*
- 20 USEPA, 2018. *Method 8260D: Volatile Organic Compounds by Gas Chromatography/Mass*  
21 *Spectrometry (GC/MS), Revision 4.*
- 22 USEPA, 2023a. *Vapor Intrusion Screening Levels (VISL) Calculator.* Available online at:  
23 [https://epa-visl.ornl.gov/cgi-bin/visl\\_search](https://epa-visl.ornl.gov/cgi-bin/visl_search).
- 24 USEPA, 2023b. *Regional Screening Levels (RSLs).* U.S. Environmental Protection Agency.  
25 November.

## **TABLES**

*This Page Intentionally Left Blank*



**Table 2.1 – USTs Removed from the Building 6 Area**

<b>Tank Number</b>	<b>Product Stored</b>	<b>Location</b>	<b>Tank Size</b>
Tank #1	Leaded Gasoline	West of Building 6	11,750 gallon
Tank #2	Unleaded Gasoline	West of Building 6	11,750 gallon
Tank #3	Diesel	South of Building 6	11,750 gallon
Tank #4	Kerosene	North of Building 6	1,000 gallon

**Acronyms and Definitions:**

UST = underground storage tank

**Source:**

Envirotech. 1993. Underground Storage Tank Closure, Fort Wingate Army Depot , Fort Wingate, New Mexico. February.

*This Page Intentionally Left Blank*

**Table 2.2 – 1993 UST Removal Confirmation Sample Results**

Sample Location			Diesel Pump Area	Unleaded Pump Area	13'6" N of Diesel Tank	8' N of Diesel Tank	Under Unleaded Lines	Tank #4 E End	Tank #4 W End	Tank #1 S End	Tank #1 N End	Tank #3 E End	Tank #3 W End	Tank #2 N End	Tank #2 S End
depth (ft bgs)			?	?	13.5	8	?	6?	6?	15	15	14.5	14.5	15	14
SampleID			4471	4472	4473	4474	4475	4518	4519	4520	4521	4522	4523	4524	4525
Method	Chemical	Units	1/14/1993	1/14/1993	1/14/1993	1/14/1993	1/14/1993	1/19/1993	1/19/1993	1/19/1993	1/19/1993	1/19/1993	1/19/1993	1/19/1993	1/19/1993
8020	Benzene	mg/kg	--	8.8	5.6	45.6	6.8	--	--	0.62	0.191	--	--	0.139	0.121
8020	Toluene	mg/kg	--	2.14	1.64	298.9	174.4	--	--	1.47	0.920	--	--	0.620	0.59
8020	Ethylbenzene	mg/kg	--	<0.079	12.6	280.9	110.2	--	--	8.10	0.214	--	--	0.0255U	0.0255U
8020	Xylenes (total)	mg/kg	--	80.6	46.2	707.4	304.6	--	--	15.6	0.545	--	--	0.290	0.329
8015	TPHg (C5-C10)	mg/kg	3.1	1,170	530	4,100	1,350	2.8	0.9	188	3.0	--	--	2.0	2.5
8015	TPHd (C10-C28)	mg/kg	369	1,480	500	2,160	960	232	40.8	510	21.9	--	--	13.8	8.2
8015	TPHo (C28-C36)	mg/kg	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	--	--	0.1 U	0.1 U
8015	Calculated Total TPH	mg/kg	372	2,650	1,030	6,300	2,310	235	41.7	700	25.0	--	--	15.8	10.7
418.1	Total TPH	mg/kg	--	--	--	--	--	--	--	--	--	10 U	13.8	--	--
Field	Photoionization Detector	ppmv	--	--	--	--	--	--	--	889	349	42	91	148	573

**Acronyms and Definitions:**

-- = not analyzed  
ft bgs = feet below ground surface  
mg/kg = milligrams per kilogram  
ND = not detected  
ppmv = parts per million by volume  
TPH = total petroleum hydrocarbons  
TPHg = TPH as gasoline range organics  
TPHd = TPH as diesel range organics  
TPHo = TPH as oil range organics  
U = not detected at the indicated detection limit  
UST = underground storage tank

**Source:**

Envirotech. 1993. Underground Storage Tank Closure, Fort Wingate Army Depot, Fort Wingate, New Mexico. February.

*This Page Intentionally Left Blank*

**Table 2.3 – 1993 UST Investigation PID Results**

Sample Location	FW-1	FW-2	FW-3	FW-4	FW-5	FW-6	FW-7	FW-8	FW-9	FW-10	FW-11	FW-12	FW-13	FW-14	FW-15	FW-16
Depth (ft bgs)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)	(ppmv)
10-15	<b>782</b>	5.2	6.7	37.8	<b>628</b>	68.5	130	44	8.2	24.1	83.4	17.7	<b>470</b>	4.5	42.2	19.5
15-20	<b>3,418</b>	<b>165</b>	<b>974</b>	6.1	<b>290</b>	45.9	<b>188</b>	31.7	5.6	18.9	84.2	13.9	<b>833</b>	3.9	14.6	<b>117</b>
20-25	<b>4,029</b>	<b>596</b>	<b>492</b>	32	<b>484</b>	52.8	<b>230</b>	122	7.2	45.7	86.7	11.4	<b>479</b>	3.4	49.3	<b>180</b>
25-30	<b>3,450</b>	<b>637</b>	<b>241</b>	95.2	<b>894</b>	104	<b>451</b>	34.8	6.3	27.7	<b>239</b>	69.2	<b>405</b>	4.4	32.6	64.8
30-35	<b>1,987</b>	36.3	3.1	37.4	<b>4,035</b>	81	<b>2,956</b>	79	12	28.8	<b>1,285</b>	37	<b>1,103</b>	3.5	62.2	31.9
35-40	27.6	10.9	2.4	11	35.9	-	24.4	141	7.3	10.3	<b>328</b>	31.4	<b>769</b>	1.1	31.5	<b>240</b>
40-45	22.6	1.6	0	3.4	4.5	22.7	4	7.5	10.4	3.4	5.4	23.7	6.3	0	79.3	15
45-50	22.6	1.5	--	2.3	4.4	47.6	7.1	--	7.2	--	4.5	16.8	10.0	1.8	45	28
50-55	3.8	--	--	--	--	7.4	--	--	--	--	--	4.3	20.8	0	32.7	21.1
55-60	7.8	--	--	--	--	--	--	--	--	--	--	--	3.5	--	50.6	92
60-65	--	--	--	--	--	--	--	--	--	--	--	--	11.4	--	41	--
65-70	--	--	--	--	--	--	--	--	--	--	--	--	4.6	--	16	--

**Acronyms and Definitions:**

Bold = results above 150 ppmv are in **bold**. This is 1.5 times the threshold for petroleum contamination specified in New Mexico Administrative Code 20.5.119.1908.B

-- = not analyzed

ft bgs = feet below ground surface

PID = photoionization detector

ppmv = parts per million by volume

UST = underground storage tank

**Source:**

USACE. 1993. Investigation of Soils Contamination, Fort Wingate Army Depot Activity, Gallup, New Mexico. June. Draft.

*This Page Intentionally Left Blank*

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-001D-S	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 FD 1151BLDG6-15-001DU	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 SPS 1151BLDG6-15-001T	1145BLDG6-SB01-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-002D-S	1145BLDG6-SB01-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-003D-S	1145BLDG6-SB02-15D-SO 2010/03/30 15 - 15_5 N 1151BLDG6-15-004D-S	1145BLDG6-SB02-30D-SO 2010/03/30 30 - 30_5 N 1151BLDG6-30-005D-S
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	<b>130 J</b>	<b>150 J</b>	0.37 U	<b>1.5 J</b>	0.85 UJ	<b>5.9</b>	<b>3.3 J</b>
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	0.19 UJ	0.19 UJ	-	0.18 UJ	0.17 UJ	<b>22</b>	<b>11</b>
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	-	-	-	-	-	-	-
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00029 UJ	0.0003 U	-	0.00029 UJ	0.00025 UJ	0.00034 UJ	0.00026 UJ
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00044 UJ	0.00046 U	-	0.00044 UJ	0.00038 UJ	0.00052 UJ	<b>0.026 J</b>
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00032 UJ	0.00033 UJ	0.00026 U	0.00032 UJ	0.00028 UJ	0.00038 UJ	0.00029 UJ
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.0003 UJ	0.00031 U	0.00032 U	0.0003 UJ	0.00026 UJ	0.00035 UJ	0.00027 UJ
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00035 UJ	0.00036 U	0.0003 U	0.00035 UJ	0.0003 UJ	0.00042 UJ	0.00031 UJ
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00026 U	0.00027 U	-	0.00026 U	0.00022 U	0.00031 UJ	0.00023 UJ
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.0005 UJ	0.00052 U	0.00063 U	0.0005 UJ	0.00044 UJ	0.0006 UJ	0.00045 UJ
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00012 UJ	0.00012 U	0.00043 U	0.00012 UJ	0.0001 UJ	0.00014 UJ	0.00011 UJ
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00034 UJ	0.00035 U	0.0004 U	0.00034 UJ	0.00029 UJ	0.0004 UJ	0.0003 UJ
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00031 UJ	0.00032 U	-	0.00031 UJ	0.00027 UJ	0.00037 UJ	0.00028 UJ
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00043 UJ	0.00045 UJ	-	0.00043 UJ	0.00037 UJ	0.00051 UJ	0.00039 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00046 UJ	0.00048 U	0.00062 U	0.00046 UJ	0.0004 UJ	0.00055 UJ	0.00042 UJ
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00042 UJ	0.00043 UJ	-	0.00042 UJ	0.00036 UJ	0.0005 UJ	0.00038 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.00033 UJ	0.00034 U	-	0.00033 UJ	0.00029 UJ	<b>1.2 J</b>	<b>1.1 J</b>
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.00034 UJ	0.00036 U	0.0013 U	0.00034 UJ	0.0003 UJ	0.00041 UJ	0.00031 UJ
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.0003 UJ	0.00031 UJ	0.00048 U	0.0003 UJ	0.00026 UJ	0.00035 UJ	0.00027 UJ
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00026 UJ	0.00027 U	-	0.00026 UJ	0.00022 UJ	0.00031 UJ	0.00023 UJ
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.0004 UJ	0.00042 U	0.00041 U	0.0004 UJ	<b>0.026 J</b>	0.00048 UJ	0.00036 UJ
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00032 UJ	0.00033 U	0.00035 U	0.00031 UJ	0.00027 UJ	0.00037 UJ	0.00028 UJ
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00033 UJ	0.00034 U	-	<b>0.0023 J</b>	0.00028 UJ	<b>0.44 J</b>	<b>0.4 J</b>
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00028 UJ	0.00029 U	-	0.00027 UJ	0.00024 UJ	0.00033 UJ	0.00025 UJ
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00029 UJ	0.0003 UJ	-	0.00029 UJ	0.00025 UJ	0.00035 UJ	0.00026 UJ
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00045 UJ	0.00046 U	-	0.00045 UJ	0.00039 UJ	0.00053 UJ	0.0004 UJ
8260B	1,4-Dioxane	123-91-1	mg/kg	0.032 U	0.033 U	0.025 U	0.032 U	0.028 U	0.038 UJ	0.029 UJ
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00045 UJ	0.00046 U	-	0.00045 UJ	0.00039 UJ	0.00053 UJ	0.0004 UJ
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.00028 UJ	0.00029 U	-	<b>0.00044 J</b>	0.00024 UJ	0.00033 UJ	<b>0.047 J</b>
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00025 U	0.00026 U	-	0.00025 U	0.00022 U	0.0003 UJ	0.00023 UJ
8260B	2-Butanone	78-93-3	mg/kg	0.001 U	0.0011 UJ	0.00043 U	<b>0.0036 J</b>	0.00091 U	0.0012 UJ	0.00094 UJ
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	0.00043 U	-	-	-	-
8260B	2-Hexanone	591-78-6	mg/kg	0.0028 UJ	0.0029 U	0.00029 U	0.0028 UJ	0.0024 UJ	0.0033 UJ	0.0025 UJ
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00019 UJ	0.0002 U	-	0.00019 UJ	0.00017 UJ	0.00023 UJ	0.00018 UJ
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0025 U	0.0026 U	0.00036 U	0.0025 U	0.0022 U	0.003 UJ	0.0022 UJ
8260B	Acetone	67-64-1	mg/kg	0.0031 UJ	0.0032 UJ	<b>0.0089 J</b>	0.0031 U	0.0027 U	<b>0.11 J</b>	<b>0.062 J</b>
8260B	Acetonitrile	75-05-8	mg/kg	-	-	0.0043 U	-	-	-	-
8260B	Acrolein	107-02-8	mg/kg	-	-	0.0032 U	-	-	-	-

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB02-45D-SO 2010/03/30 45 - 45_5 N 1151BLDG6-45-006D-S	1145BLDG6-SB03-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-007D-S	1145BLDG6-SB03-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-008D-S	1145BLDG6-SB03-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-009D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 N 1151BLDG6-15-010D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 FD 1151BLDG6-15-010DU	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 SPS 1151BLDG6-15-010T
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	2.2 J	2.1 J	1.2 J	0.76 UJ	1.6 J	1.4 J	0.41 U
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	0.17 UJ	0.18 UJ	0.19 UJ	0.17 UJ	0.2 UJ	0.18 UJ	-
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	-	-	-	-	-	-	-
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00025 U	0.00031 UJ	0.00031 UJ	0.00027 UJ	0.00025 U	0.00034 U	-
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00038 U	0.00048 UJ	0.00093 J	0.00042 UJ	0.00039 U	0.00052 U	-
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00028 U	0.00035 UJ	0.00035 UJ	0.00031 UJ	0.00028 U	0.00038 U	0.017 U
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00026 U	0.00033 UJ	0.00032 UJ	0.00029 UJ	0.00026 U	0.00035 U	0.012 U
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0003 U	0.00038 UJ	0.00038 UJ	0.00033 UJ	0.00031 U	0.00041 U	0.018 U
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00022 U	0.00028 U	0.00028 U	0.00025 U	0.00023 U	0.0003 U	-
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00043 U	0.00055 UJ	0.00055 UJ	0.00048 UJ	0.00044 U	0.00059 U	0.036 U
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.0001 U	0.00013 UJ	0.00013 UJ	0.00012 UJ	0.00011 U	0.00014 U	0.012 U
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00029 U	0.00037 UJ	0.00037 UJ	0.00032 UJ	0.0003 U	0.0004 U	0.029 U
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00027 U	0.00034 UJ	0.00034 UJ	0.0003 UJ	0.00027 U	0.00036 U	-
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00037 UJ	0.00047 UJ	0.00047 UJ	0.00041 UJ	0.00038 U	0.0005 U	-
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.0004 U	0.00051 UJ	0.00051 UJ	0.00044 UJ	0.00041 U	0.00054 U	0.063 U
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00036 UJ	0.00046 UJ	0.00046 UJ	0.0004 UJ	0.00037 U	0.00049 U	-
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.00029 U	0.00036 UJ	0.00036 UJ	0.00032 UJ	0.00029 U	0.00039 U	-
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.0003 U	0.00038 UJ	0.00037 UJ	0.00033 UJ	0.0003 U	0.0004 U	0.08 U
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00026 U	0.00033 UJ	0.00032 UJ	0.00029 UJ	0.00026 U	0.00035 U	0.021 U
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00022 U	0.00028 UJ	0.00028 UJ	0.00025 UJ	0.00023 U	0.0003 U	-
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.077	0.00044 UJ	0.0044 J	0.018 J	0.00035 U	0.00047 U	0.013 U
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00029 J	0.00035 UJ	0.00034 UJ	0.0003 UJ	0.00028 U	0.00037 U	0.019 U
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00028 U	0.00036 UJ	0.0079 J	0.00031 UJ	0.00029 U	0.00038 U	-
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00024 U	0.0003 UJ	0.0003 UJ	0.00026 UJ	0.00024 U	0.00032 U	-
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00025 U	0.00032 UJ	0.00032 UJ	0.00028 UJ	0.00026 U	0.00034 U	-
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00038 U	0.00049 UJ	0.00049 UJ	0.00043 UJ	0.00039 U	0.00052 U	-
8260B	1,4-Dioxane	123-91-1	mg/kg	0.028 U	0.035 U	0.035 U	0.031 U	0.028 U	0.038 U	2.4 U
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00038 U	0.00049 UJ	0.00049 UJ	0.00043 UJ	0.00039 U	0.00052 U	-
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.00024 U	0.00031 UJ	0.0016 J	0.00027 UJ	0.00025 U	0.00033 U	-
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00022 U	0.00028 U	0.00027 U	0.00024 U	0.00022 U	0.0003 U	-
8260B	2-Butanone	78-93-3	mg/kg	0.0009 UJ	0.0012 U	0.0017 J	0.001 U	0.0012 J	0.0015 J	0.081 U
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	-	-	-	-	0.011 U
8260B	2-Hexanone	591-78-6	mg/kg	0.0024 U	0.0031 UJ	0.0031 UJ	0.0027 UJ	0.0024 U	0.0033 U	0.015 U
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00017 U	0.00021 UJ	0.001 J	0.00019 UJ	0.00017 U	0.00023 U	-
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0022 U	0.0027 U	0.0027 U	0.0024 U	0.0022 U	0.0029 U	0.025 U
8260B	Acetone	67-64-1	mg/kg	0.0027 UJ	0.0034 U	0.0034 U	0.0029 UJ	0.0027 U	0.0038 J	0.1 U
8260B	Acetonitrile	75-05-8	mg/kg	-	-	-	-	-	-	0.099 U
8260B	Acrolein	107-02-8	mg/kg	-	-	-	-	-	-	0.11 U



**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB04-30D-SO 2010/04/02 30 - 30_5 N 1151BLDG6-30-011D-S	1145BLDG6-SB04-45D-SO 2010/04/02 45 - 45_5 N 1151BLDG6-45-012D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 N 1151BLDG6-15-013D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 FD 1151BLDG6-15-013DU	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 SPS 1151BLDG6-15-013T	1145BLDG6-SB05-30D-SO 2010/04/06 30 - 30_5 N 1151BLDG6-30-014D-S	1145BLDG6-SB05-45D-SO 2010/04/06 45 - 45_5 N 1151BLDG6-45-015D-S
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	<b>1.4 J</b>	0.78 U	<b>1.2 J</b>	0.8 U	0.4 U	<b>3.2 J</b>	0.85 U
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	<b>8.5</b>	0.17 UJ	0.19 UJ	0.25 UJ	-	<b>23 J</b>	0.2 UJ
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	-	-	-	-	-	-	-
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00031 U	0.00027 U	0.00033 U	0.00032 U	-	0.00044 UJ	0.00031 U
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	<b>0.0064</b>	0.00041 U	0.00051 U	0.00049 U	-	<b>0.026 J</b>	<b>0.00066 J</b>
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00035 U	0.0003 U	0.00037 U	0.00036 U	0.00029 U	0.0005 UJ	0.00034 U
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00032 U	0.00028 U	0.00035 UJ	0.00033 UJ	0.00035 U	0.00046 UJ	0.00032 UJ
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00038 U	0.00032 U	0.00041 U	0.00039 U	0.00033 U	0.00054 UJ	0.00038 U
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00028 U	0.00024 U	0.0003 U	0.00029 U	-	0.0004 UJ	0.00028 U
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00055 U	0.00047 U	0.00059 U	0.00056 U	0.00069 U	0.00078 UJ	0.00054 U
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00013 U	0.00011 U	0.00014 UJ	0.00013 UJ	0.00047 U	0.00019 UJ	0.00013 UJ
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00037 U	0.00031 U	0.00039 U	0.00038 U	0.00044 U	0.00052 UJ	0.00036 U
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00034 U	0.00029 U	0.00036 UJ	0.00034 UJ	-	0.00048 UJ	0.00033 UJ
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00047 U	0.0004 U	0.0005 UJ	0.00048 UJ	-	0.00066 UJ	0.00046 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00051 U	0.00043 U	0.00054 U	0.00052 U	0.00067 U	0.00072 UJ	0.0005 U
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00046 U	0.00039 U	0.00049 UJ	0.00047 UJ	-	0.00065 UJ	0.00045 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	<b>0.047</b>	0.00031 U	0.00039 U	0.00037 U	-	<b>0.48 J</b>	<b>0.00055 J</b>
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.00037 U	0.00032 U	0.0004 U	0.00038 U	0.0014 U	0.00053 UJ	0.00037 U
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00032 U	0.00028 U	0.00035 U	0.00033 U	0.00052 U	0.00046 UJ	0.00032 U
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00028 U	0.00024 U	0.0003 UJ	0.00029 UJ	-	0.0004 UJ	0.00028 UJ
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.00044 U	<b>0.019</b>	0.00047 UJ	0.00045 UJ	0.00045 U	0.00062 UJ	<b>0.039 J</b>
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00034 U	0.00029 U	0.00037 UJ	0.00035 UJ	0.00038 U	0.00049 UJ	0.00034 UJ
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	<b>0.047</b>	0.0003 U	0.00038 U	0.00036 U	-	<b>0.16 J</b>	0.00035 U
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.0003 U	0.00025 U	0.00032 UJ	0.00031 UJ	-	0.00042 UJ	0.0003 UJ
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00032 U	0.00027 U	0.00034 UJ	0.00033 UJ	-	0.00045 UJ	0.00031 UJ
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00049 U	0.00041 U	0.00052 UJ	0.0005 UJ	-	0.00069 UJ	0.00048 UJ
8260B	1,4-Dioxane	123-91-1	mg/kg	0.035 U	0.03 U	0.037 U	0.036 U	0.027 U	0.05 UJ	0.035 U
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00049 U	0.00041 U	0.00052 UJ	0.0005 UJ	-	0.00069 UJ	0.00048 UJ
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	<b>0.022</b>	0.00026 U	0.00033 UJ	0.00031 UJ	-	<b>0.045 J</b>	0.0003 UJ
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00027 U	0.00023 U	0.00029 UJ	0.00028 UJ	-	0.00039 UJ	0.00027 UJ
8260B	2-Butanone	78-93-3	mg/kg	<b>0.0071 J</b>	<b>0.0044 J</b>	<b>0.0014 J</b>	<b>0.0014 J</b>	0.00047 U	0.0016 UJ	0.0011 U
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	-	-	0.00047 U	-	-
8260B	2-Hexanone	591-78-6	mg/kg	0.0031 U	0.0026 U	0.0033 U	0.0031 U	0.00031 U	0.0043 UJ	0.003 U
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00021 U	0.00018 U	0.00023 U	0.00022 U	-	0.0003 UJ	0.00021 U
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0027 U	0.0023 U	0.0029 U	0.0028 U	0.00039 U	0.0039 UJ	0.0027 U
8260B	Acetone	67-64-1	mg/kg	<b>0.027</b>	0.0029 U	0.0036 U	0.0034 U	0.0078 U	<b>0.046 J</b>	<b>0.0077 J</b>
8260B	Acetonitrile	75-05-8	mg/kg	-	-	-	-	0.0047 U	-	-
8260B	Acrolein	107-02-8	mg/kg	-	-	-	-	0.0035 U	-	-

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB06-15D-SO 2010/04/01 15 - 15_5 N 1151BLDG6-15-016D-S	1145BLDG6-SB06-30D-SO 2010/04/01 30 - 30_5 N 1151BLDG6-30-017D-S	1145BLDG6-SB06-45D-SO 2010/04/01 45 - 45_5 N 1151BLDG6-45-018D-S	1145BLDG6-SB07-15D-SO 2010/04/05 15 - 15_5 N 1151BLDG6-15-019D-S	1145BLDG6-SB07-30D-SO 2010/04/05 30 - 30_5 N 1151BLDG6-30-020D-S	1145BLDG6-SB07-45D-SO 2010/04/05 45 - 45_5 N 1151BLDG6-45-021D-S	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS001D-SO
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	<b>0.89 J</b>	<b>3.9 J</b>	0.82 U	<b>210</b>	<b>16</b>	<b>0.97 J</b>	-
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	0.19 UJ	<b>14</b>	0.19 UJ	<b>3600</b>	<b>55</b>	0.19 UJ	-
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	-	-	-	-	-	-	-
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00028 U	0.00035 UJ	0.00026 U	0.00043 UJ	0.017 U	0.00031 U	0.00027 UJ
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00043 U	<b>0.021 J</b>	0.00041 U	<b>2.9 J</b>	<b>0.73</b>	<b>0.0029 J</b>	0.00041 UJ
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00032 U	0.00039 UJ	0.0003 UJ	0.00048 UJ	0.013 U	0.00034 U	0.0003 UJ
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00029 U	0.00036 UJ	0.00027 UJ	0.00045 U	0.012 U	0.00032 U	0.00028 UJ
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00034 U	0.00042 UJ	0.00032 U	0.00053 UJ	0.018 U	0.00037 U	0.00032 U
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00025 U	0.00031 UJ	0.00024 U	0.00039 U	0.04 U	0.00028 U	0.00024 U
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.0005 U	0.00061 UJ	0.00046 U	0.00076 U	0.017 U	0.00054 U	0.00047 UJ
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00012 U	0.00015 UJ	0.00011 UJ	0.00018 U	0.031 U	0.00013 U	0.00011 UJ
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00033 U	0.00041 UJ	0.00031 U	0.00051 U	0.031 U	0.00036 U	0.00031 UJ
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.0003 U	0.00038 UJ	0.00029 UJ	0.00047 U	0.029 U	0.00033 U	0.00029 UJ
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00042 U	0.00052 UJ	0.0004 U	0.00065 UJ	0.021 U	0.00046 UJ	0.0004 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00046 U	0.00056 UJ	0.00043 UJ	0.0007 UJ	0.029 U	0.0005 U	0.00043 UJ
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00041 U	0.00051 UJ	0.00039 U	0.00063 UJ	0.029 U	<b>0.00076 J</b>	0.00039 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	<b>0.00035 J</b>	<b>1.7 J</b>	0.00031 UJ	<b>98 J</b>	<b>12</b>	0.00035 U	0.00031 UJ
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.00034 U	0.00042 UJ	0.00032 U	0.00052 UJ	0.053 U	0.00037 U	0.00032 U
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00029 U	0.00036 UJ	0.00027 UJ	0.00045 UJ	0.015 U	0.00032 U	0.00028 UJ
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00025 U	0.00031 UJ	0.00024 UJ	0.00039 UJ	0.057 U	0.00028 U	0.00024 UJ
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.00039 U	0.00049 UJ	<b>0.029</b>	0.00061 U	0.015 U	<b>0.12</b>	0.00037 UJ
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00031 U	0.00038 UJ	0.00029 UJ	0.00048 U	0.028 U	0.00034 U	0.00029 UJ
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00032 U	<b>0.13 J</b>	0.0003 U	<b>34 J</b>	<b>4</b>	0.00035 U	0.0003 UJ
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00027 U	0.00033 UJ	0.00025 U	0.00042 UJ	0.025 U	0.00029 U	0.00026 UJ
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00029 U	0.00035 UJ	0.00027 UJ	0.00044 UJ	0.017 U	0.00031 U	0.00027 UJ
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00044 U	0.00054 UJ	0.00041 U	0.00067 UJ	0.015 U	0.00048 U	0.00042 UJ
8260B	1,4-Dioxane	123-91-1	mg/kg	0.032 U	0.039 UJ	0.03 U	0.049 U	1.5 U	0.034 U	0.03 U
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00044 U	0.00054 UJ	0.00041 UJ	0.00067 UJ	0.014 U	0.00048 U	0.00042 UJ
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.00028 U	0.00034 UJ	0.00026 UJ	<b>2.9 J</b>	<b>0.43</b>	<b>0.0027 J</b>	0.00026 UJ
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00025 U	0.00031 UJ	0.00023 U	0.00038 U	0.017 U	0.00027 U	0.00023 UJ
8260B	2-Butanone	78-93-3	mg/kg	0.001 UJ	0.0013 UJ	0.00097 UJ	0.0016 U	0.18 U	0.0011 U	<b>0.002 J</b>
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	-	-	-	-	-
8260B	2-Hexanone	591-78-6	mg/kg	0.0028 U	0.0034 UJ	0.0026 U	0.0042 U	0.13 U	0.003 U	0.0026 U
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00019 U	<b>0.00073 J</b>	0.00018 U	0.00029 U	0.031 U	0.00021 U	0.00018 UJ
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0025 U	0.003 UJ	0.0023 U	0.0038 U	0.14 U	0.0027 U	0.0023 U
8260B	Acetone	67-64-1	mg/kg	0.003 U	<b>0.037 J</b>	0.0028 U	0.0047 U	0.24 U	<b>0.065</b>	0.0029 U
8260B	Acetonitrile	75-05-8	mg/kg	-	-	-	-	-	-	-
8260B	Acrolein	107-02-8	mg/kg	-	-	-	-	-	-	-

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 FD 1149AOC49-SS001DUP-SO	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 SPS 1149AOC49-SS001TRIP-	1149DOCK-SB01-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-002D-SO	1149DOCK-SB01-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-003D-SO	1149DOCK-SB02-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS004D-SO	1149DOCK-SB02-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-005D-SO	1149DOCK-SB02-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-006D-SO
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	-	-	-	-	-	-	-
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	-	-	-	-	-	-	-
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00031 UJ	-	0.00041 UJ	0.00037 UJ	0.00035 UJ	0.00031 UJ	0.0003 UJ
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00047 UJ	-	<b>0.0074 J</b>	0.00058 UJ	0.00055 UJ	0.00048 UJ	<b>0.34 J</b>
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00034 UJ	0.00028 U	0.00046 UJ	0.00042 UJ	0.0004 UJ	0.00035 UJ	0.00034 UJ
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00032 UJ	0.00034 U	0.00043 UJ	0.00039 UJ	0.00037 UJ	0.00032 UJ	0.00032 UJ
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00037 U	0.00032 U	0.0005 UJ	0.00046 U	0.00043 U	0.00038 U	0.00037 UJ
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00027 U	-	0.00037 UJ	0.00034 U	0.00032 U	0.00028 U	0.00027 UJ
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00054 UJ	0.00067 U	0.00072 UJ	0.00066 UJ	0.00062 UJ	0.00055 UJ	0.00054 UJ
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00013 UJ	0.00046 U	0.00017 UJ	0.00016 UJ	0.00015 UJ	0.00013 UJ	0.00013 UJ
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00036 UJ	0.00043 U	0.00048 UJ	0.00044 UJ	0.00042 UJ	0.00037 UJ	0.00036 UJ
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00033 UJ	-	0.00044 UJ	0.0004 UJ	0.00038 UJ	0.00034 UJ	0.00033 UJ
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00046 UJ	-	0.00062 UJ	0.00056 UJ	0.00053 UJ	0.00047 UJ	0.00046 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00049 UJ	0.00065 U	0.00067 UJ	0.00061 UJ	0.00057 UJ	0.0005 UJ	0.00049 UJ
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00045 UJ	-	0.0006 UJ	0.00055 UJ	0.00052 UJ	0.00045 UJ	0.00044 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.00035 UJ	-	<b>0.088 J</b>	0.00043 UJ	0.00041 UJ	0.00036 UJ	<b>2.8 J</b>
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.00037 U	0.0013 U	0.00049 UJ	0.00045 U	0.00043 U	0.00037 U	0.00037 UJ
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00032 UJ	0.00051 U	0.00043 UJ	0.00039 UJ	0.00037 UJ	0.00032 UJ	0.00032 UJ
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00027 UJ	-	0.00037 UJ	0.00034 UJ	0.00032 UJ	0.00028 UJ	0.00027 UJ
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.00043 UJ	0.00044 U	0.00057 UJ	0.00052 UJ	0.0005 UJ	0.00044 UJ	0.00043 UJ
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00034 UJ	0.00037 U	0.00045 UJ	0.00041 UJ	0.00039 UJ	0.00034 UJ	0.00033 UJ
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00035 UJ	-	0.00047 UJ	0.00043 UJ	0.0004 UJ	0.00035 UJ	<b>1.1 J</b>
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00029 UJ	-	0.00039 UJ	0.00036 UJ	0.00034 UJ	0.0003 UJ	0.00029 UJ
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00031 UJ	-	0.00042 UJ	0.00038 UJ	0.00036 UJ	0.00032 UJ	0.00031 UJ
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00048 UJ	-	0.00064 UJ	0.00058 UJ	0.00055 UJ	0.00049 UJ	0.00047 UJ
8260B	1,4-Dioxane	123-91-1	mg/kg	0.034 U	0.027 U	0.046 UJ	0.042 U	0.04 U	0.035 U	0.034 UJ
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00048 UJ	-	0.00064 UJ	0.00058 UJ	0.00055 UJ	0.00049 UJ	<b>0.015 J</b>
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.0003 UJ	-	<b>0.0062 J</b>	0.00037 UJ	0.00035 UJ	0.00031 UJ	<b>0.27 J</b>
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00027 UJ	-	0.00036 UJ	0.00033 UJ	0.00031 UJ	0.00027 UJ	0.00027 UJ
8260B	2-Butanone	78-93-3	mg/kg	<b>0.002 J</b>	0.00046 U	<b>0.047 J</b>	<b>0.003 J</b>	<b>0.0022 J</b>	<b>0.002 J</b>	0.0011 UJ
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	0.00045 U	-	-	-	-	-
8260B	2-Hexanone	591-78-6	mg/kg	0.003 U	0.00031 U	0.004 UJ	0.0037 U	0.0035 U	0.003 U	0.003 UJ
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00021 UJ	-	0.00028 UJ	0.00025 UJ	0.00024 UJ	0.00021 UJ	0.00021 UJ
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0027 U	0.00038 U	0.0036 UJ	0.0033 U	0.0031 U	0.0027 U	0.0027 UJ
8260B	Acetone	67-64-1	mg/kg	0.0033 U	0.0076 U	<b>0.051 J</b>	0.004 U	0.0038 U	0.0033 U	0.0033 UJ
8260B	Acetonitrile	75-05-8	mg/kg	-	0.0046 U	-	-	-	-	-
8260B	Acrolein	107-02-8	mg/kg	-	0.0034 U	-	-	-	-	-

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 FD 1105BLDG5-SS001DUP-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS001D-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 SPS 1105BLDG5-SS001TRIP-SO	1105BLDG5-SS002D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS002D-SO	1105BLDG5-SS003D-SO 2010/03/18 2 - 3 N 1105BLDG5-SS003D-SO	1105BLDG5-SS004D-SO 2010/03/18 0_5 - 1 N 1105BLDG5-SS004D-SO	1105BLDG5-SS005D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS005D-SO
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	4 J	5.8	-	2.8 J	1.3 U	17	1.3 U
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	2 J	3.1 J	0.42 U	1.8 J	0.86 U	11	0.87 U
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	0.28 UJ	0.21 UJ	-	0.23 UJ	0.3 UJ	0.22 J	0.3 U
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	6.7 J	8.1 J	0.8 U	5.3 J	5 U	17	5 U
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00042 U	0.00042 UJ	-	0.00027 U	0.0004 UJ	0.00032 UJ	0.00037 U
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00064 U	0.00065 UJ	-	0.00041 U	0.00062 UJ	0.00049 UJ	0.00057 U
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00047 U	0.00047 UJ	0.00047 U	0.0003 U	0.00045 UJ	0.00036 UJ	0.00042 U
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00043 U	0.00044 UJ	0.00029 U	0.00028 U	0.00042 UJ	0.00033 UJ	0.00039 U
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00051 U	0.00052 UJ	0.00055 U	0.00033 U	0.00049 UJ	0.00039 UJ	0.00045 U
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00037 U	0.00038 U	-	0.00024 U	0.00036 UJ	0.00029 U	0.00034 U
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00073 U	0.00075 UJ	0.00045 U	0.00047 U	0.00071 UJ	0.00056 UJ	0.00066 U
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00017 U	0.00018 UJ	0.00046 U	0.00011 U	0.00017 UJ	0.00013 UJ	0.00016 U
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00049 U	0.0005 UJ	0.00029 U	0.00032 U	0.00048 UJ	0.00037 UJ	0.00044 U
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00045 U	0.00046 UJ	-	0.00029 U	0.00044 UJ	0.00034 UJ	0.0004 U
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00062 UJ	0.00064 UJ	-	0.0004 UJ	0.0006 UJ	0.00048 UJ	0.00056 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00067 U	0.00069 UJ	0.0006 U	0.00044 U	0.00065 UJ	0.00051 UJ	0.0006 U
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00061 UJ	0.00062 UJ	-	0.00039 UJ	0.00059 UJ	0.00046 UJ	0.00054 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.00048 U	0.00049 UJ	-	0.00031 U	0.00047 UJ	0.00037 UJ	0.00043 U
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.0005 U	0.00051 UJ	0.00074 U	0.00032 U	0.00048 UJ	0.00038 UJ	0.00045 U
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00043 U	0.00044 UJ	0.00038 U	0.00028 U	0.00042 UJ	0.00033 UJ	0.00039 U
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00037 U	0.00038 UJ	-	0.00024 U	0.00036 UJ	0.00029 UJ	0.00034 U
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.00058 U	0.00059 UJ	0.0004 U	0.00038 U	0.00056 UJ	0.00044 UJ	0.00052 U
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00046 U	0.00047 UJ	0.00046 U	0.0003 U	0.00044 UJ	0.00035 UJ	0.00041 U
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00047 U	0.00048 UJ	-	0.00031 U	0.00046 UJ	0.00036 UJ	0.00042 U
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.0004 U	0.00041 UJ	-	0.00026 U	0.00039 UJ	0.0003 UJ	0.00036 U
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.00042 U	0.00043 UJ	-	0.00027 U	0.00041 UJ	0.00032 UJ	0.00038 U
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00065 U	0.00066 UJ	-	0.00042 U	0.00063 UJ	0.0005 UJ	0.00058 U
8260B	1,4-Dioxane	123-91-1	mg/kg	0.047 U	0.047 U	0.016 U	0.03 U	0.045 UJ	0.036 U	0.042 U
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00065 U	0.00066 UJ	-	0.00042 U	0.00063 UJ	0.0005 UJ	0.00058 U
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.00041 U	0.00041 UJ	-	0.00026 U	0.00039 UJ	0.00031 UJ	0.00037 U
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00037 U	0.00037 UJ	-	0.00024 U	0.00035 UJ	0.00028 UJ	0.00033 U
8260B	2-Butanone	78-93-3	mg/kg	0.0015 U	0.0015 UJ	0.00071 U	0.00098 UJ	0.0015 UJ	0.0012 UJ	0.0014 U
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	0.00038 U	-	-	-	-
8260B	2-Hexanone	591-78-6	mg/kg	0.0041 U	0.0041 UJ	0.00035 U	0.0026 U	0.0039 UJ	0.0031 UJ	0.0036 U
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00028 U	0.00029 UJ	-	0.00018 U	0.00027 UJ	0.00022 UJ	0.00025 U
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0036 U	0.0037 UJ	0.00038 U	0.0023 U	0.0035 UJ	0.0028 UJ	0.0032 U
8260B	Acetone	67-64-1	mg/kg	0.0045 U	0.0046 UJ	0.0081 U	0.0029 U	0.0043 UJ	0.0034 UJ	0.004 U
8260B	Acetonitrile	75-05-8	mg/kg	-	-	0.0043 U	-	-	-	-
8260B	Acrolein	107-02-8	mg/kg	-	-	0.0034 U	-	-	-	-

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1105BLDG5-SS006D-SO 2010/03/18 0 - 0.5 N 1105BLDG5-SS006D-SO	1105BLDG5-SS007D-SO 2010/04/23 0 - 0.5 N 1105BLDG5-SS007D-SO	1105BLDG5-SS019D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS019D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0.5 FD 1105BLDG5-SS020DUP-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0.5 N 1105BLDG5-SS020D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0.5 SPS 1105BLDG5-SS020TRIP-S	1105BLDG5-SS021D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS021D-SO
8015	Diesel Range Organics Extended [C10-C36]	AEC956E	mg/kg	2 J	1.3 U	1.2 U	1.2 U	1.6 J	-	1.1 U
8015	Total petroleum hydrocarbons, diesel fraction	AEC956	mg/kg	1.6 J	0.86 U	0.84 U	0.81 U	0.81 U	0.41 U	0.73 U
8015	Total petroleum hydrocarbons, gas fraction	AEC957	mg/kg	0.24 UJ	0.18 UJ	0.24 UJ	0.21 UJ	0.18 UJ	-	0.23 UJ
8015	Total petroleum hydrocarbons, motor oil	AEC1041	mg/kg	4.8 U	4.9 U	4.8 U	4.7 U	4.7 UJ	45	4.2 U
8260B	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.0003 U	0.00029 UJ	0.0004 UJ	0.00031 UJ	0.00037 UJ	-	0.00038 UJ
8260B	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.00045 U	0.00045 UJ	0.00062 UJ	0.00047 UJ	0.00057 UJ	-	0.00058 UJ
8260B	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00033 U	0.00033 UJ	0.00045 UJ	0.00035 UJ	0.00042 UJ	0.00046 U	0.00042 UJ
8260B	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00031 U	0.00031 U	0.00042 U	0.00032 U	0.00039 U	0.00029 U	0.00039 U
8260B	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00036 U	0.00036 UJ	0.00049 U	0.00038 U	0.00045 U	0.00054 U	0.00046 U
8260B	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.00027 U	0.00027 U	0.00036 U	0.00028 U	0.00033 U	-	0.00034 U
8260B	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00052 U	0.00052 U	0.00071 U	0.00054 U	0.00065 U	0.00044 U	0.00067 U
8260B	1,1-Dichloroethane	75-34-3	mg/kg	0.00012 U	0.00012 U	0.00017 U	0.00013 U	0.00016 U	0.00045 U	0.00016 U
8260B	1,1-Dichloroethene	75-35-4	mg/kg	0.00035 U	0.00035 U	0.00048 U	0.00036 U	0.00044 U	0.00029 U	0.00045 U
8260B	1,1-Dichloropropene	563-58-6	mg/kg	0.00032 U	0.00032 U	0.00044 U	0.00033 U	0.0004 U	-	0.00041 U
8260B	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.00044 UJ	0.00044 UJ	0.0006 UJ	0.00046 UJ	0.00056 UJ	-	0.00057 UJ
8260B	1,2,3-Trichloropropane	96-18-4	mg/kg	0.00048 U	0.00048 UJ	0.00065 UJ	0.0005 UJ	0.0006 UJ	0.00059 U	0.00061 UJ
8260B	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00043 UJ	0.00043 UJ	0.00059 UJ	0.00045 UJ	0.00054 UJ	-	0.00055 UJ
8260B	1,2,4-Trimethylbenzene	95-63-6	mg/kg	0.00034 U	0.00034 UJ	0.00047 UJ	0.00036 UJ	0.00043 UJ	-	0.00044 UJ
8260B	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.00035 U	0.00035 UJ	0.00048 U	0.00037 U	0.00045 U	0.00072 U	0.00045 U
8260B	1,2-Dibromoethane	106-93-4	mg/kg	0.00031 U	0.00031 UJ	0.00042 UJ	0.00032 UJ	0.00039 UJ	0.00037 U	0.00039 UJ
8260B	1,2-Dichlorobenzene	95-50-1	mg/kg	0.00027 U	0.00027 UJ	0.00036 UJ	0.00028 UJ	0.00033 UJ	-	0.00034 UJ
8260B	1,2-Dichloroethane	107-06-2	mg/kg	0.00041 U	0.00041 U	0.00056 UJ	0.00043 UJ	0.00052 UJ	0.00039 U	0.00053 UJ
8260B	1,2-Dichloropropane	78-87-5	mg/kg	0.00032 U	0.00032 U	0.00044 U	0.00034 U	0.00041 U	0.00045 U	0.00042 U
8260B	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00034 U	0.00034 UJ	0.00046 UJ	0.00035 UJ	0.00042 UJ	-	0.00043 UJ
8260B	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00028 U	0.00028 UJ	0.00039 UJ	0.0003 UJ	0.00036 UJ	-	0.00036 UJ
8260B	1,3-Dichloropropane	142-28-9	mg/kg	0.0003 U	0.0003 UJ	0.00041 UJ	0.00031 UJ	0.00038 UJ	-	0.00039 UJ
8260B	1,4-Dichlorobenzene	106-46-7	mg/kg	0.00046 U	0.00046 UJ	0.00063 UJ	0.00048 UJ	0.00058 UJ	-	0.00059 UJ
8260B	1,4-Dioxane	123-91-1	mg/kg	0.033 U	0.033 U	0.045 U	0.035 U	0.042 U	0.016 U	0.043 U
8260B	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.00046 U	0.00046 UJ	0.00063 UJ	0.00048 UJ	0.00058 UJ	-	0.00059 UJ
8260B	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.00029 U	0.00029 UJ	0.00039 UJ	0.0003 UJ	0.00036 UJ	-	0.00037 UJ
8260B	2,2-Dichloropropane	594-20-7	mg/kg	0.00026 U	0.00026 U	0.00035 U	0.00027 U	0.00033 U	-	0.00033 U
8260B	2-Butanone	78-93-3	mg/kg	0.0011 U	0.0011 U	0.0015 U	0.0011 U	0.0014 U	0.0007 U	0.0014 U
8260B	2-Chloro-1,3-butadiene	126-99-8	mg/kg	-	-	-	-	-	0.00037 U	-
8260B	2-Hexanone	591-78-6	mg/kg	0.0029 U	0.0029 U	0.0039 U	0.003 U	0.0036 U	0.00034 U	0.0037 U
8260B	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.0002 U	0.0002 U	0.00027 U	0.00021 U	0.00025 U	-	0.00026 U
8260B	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0026 U	0.0026 U	0.0035 U	0.0027 U	0.0032 U	0.00037 U	0.0033 U
8260B	Acetone	67-64-1	mg/kg	0.0032 U	0.0032 U	0.0043 U	0.0033 U	0.0042 J	0.0079 U	0.0041 U
8260B	Acetonitrile	75-05-8	mg/kg	-	-	-	-	-	0.0042 U	-
8260B	Acrolein	107-02-8	mg/kg	-	-	-	-	-	0.0033 U	-

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-001D-S	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 FD 1151BLDG6-15-001DU	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 SPS 1151BLDG6-15-001T	1145BLDG6-SB01-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-002D-S	1145BLDG6-SB01-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-003D-S	1145BLDG6-SB02-15D-SO 2010/03/30 15 - 15_5 N 1151BLDG6-15-004D-S	1145BLDG6-SB02-30D-SO 2010/03/30 30 - 30_5 N 1151BLDG6-30-005D-S
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	0.0012 U	-	-	-	-
8260B	Allyl chloride	107-05-1	mg/kg	-	-	0.00039 U	-	-	-	-
8260B	Benzene	71-43-2	mg/kg	0.00027 UJ	0.00028 U	0.00028 U	0.00027 UJ	0.00023 UJ	<b>0.1 J</b>	<b>0.14 J</b>
8260B	Bromobenzene	108-86-1	mg/kg	0.00028 UJ	0.00029 U	-	0.00028 UJ	0.00024 UJ	0.00033 UJ	0.00025 UJ
8260B	Bromochloromethane	74-97-5	mg/kg	0.00017 UJ	0.00018 U	-	0.00017 UJ	0.00015 UJ	0.0002 UJ	0.00015 UJ
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00013 UJ	0.00013 U	0.00028 U	0.00013 UJ	0.00011 UJ	0.00015 UJ	0.00011 UJ
8260B	Bromoform	75-25-2	mg/kg	0.00013 UJ	0.00014 UJ	0.0004 U	0.00013 UJ	0.00011 UJ	0.00016 UJ	0.00012 UJ
8260B	Bromomethane	74-83-9	mg/kg	0.00029 UJ	0.0003 U	0.00044 U	0.00029 UJ	0.00025 UJ	0.00034 UJ	0.00026 UJ
8260B	Butylbenzene	104-51-8	mg/kg	0.00032 UJ	0.00033 U	-	0.00032 UJ	0.00028 UJ	<b>0.054 J</b>	<b>0.059 J</b>
8260B	Carbon disulfide	75-15-0	mg/kg	0.00024 UJ	0.00025 U	0.00041 U	0.00024 UJ	0.00021 UJ	0.00029 UJ	0.00022 UJ
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00036 UJ	0.00037 U	0.0004 U	0.00036 UJ	0.00031 UJ	0.00043 UJ	0.00033 UJ
8260B	Chlorobenzene	108-90-7	mg/kg	0.00031 UJ	0.00032 UJ	0.00042 U	0.00031 UJ	0.00027 UJ	0.00037 UJ	0.00028 UJ
8260B	Chloroethane	75-00-3	mg/kg	0.00051 UJ	0.00053 U	0.00042 U	0.00051 UJ	0.00044 UJ	0.00061 UJ	0.00046 UJ
8260B	Chloroform	67-66-3	mg/kg	0.00017 UJ	0.00017 U	0.0001 U	0.00017 UJ	0.00014 UJ	0.0002 UJ	0.00015 UJ
8260B	Chloromethane	74-87-3	mg/kg	0.00044 UJ	0.00046 U	0.00061 U	0.00044 UJ	0.00038 UJ	0.00052 UJ	0.0004 UJ
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00032 UJ	0.00033 U	-	0.00032 UJ	0.00028 UJ	0.00038 UJ	0.00029 UJ
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00074 UJ	0.00077 U	0.00037 U	0.00074 UJ	0.00064 UJ	0.00088 UJ	0.00067 UJ
8260B	Cumene	98-82-8	mg/kg	0.00034 UJ	0.00035 U	-	0.00034 UJ	0.00029 UJ	<b>0.048 J</b>	<b>0.038 J</b>
8260B	Cyclohexane	110-82-7	mg/kg	0.00023 U	0.00024 U	-	<b>0.002 J</b>	0.0002 U	<b>0.12 J</b>	<b>0.11 J</b>
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00033 UJ	0.00034 UJ	0.00036 U	0.00033 UJ	0.00028 UJ	0.00039 UJ	0.00029 UJ
8260B	Dibromomethane	74-95-3	mg/kg	0.00048 UJ	0.0005 U	0.00045 U	0.00048 UJ	0.00042 UJ	0.00057 UJ	0.00043 UJ
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.0003 UJ	0.00031 U	0.0005 U	0.0003 UJ	0.00026 UJ	0.00035 UJ	0.00027 UJ
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	0.0013 U	-	-	-	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	0.00026 U	-	-	-	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.00038 UJ	0.0004 UJ	0.00033 U	0.00038 UJ	0.00033 UJ	-	<b>0.23 J</b>
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00032 UJ	0.00033 U	-	0.00031 UJ	0.00027 UJ	0.00037 UJ	0.00028 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	-	0.0017 U	-	-	-	-
8260B	Isobutanol	78-83-1	mg/kg	-	-	0.0081 U	-	-	-	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	0.0017 U	-	-	-	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0016 U	0.0016 U	-	0.0016 U	0.0014 U	0.0019 UJ	0.0014 UJ
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	0.00055 U	-	-	-	-
8260B	Methylcyclohexane	108-87-2	mg/kg	0.00024 U	0.00025 U	-	<b>0.0025 J</b>	0.00021 U	<b>0.22 J</b>	<b>0.19 J</b>
8260B	Methylene chloride	75-09-2	mg/kg	0.00043 UJ	0.00045 U	0.00088 U	0.00043 UJ	0.00037 UJ	0.00051 UJ	<b>0.0027 J</b>
8260B	Naphthalene	91-20-3	mg/kg	0.00036 UJ	0.00037 UJ	-	0.00036 UJ	0.00031 UJ	<b>0.016 J</b>	<b>0.075 J</b>
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00029 UJ	0.0003 U	-	0.00029 UJ	0.00025 UJ	0.00035 UJ	0.00026 UJ
8260B	Propylbenzene	103-65-1	mg/kg	0.00033 UJ	0.00034 U	-	0.00033 UJ	0.00029 UJ	<b>0.082 J</b>	<b>0.082 J</b>
8260B	Styrene	100-42-5	mg/kg	0.00036 UJ	0.00037 UJ	0.00038 U	0.00036 UJ	0.00031 UJ	0.00043 UJ	0.00033 UJ
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00034 UJ	0.00035 UJ	0.00031 U	0.00034 UJ	0.00029 UJ	0.0004 UJ	0.0003 UJ
8260B	Toluene	108-88-3	mg/kg	0.0004 UJ	0.00041 U	0.00033 U	0.00039 UJ	0.00034 UJ	<b>0.27 J</b>	<b>0.032 J</b>

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB02-45D-SO 2010/03/30 45 - 45_5 N 1151BLDG6-45-006D-S	1145BLDG6-SB03-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-007D-S	1145BLDG6-SB03-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-008D-S	1145BLDG6-SB03-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-009D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 N 1151BLDG6-15-010D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 FD 1151BLDG6-15-010DU	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 SPS 1151BLDG6-15-010T
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	-	-	-	-	0.092 U
8260B	Allyl chloride	107-05-1	mg/kg	-	-	-	-	-	-	0.037 U
8260B	Benzene	71-43-2	mg/kg	0.00023 U	0.0003 UJ	<b>0.00047 J</b>	0.00026 UJ	0.00024 U	0.00032 U	0.012 U
8260B	Bromobenzene	108-86-1	mg/kg	0.00024 U	0.00031 UJ	0.00031 UJ	0.00027 UJ	0.00025 U	0.00033 U	-
8260B	Bromochloromethane	74-97-5	mg/kg	0.00015 U	0.00019 UJ	0.00019 UJ	0.00016 UJ	0.00015 U	0.0002 U	-
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00011 U	0.00014 UJ	0.00014 UJ	0.00012 UJ	0.00011 U	0.00015 U	0.013 U
8260B	Bromoform	75-25-2	mg/kg	0.00011 U	0.00014 UJ	0.00014 UJ	0.00013 UJ	0.00012 U	0.00015 U	0.02 U
8260B	Bromomethane	74-83-9	mg/kg	0.00025 U	0.00031 UJ	0.00031 UJ	0.00027 UJ	0.00025 U	0.00034 U	0.029 U
8260B	Butylbenzene	104-51-8	mg/kg	0.00028 U	0.00035 UJ	0.00035 UJ	0.00031 UJ	0.00028 U	0.00038 U	-
8260B	Carbon disulfide	75-15-0	mg/kg	0.00021 U	0.00026 UJ	0.00026 UJ	0.00023 UJ	0.00021 U	0.00028 U	0.015 U
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00031 U	0.0004 UJ	0.00039 UJ	0.00035 UJ	0.00032 U	0.00042 U	0.021 U
8260B	Chlorobenzene	108-90-7	mg/kg	0.00027 U	0.00034 UJ	0.00034 UJ	0.0003 UJ	0.00027 U	0.00036 U	0.013 U
8260B	Chloroethane	75-00-3	mg/kg	0.00044 U	0.00056 UJ	0.00056 UJ	0.00049 UJ	0.00045 U	0.0006 U	0.016 U
8260B	Chloroform	67-66-3	mg/kg	0.00014 U	0.00018 UJ	0.00018 UJ	0.00016 UJ	0.00015 U	0.0002 U	0.013 U
8260B	Chloromethane	74-87-3	mg/kg	0.00038 U	0.00048 UJ	0.00048 UJ	0.00042 UJ	0.00039 U	0.00052 U	0.03 U
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00028 U	0.00035 UJ	0.00035 UJ	0.00031 UJ	0.00028 U	0.00038 U	-
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00064 U	0.00081 UJ	0.00081 UJ	0.00071 UJ	0.00065 U	0.00087 U	0.0078 U
8260B	Cumene	98-82-8	mg/kg	0.00029 U	0.00037 UJ	0.00037 UJ	0.00032 UJ	0.0003 U	0.0004 U	-
8260B	Cyclohexane	110-82-7	mg/kg	0.0002 U	0.00025 U	<b>0.00082 J</b>	0.00022 U	0.0002 U	0.00027 U	-
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00028 U	0.00036 UJ	0.00036 UJ	0.00031 UJ	0.00029 U	0.00038 U	0.012 U
8260B	Dibromomethane	74-95-3	mg/kg	0.00041 U	0.00053 UJ	0.00052 UJ	0.00046 UJ	0.00042 U	0.00057 U	0.028 U
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00026 U	0.00033 UJ	0.00032 UJ	0.00029 UJ	0.00026 U	0.00035 U	0.035 U
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	-	-	-	-	0.17 U
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	-	-	-	-	0.014 U
8260B	Ethylbenzene	100-41-4	mg/kg	0.00033 U	0.00042 UJ	0.00042 UJ	0.00037 UJ	0.00034 U	0.00045 U	0.01 U
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00027 U	0.00035 UJ	0.00034 UJ	0.0003 UJ	0.00028 U	0.00037 U	-
8260B	Iodomethane	74-88-4	mg/kg	-	-	-	-	-	-	0.025 U
8260B	Isobutanol	78-83-1	mg/kg	-	-	-	-	-	-	0.53 U
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	-	-	-	-	0.072 U
8260B	Methyl acetate	79-20-9	mg/kg	0.0014 U	0.0017 U	0.0017 U	0.0015 U	0.0014 U	0.0018 U	-
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	-	-	-	-	0.06 U
8260B	Methylcyclohexane	108-87-2	mg/kg	0.00021 U	0.00026 U	<b>0.00084 J</b>	0.00023 U	0.00021 U	0.00028 U	-
8260B	Methylene chloride	75-09-2	mg/kg	0.00037 U	0.00047 UJ	0.00047 UJ	0.00041 UJ	0.00038 U	0.0005 U	0.062 U
8260B	Naphthalene	91-20-3	mg/kg	0.00031 UJ	0.0004 UJ	0.00039 UJ	0.00035 UJ	0.00032 U	0.00042 U	-
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00025 U	0.00032 UJ	0.00032 UJ	0.00028 UJ	0.00026 U	0.00034 U	-
8260B	Propylbenzene	103-65-1	mg/kg	0.00029 U	0.00036 UJ	0.00036 UJ	0.00032 UJ	0.00029 U	0.00039 U	-
8260B	Styrene	100-42-5	mg/kg	0.00031 U	0.0004 UJ	0.00039 UJ	0.00035 UJ	0.00032 U	0.00042 U	0.018 U
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00029 U	0.00037 UJ	0.00037 UJ	0.00032 UJ	0.0003 U	0.0004 U	0.024 U
8260B	Toluene	108-88-3	mg/kg	0.00034 U	0.00043 UJ	0.00043 UJ	0.00038 UJ	0.00035 U	0.00046 U	0.016 U

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB04-30D-SO 2010/04/02 30 - 30_5 N 1151BLDG6-30-011D-S	1145BLDG6-SB04-45D-SO 2010/04/02 45 - 45_5 N 1151BLDG6-45-012D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 N 1151BLDG6-15-013D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 FD 1151BLDG6-15-013DU	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 SPS 1151BLDG6-15-013T	1145BLDG6-SB05-30D-SO 2010/04/06 30 - 30_5 N 1151BLDG6-30-014D-S	1145BLDG6-SB05-45D-SO 2010/04/06 45 - 45_5 N 1151BLDG6-45-015D-S
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	-	-	0.0014 U	-	-
8260B	Allyl chloride	107-05-1	mg/kg	-	-	-	-	0.00042 U	-	-
8260B	Benzene	71-43-2	mg/kg	<b>0.002 J</b>	0.00025 U	0.00031 UJ	0.0003 UJ	0.0003 U	<b>0.14 J</b>	0.00029 UJ
8260B	Bromobenzene	108-86-1	mg/kg	0.00031 U	0.00026 U	0.00033 U	0.00031 U	-	0.00043 UJ	0.0003 U
8260B	Bromochloromethane	74-97-5	mg/kg	0.00019 U	0.00016 U	0.0002 U	0.00019 U	-	0.00027 UJ	0.00018 U
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00014 U	0.00012 U	0.00015 UJ	0.00014 UJ	0.0003 U	0.00019 UJ	0.00014 UJ
8260B	Bromoform	75-25-2	mg/kg	0.00014 U	0.00012 U	0.00015 U	0.00015 U	0.00044 U	0.0002 UJ	0.00014 U
8260B	Bromomethane	74-83-9	mg/kg	0.00031 U	0.00027 U	0.00033 U	0.00032 U	0.00048 U	0.00044 UJ	0.00031 U
8260B	Butylbenzene	104-51-8	mg/kg	0.00035 U	0.0003 U	0.00037 UJ	0.00036 UJ	-	0.0005 UJ	0.00034 UJ
8260B	Carbon disulfide	75-15-0	mg/kg	<b>0.00034 J</b>	0.00022 U	0.00028 U	0.00027 U	0.00044 U	0.00037 UJ	0.00026 U
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00039 U	0.00033 U	0.00042 UJ	0.0004 UJ	0.00043 U	0.00056 UJ	0.00039 UJ
8260B	Chlorobenzene	108-90-7	mg/kg	0.00034 U	0.00029 U	0.00036 UJ	0.00034 UJ	0.00046 U	0.00048 UJ	0.00033 UJ
8260B	Chloroethane	75-00-3	mg/kg	0.00056 U	0.00047 U	0.00059 U	0.00057 U	0.00046 U	0.00079 UJ	0.00055 U
8260B	Chloroform	67-66-3	mg/kg	0.00018 U	0.00015 U	0.00019 UJ	0.00019 UJ	0.00011 U	0.00026 UJ	0.00018 UJ
8260B	Chloromethane	74-87-3	mg/kg	0.00048 U	0.00041 U	0.00051 U	0.00049 U	0.00066 U	0.00068 UJ	0.00047 U
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00035 U	0.0003 U	0.00037 U	0.00036 U	-	0.0005 UJ	0.00034 U
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00081 U	0.00068 U	0.00086 UJ	0.00082 UJ	0.00041 U	0.0011 UJ	0.00079 UJ
8260B	Cumene	98-82-8	mg/kg	<b>0.0012 J</b>	0.00031 U	0.00039 UJ	0.00038 UJ	-	<b>0.044 J</b>	0.00036 UJ
8260B	Cyclohexane	110-82-7	mg/kg	<b>0.034</b>	0.00021 U	0.00027 U	0.00026 U	-	<b>0.092 J</b>	<b>0.0016 J</b>
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00036 U	0.0003 U	0.00038 U	0.00036 U	0.00039 U	0.0005 UJ	0.00035 U
8260B	Dibromomethane	74-95-3	mg/kg	0.00052 U	0.00045 U	0.00056 UJ	0.00054 UJ	0.00049 U	0.00074 UJ	0.00052 UJ
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00032 U	0.00028 U	0.00035 U	0.00033 U	0.00054 U	0.00046 UJ	0.00032 U
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	-	-	0.0014 U	-	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	-	-	0.00029 U	-	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.00042 U	0.00036 U	0.00045 UJ	0.00043 UJ	0.00036 U	<b>0.14 J</b>	0.00041 UJ
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00034 U	0.00029 U	0.00037 UJ	0.00035 UJ	-	0.00049 UJ	0.00034 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	-	-	-	0.0018 U	-	-
8260B	Isobutanol	78-83-1	mg/kg	-	-	-	-	0.0088 U	-	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	-	-	0.0018 U	-	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0017 U	0.0015 U	0.0018 U	0.0018 U	-	0.0024 UJ	0.0017 U
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	-	-	0.0006 U	-	-
8260B	Methylcyclohexane	108-87-2	mg/kg	<b>0.042</b>	0.00022 U	0.00028 U	0.00027 U	-	<b>0.23 J</b>	0.00026 U
8260B	Methylene chloride	75-09-2	mg/kg	0.00047 U	<b>0.00057 J</b>	0.0005 U	0.00048 U	0.00096 U	0.00066 UJ	0.00046 U
8260B	Naphthalene	91-20-3	mg/kg	0.00039 UJ	0.00033 U	0.00042 UJ	0.0004 UJ	-	<b>0.009 J</b>	0.00039 UJ
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00032 U	0.00027 U	0.00034 U	0.00033 U	-	0.00045 UJ	0.00031 U
8260B	Propylbenzene	103-65-1	mg/kg	0.00036 U	0.00031 U	0.00039 U	0.00037 U	-	<b>0.027 J</b>	0.00036 U
8260B	Styrene	100-42-5	mg/kg	0.00039 U	0.00033 U	0.00042 UJ	0.0004 UJ	0.00042 U	0.00056 UJ	0.00039 UJ
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00037 U	0.00031 U	0.00039 U	0.00038 U	0.00034 U	0.00052 UJ	0.00036 U
8260B	Toluene	108-88-3	mg/kg	<b>0.0037</b>	0.00037 U	0.00046 UJ	0.00044 UJ	0.00036 U	<b>0.015 J</b>	0.00042 UJ



**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB06-15D-SO 2010/04/01 15 - 15_5 N 1151BLDG6-15-016D-S	1145BLDG6-SB06-30D-SO 2010/04/01 30 - 30_5 N 1151BLDG6-30-017D-S	1145BLDG6-SB06-45D-SO 2010/04/01 45 - 45_5 N 1151BLDG6-45-018D-S	1145BLDG6-SB07-15D-SO 2010/04/05 15 - 15_5 N 1151BLDG6-15-019D-S	1145BLDG6-SB07-30D-SO 2010/04/05 30 - 30_5 N 1151BLDG6-30-020D-S	1145BLDG6-SB07-45D-SO 2010/04/05 45 - 45_5 N 1151BLDG6-45-021D-S	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS001D-SO
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	-	-	-	-	-
8260B	Allyl chloride	107-05-1	mg/kg	-	-	-	-	-	-	-
8260B	Benzene	71-43-2	mg/kg	0.00026 U	<b>0.11 J</b>	0.00025 UJ	<b>2.3 J</b>	<b>0.82</b>	0.00029 U	0.00025 UJ
8260B	Bromobenzene	108-86-1	mg/kg	0.00028 U	0.00034 UJ	0.00026 U	0.00042 UJ	0.012 U	0.0003 U	0.00026 UJ
8260B	Bromochloromethane	74-97-5	mg/kg	0.00017 U	0.00021 UJ	0.00016 UJ	0.00026 U	0.029 U	0.00018 U	0.00016 UJ
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00012 U	0.00015 UJ	0.00012 UJ	0.00019 U	0.024 U	0.00013 U	0.00012 UJ
8260B	Bromoform	75-25-2	mg/kg	0.00013 U	0.00016 UJ	0.00012 U	0.0002 UJ	0.018 U	0.00014 U	0.00012 U
8260B	Bromomethane	74-83-9	mg/kg	0.00028 U	0.00035 UJ	0.00026 U	0.00043 U	0.027 U	0.00031 U	0.00027 U
8260B	Butylbenzene	104-51-8	mg/kg	0.00032 U	<b>0.034 J</b>	0.0003 U	<b>9.4 J</b>	<b>1.2</b>	0.00034 U	0.0003 UJ
8260B	Carbon disulfide	75-15-0	mg/kg	0.00024 U	<b>0.00057 J</b>	0.00022 U	0.00036 U	0.039 U	0.00026 U	0.00022 U
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00035 U	0.00044 UJ	0.00033 U	0.00055 U	0.01 U	0.00039 U	0.00034 UJ
8260B	Chlorobenzene	108-90-7	mg/kg	0.0003 U	0.00038 UJ	0.00029 UJ	0.00047 UJ	0.018 U	0.00033 U	0.00029 UJ
8260B	Chloroethane	75-00-3	mg/kg	0.0005 U	0.00062 UJ	0.00047 U	0.00077 U	0.027 U	0.00054 U	0.00047 U
8260B	Chloroform	67-66-3	mg/kg	0.00016 U	0.0002 UJ	0.00015 UJ	0.00025 U	0.028 U	0.00018 U	0.00015 UJ
8260B	Chloromethane	74-87-3	mg/kg	0.00043 U	0.00054 UJ	0.00041 U	0.00067 U	0.031 U	0.00047 U	0.00041 U
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00032 U	0.00039 UJ	0.0003 UJ	0.00048 U	0.013 U	0.00034 U	0.0003 UJ
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00073 U	0.0009 UJ	0.00068 UJ	0.0011 U	0.017 U	0.00079 U	0.00069 UJ
8260B	Cumene	98-82-8	mg/kg	0.00033 U	<b>0.037 J</b>	0.00031 UJ	<b>4.2 J</b>	<b>1.2</b>	0.00036 U	0.00031 UJ
8260B	Cyclohexane	110-82-7	mg/kg	0.00023 U	<b>0.11 J</b>	0.00021 U	<b>7.5 J</b>	0.017 U	<b>0.019</b>	0.00021 U
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00032 U	0.0004 UJ	0.0003 U	0.00049 UJ	0.02 U	0.00035 U	0.0003 UJ
8260B	Dibromomethane	74-95-3	mg/kg	0.00047 U	0.00058 UJ	0.00044 UJ	0.00073 U	0.018 U	0.00051 U	0.00045 UJ
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00029 U	0.00036 UJ	0.00027 U	0.00045 U	0.013 U	0.00032 U	0.00028 U
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	-	-	-	-	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	-	-	-	-	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.00038 U	<b>0.79 J</b>	0.00035 UJ	<b>25 J</b>	<b>5.4</b>	0.00041 U	0.00036 UJ
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00031 U	0.00038 UJ	0.00029 U	0.00048 UJ	0.03 U	<b>0.00048 J</b>	0.00029 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	-	-	-	-	-	-
8260B	Isobutanol	78-83-1	mg/kg	-	-	-	-	-	-	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	-	-	-	-	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0015 U	0.0019 UJ	0.0015 U	0.0024 U	0.15 U	0.0017 U	0.0015 U
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	-	-	-	-	-
8260B	Methylcyclohexane	108-87-2	mg/kg	0.00024 U	<b>0.11 J</b>	0.00022 U	<b>15 J</b>	<b>5.2</b>	<b>0.013</b>	0.00022 U
8260B	Methylene chloride	75-09-2	mg/kg	0.00042 U	0.00052 UJ	0.0004 U	0.00065 U	0.042 U	0.00046 U	0.0004 U
8260B	Naphthalene	91-20-3	mg/kg	0.00035 UJ	<b>0.027 J</b>	0.00033 U	<b>0.12 J</b>	<b>2.5</b>	0.00039 UJ	0.00034 UJ
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00029 U	0.00035 UJ	0.00027 UJ	0.00044 UJ	0.016 U	0.00031 U	0.00027 UJ
8260B	Propylbenzene	103-65-1	mg/kg	0.00033 U	<b>0.058 J</b>	0.00031 U	<b>13 J</b>	<b>2.3</b>	0.00035 U	0.00031 UJ
8260B	Styrene	100-42-5	mg/kg	0.00035 U	0.00044 UJ	0.00033 UJ	0.00055 UJ	0.016 U	0.00039 U	0.00034 UJ
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00033 U	0.00041 UJ	0.00031 U	0.00051 UJ	0.017 U	0.00036 U	0.00031 UJ
8260B	Toluene	108-88-3	mg/kg	0.00039 U	<b>0.044 J</b>	0.00036 UJ	<b>8.8 J</b>	<b>3.2</b>	0.00042 U	0.00037 UJ

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 FD 1149AOC49-SS001DUP-SO	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 SPS 1149AOC49-SS001TRIP-	1149DOCK-SB01-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-002D-SO	1149DOCK-SB01-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-003D-SO	1149DOCK-SB02-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS004D-SO	1149DOCK-SB02-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-005D-SO	1149DOCK-SB02-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-006D-SO
8260B	Acrylonitrile	107-13-1	mg/kg	-	0.0013 U	-	-	-	-	-
8260B	Allyl chloride	107-05-1	mg/kg	-	0.00041 U	-	-	-	-	-
8260B	Benzene	71-43-2	mg/kg	0.00029 UJ	0.0003 U	0.00039 UJ	0.00035 UJ	0.00033 UJ	0.00029 UJ	<b>0.3 J</b>
8260B	Bromobenzene	108-86-1	mg/kg	0.0003 UJ	-	0.0004 UJ	0.00037 UJ	0.00035 UJ	0.00031 UJ	0.0003 UJ
8260B	Bromochloromethane	74-97-5	mg/kg	0.00018 UJ	-	0.00025 UJ	0.00022 UJ	0.00021 UJ	0.00019 UJ	0.00018 UJ
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00013 UJ	0.0003 U	0.00018 UJ	0.00016 UJ	0.00016 UJ	0.00014 UJ	0.00013 UJ
8260B	Bromoform	75-25-2	mg/kg	0.00014 U	0.00043 U	0.00019 UJ	0.00017 U	0.00016 U	0.00014 U	0.00014 UJ
8260B	Bromomethane	74-83-9	mg/kg	0.00031 U	0.00046 U	0.00041 UJ	0.00037 U	0.00035 U	0.00031 U	0.0003 UJ
8260B	Butylbenzene	104-51-8	mg/kg	0.00034 UJ	-	0.00046 UJ	0.00042 UJ	0.0004 UJ	0.00035 UJ	<b>0.33 J</b>
8260B	Carbon disulfide	75-15-0	mg/kg	0.00026 U	0.00043 U	0.00034 UJ	<b>0.0017 J</b>	0.0003 U	0.00026 U	0.00026 UJ
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00038 UJ	0.00042 U	0.00052 UJ	0.00047 UJ	0.00045 UJ	0.00039 UJ	0.00038 UJ
8260B	Chlorobenzene	108-90-7	mg/kg	0.00033 UJ	0.00045 U	0.00044 UJ	0.0004 UJ	0.00038 UJ	0.00034 UJ	0.00033 UJ
8260B	Chloroethane	75-00-3	mg/kg	0.00054 U	0.00045 U	0.00073 UJ	0.00067 U	0.00063 U	0.00055 U	0.00054 UJ
8260B	Chloroform	67-66-3	mg/kg	0.00018 UJ	0.00011 U	0.00024 UJ	0.00022 UJ	0.00021 UJ	0.00018 UJ	0.00018 UJ
8260B	Chloromethane	74-87-3	mg/kg	0.00047 U	0.00065 U	0.00063 UJ	0.00058 U	0.00055 U	0.00048 U	0.00047 UJ
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00034 UJ	-	0.00046 UJ	0.00042 UJ	0.0004 UJ	0.00035 UJ	0.00034 UJ
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00079 UJ	0.0004 U	0.0011 UJ	0.00097 UJ	0.00092 UJ	0.0008 UJ	0.00079 UJ
8260B	Cumene	98-82-8	mg/kg	0.00036 UJ	-	<b>0.00074 J</b>	0.00044 UJ	0.00042 UJ	0.00037 UJ	<b>0.78 J</b>
8260B	Cyclohexane	110-82-7	mg/kg	<b>0.00049 J</b>	-	<b>0.14 J</b>	<b>0.00058 J</b>	<b>0.00055 J</b>	<b>0.00041 J</b>	<b>4.1 J</b>
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00035 UJ	0.00038 U	0.00047 UJ	0.00043 UJ	0.0004 UJ	0.00035 UJ	0.00035 UJ
8260B	Dibromomethane	74-95-3	mg/kg	0.00051 UJ	0.00047 U	0.00069 UJ	0.00063 UJ	0.0006 UJ	0.00052 UJ	0.00051 UJ
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00032 U	0.00053 U	0.00043 UJ	0.00039 U	0.00037 U	0.00032 U	0.00032 UJ
8260B	Ethyl cyanide	107-12-0	mg/kg	-	0.0013 U	-	-	-	-	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	0.00028 U	-	-	-	-	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.00041 UJ	0.00035 U	0.00055 UJ	0.0005 UJ	0.00048 UJ	0.00042 UJ	<b>4.2 J</b>
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00034 UJ	-	0.00045 UJ	0.00041 UJ	0.00039 UJ	0.00034 UJ	0.00033 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	0.0018 U	-	-	-	-	-
8260B	Isobutanol	78-83-1	mg/kg	-	0.0086 U	-	-	-	-	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	0.0018 U	-	-	-	-	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0017 U	-	0.0023 UJ	0.0021 U	0.002 U	0.0017 U	0.0017 UJ
8260B	Methyl methacrylate	80-62-6	mg/kg	-	0.00058 U	-	-	-	-	-
8260B	Methylcyclohexane	108-87-2	mg/kg	<b>0.00052 J</b>	-	<b>0.17 J</b>	<b>0.00063 J</b>	<b>0.00048 J</b>	<b>0.00041 J</b>	<b>6.6 J</b>
8260B	Methylene chloride	75-09-2	mg/kg	0.00046 U	<b>0.0031 J</b>	0.00062 UJ	0.00056 U	0.00053 U	0.00047 U	0.00046 UJ
8260B	Naphthalene	91-20-3	mg/kg	0.00038 UJ	-	<b>0.023 J</b>	0.00047 UJ	0.00045 UJ	0.00039 UJ	<b>0.036 J</b>
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00031 UJ	-	0.00042 UJ	0.00038 UJ	0.00036 UJ	0.00032 UJ	0.00031 UJ
8260B	Propylbenzene	103-65-1	mg/kg	0.00035 UJ	-	0.00048 UJ	0.00043 UJ	0.00041 UJ	0.00036 UJ	<b>0.95 J</b>
8260B	Styrene	100-42-5	mg/kg	0.00038 UJ	0.00041 U	0.00052 UJ	0.00047 UJ	0.00045 UJ	0.00039 UJ	0.00038 UJ
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00036 UJ	0.00033 U	0.00048 UJ	0.00044 UJ	0.00042 UJ	0.00037 UJ	0.00036 UJ
8260B	Toluene	108-88-3	mg/kg	0.00042 UJ	0.00035 U	0.00057 UJ	0.00052 UJ	0.00049 UJ	0.00043 UJ	0.00042 UJ

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 FD 1105BLDG5-SS001DUP-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS001D-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 SPS 1105BLDG5-SS001TRIP-SO	1105BLDG5-SS002D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS002D-SO	1105BLDG5-SS003D-SO 2010/03/18 2 - 3 N 1105BLDG5-SS003D-SO	1105BLDG5-SS004D-SO 2010/03/18 0_5 - 1 N 1105BLDG5-SS004D-SO	1105BLDG5-SS005D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS005D-SO
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	0.002 U	-	-	-	-
8260B	Allyl chloride	107-05-1	mg/kg	-	-	0.00035 U	-	-	-	-
8260B	Benzene	71-43-2	mg/kg	0.00039 U	0.0004 UJ	0.00041 U	0.00025 U	0.00038 UJ	0.0003 UJ	0.00035 U
8260B	Bromobenzene	108-86-1	mg/kg	0.00041 U	0.00041 UJ	-	0.00026 U	0.00039 UJ	0.00031 UJ	0.00037 U
8260B	Bromochloromethane	74-97-5	mg/kg	0.00025 U	0.00025 UJ	-	0.00016 U	0.00024 UJ	0.00019 UJ	0.00022 U
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00018 U	0.00019 UJ	0.0004 U	0.00012 U	0.00018 UJ	0.00014 UJ	0.00016 U
8260B	Bromoform	75-25-2	mg/kg	0.00019 U	0.00019 UJ	0.00051 U	0.00012 U	0.00019 UJ	0.00015 UJ	0.00017 U
8260B	Bromomethane	74-83-9	mg/kg	0.00042 U	0.00042 UJ	0.00049 U	0.00027 U	0.0004 UJ	0.00032 UJ	0.00037 U
8260B	Butylbenzene	104-51-8	mg/kg	0.00047 U	0.00047 UJ	-	0.0003 U	0.00045 UJ	0.00036 UJ	0.00042 U
8260B	Carbon disulfide	75-15-0	mg/kg	0.00035 U	0.00036 UJ	0.00034 U	0.00023 U	0.00034 UJ	0.00027 UJ	0.00031 U
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00052 U	0.00053 UJ	0.00038 U	0.00034 U	0.00051 UJ	0.0004 UJ	0.00047 U
8260B	Chlorobenzene	108-90-7	mg/kg	0.00045 U	0.00046 UJ	0.00037 U	0.00029 U	0.00044 UJ	0.00034 UJ	0.0004 U
8260B	Chloroethane	75-00-3	mg/kg	0.00074 U	0.00075 UJ	0.00038 U	0.00048 U	0.00072 UJ	0.00057 UJ	0.00066 U
8260B	Chloroform	67-66-3	mg/kg	0.00024 U	0.00025 UJ	0.00044 U	0.00016 U	0.00023 UJ	0.00018 UJ	0.00022 U
8260B	Chloromethane	74-87-3	mg/kg	0.00064 U	0.00065 UJ	0.00034 U	0.00041 U	0.00062 UJ	0.00049 UJ	0.00057 U
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00047 U	0.00047 UJ	-	0.0003 U	0.00045 UJ	0.00036 UJ	0.00042 U
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.0011 U	0.0011 UJ	0.00029 U	0.00069 U	0.001 UJ	0.00082 UJ	0.00096 U
8260B	Cumene	98-82-8	mg/kg	0.00049 U	0.0005 UJ	-	0.00032 U	0.00048 UJ	0.00037 UJ	0.00044 U
8260B	Cyclohexane	110-82-7	mg/kg	0.00033 U	0.00034 U	-	0.00021 U	0.00032 UJ	0.00025 U	0.0003 U
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00047 U	0.00048 UJ	0.00036 U	0.00031 U	0.00046 UJ	0.00036 UJ	0.00042 U
8260B	Dibromomethane	74-95-3	mg/kg	0.0007 U	0.00071 UJ	0.00043 U	0.00045 U	0.00068 UJ	0.00053 UJ	0.00063 U
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00043 U	0.00044 UJ	0.00031 U	0.00028 U	0.00042 UJ	0.00033 UJ	0.00039 U
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	0.0037 U	-	-	-	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	0.00025 U	-	-	-	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.00056 U	0.00057 UJ	0.00036 U	0.00036 U	0.00054 UJ	0.00043 UJ	0.0005 U
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00046 UJ	0.00047 UJ	-	0.0003 UJ	0.00044 UJ	0.00035 UJ	0.00041 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	-	0.00048 U	-	-	-	-
8260B	Isobutanol	78-83-1	mg/kg	-	-	0.0078 U	-	-	-	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	0.0018 U	-	-	-	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0023 U	0.0023 U	-	0.0015 U	0.0022 UJ	0.0017 U	0.002 U
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	0.00053 U	-	-	-	-
8260B	Methylcyclohexane	108-87-2	mg/kg	0.00035 U	0.00036 U	-	0.00023 U	0.00034 UJ	0.00027 U	0.00031 U
8260B	Methylene chloride	75-09-2	mg/kg	0.00062 U	<b>0.0012 J</b>	0.0029 U	0.0004 U	<b>0.0011 J</b>	0.00048 UJ	0.00056 U
8260B	Naphthalene	91-20-3	mg/kg	0.00052 U	0.00053 UJ	-	0.00034 U	0.00051 UJ	0.0004 UJ	0.00047 U
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.00042 U	0.00043 UJ	-	0.00027 U	0.00041 UJ	0.00032 UJ	0.00038 U
8260B	Propylbenzene	103-65-1	mg/kg	0.00048 U	0.00049 UJ	-	0.00031 U	0.00047 UJ	0.00037 UJ	0.00043 U
8260B	Styrene	100-42-5	mg/kg	0.00052 U	0.00053 UJ	0.00026 U	0.00034 U	0.00051 UJ	0.0004 UJ	0.00047 U
8260B	Tetrachloroethene	127-18-4	mg/kg	<b>0.0011 J</b>	<b>0.0031 J</b>	<b>0.0015 J</b>	0.00032 U	0.00048 UJ	<b>0.004 J</b>	0.00044 U
8260B	Toluene	108-88-3	mg/kg	0.00057 U	0.00058 UJ	0.0003 U	0.00037 U	0.00056 UJ	0.00044 UJ	0.00051 U

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1105BLDG5-SS006D-SO 2010/03/18 0 - 0.5 N 1105BLDG5-SS006D-SO	1105BLDG5-SS007D-SO 2010/04/23 0 - 0.5 N 1105BLDG5-SS007D-SO	1105BLDG5-SS019D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS019D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0.5 FD 1105BLDG5-SS020DUP-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0.5 N 1105BLDG5-SS020D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0.5 SPS 1105BLDG5-SS020TRIP-S	1105BLDG5-SS021D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS021D-SO
8260B	Acrylonitrile	107-13-1	mg/kg	-	-	-	-	-	0.002 U	-
8260B	Allyl chloride	107-05-1	mg/kg	-	-	-	-	-	0.00034 U	-
8260B	Benzene	71-43-2	mg/kg	0.00028 U	0.00028 U	0.00038 UJ	0.00029 UJ	0.00035 UJ	0.0004 U	0.00036 UJ
8260B	Bromobenzene	108-86-1	mg/kg	0.00029 U	0.00029 UJ	0.00039 UJ	0.0003 UJ	0.00036 UJ	-	0.00037 UJ
8260B	Bromochloromethane	74-97-5	mg/kg	0.00018 U	0.00018 U	0.00024 U	0.00019 U	0.00022 U	-	0.00023 U
8260B	Bromodichloromethane	75-27-4	mg/kg	0.00013 U	0.00013 U	0.00018 UJ	0.00014 UJ	0.00016 UJ	0.00039 U	0.00017 UJ
8260B	Bromoform	75-25-2	mg/kg	0.00014 U	0.00014 UJ	0.00019 U	0.00014 U	0.00017 U	0.0005 U	0.00017 U
8260B	Bromomethane	74-83-9	mg/kg	0.0003 U	0.00029 U	0.0004 U	0.00031 U	0.00037 U	0.00048 U	0.00038 U
8260B	Butylbenzene	104-51-8	mg/kg	0.00033 U	0.00033 UJ	0.00045 UJ	0.00035 UJ	0.00042 UJ	-	0.00042 UJ
8260B	Carbon disulfide	75-15-0	mg/kg	0.00025 U	0.00025 U	0.00034 U	0.00026 U	0.00031 U	0.00034 U	0.00032 U
8260B	Carbon tetrachloride	56-23-5	mg/kg	0.00037 U	0.00037 U	0.00051 U	0.00039 U	0.00047 U	0.00037 U	0.00048 U
8260B	Chlorobenzene	108-90-7	mg/kg	0.00032 U	0.00032 UJ	0.00044 UJ	0.00033 UJ	0.0004 UJ	0.00037 U	0.00041 UJ
8260B	Chloroethane	75-00-3	mg/kg	0.00053 U	0.00052 U	0.00072 U	0.00055 U	0.00066 U	0.00038 U	0.00067 U
8260B	Chloroform	67-66-3	mg/kg	0.00017 U	0.00017 U	0.00023 U	0.00018 U	0.00022 U	0.00043 U	0.00022 U
8260B	Chloromethane	74-87-3	mg/kg	0.00045 U	0.00045 U	0.00062 U	0.00047 U	0.00057 U	0.00033 U	0.00058 U
8260B	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.00033 U	0.00033 U	0.00045 U	0.00035 U	0.00042 U	-	0.00042 U
8260B	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00076 U	0.00076 U	0.001 UJ	0.0008 UJ	0.00096 UJ	0.00028 U	0.00098 UJ
8260B	Cumene	98-82-8	mg/kg	0.00035 U	0.00035 UJ	0.00048 UJ	0.00036 UJ	0.00044 UJ	-	0.00045 UJ
8260B	Cyclohexane	110-82-7	mg/kg	0.00024 U	0.00024 U	0.00032 U	0.00025 U	0.0003 U	-	0.0003 U
8260B	Dibromochloromethane	124-48-1	mg/kg	0.00034 U	0.00034 UJ	0.00046 UJ	0.00035 UJ	0.00042 UJ	0.00035 U	0.00043 UJ
8260B	Dibromomethane	74-95-3	mg/kg	0.0005 U	0.0005 U	0.00068 UJ	0.00052 UJ	0.00062 UJ	0.00042 U	0.00064 UJ
8260B	Dichlorodifluoromethane	75-71-8	mg/kg	0.00031 U	0.00031 U	0.00042 U	0.00032 U	0.00039 U	0.0003 U	0.00039 U
8260B	Ethyl cyanide	107-12-0	mg/kg	-	-	-	-	-	0.0036 U	-
8260B	Ethyl methacrylate	97-63-2	mg/kg	-	-	-	-	-	0.00024 U	-
8260B	Ethylbenzene	100-41-4	mg/kg	0.0004 U	0.0004 UJ	0.00054 UJ	0.00041 UJ	0.0005 UJ	0.00035 U	0.00051 UJ
8260B	Hexachlorobutadiene	87-68-3	mg/kg	0.00032 UJ	0.00032 UJ	0.00044 UJ	0.00034 UJ	0.00041 UJ	-	0.00042 UJ
8260B	Iodomethane	74-88-4	mg/kg	-	-	-	-	-	0.00047 U	-
8260B	Isobutanol	78-83-1	mg/kg	-	-	-	-	-	0.0077 U	-
8260B	Methacrylonitrile	126-98-7	mg/kg	-	-	-	-	-	0.0017 U	-
8260B	Methyl acetate	79-20-9	mg/kg	0.0016 U	0.0016 U	0.0022 U	0.0017 U	0.002 U	-	0.0021 U
8260B	Methyl methacrylate	80-62-6	mg/kg	-	-	-	-	-	0.00052 U	-
8260B	Methylcyclohexane	108-87-2	mg/kg	0.00025 U	0.00025 U	0.00034 U	0.00026 U	0.00031 U	-	0.00032 U
8260B	Methylene chloride	75-09-2	mg/kg	0.00044 U	0.00044 U	<b>0.002 J</b>	<b>0.0015 J</b>	<b>0.0019 J</b>	0.0028 U	0.00057 U
8260B	Naphthalene	91-20-3	mg/kg	0.00037 U	<b>0.00039 J</b>	0.00051 UJ	0.00039 UJ	0.00047 UJ	-	0.00048 UJ
8260B	o-Chlorotoluene	95-49-8	mg/kg	0.0003 U	0.0003 UJ	0.00041 UJ	0.00031 UJ	0.00038 UJ	-	0.00039 UJ
8260B	Propylbenzene	103-65-1	mg/kg	0.00034 U	0.00034 UJ	0.00047 UJ	0.00036 UJ	0.00043 UJ	-	0.00044 UJ
8260B	Styrene	100-42-5	mg/kg	0.00037 U	0.00037 UJ	0.00051 UJ	0.00039 UJ	0.00047 UJ	0.00025 U	0.00048 UJ
8260B	Tetrachloroethene	127-18-4	mg/kg	0.00035 U	<b>0.011 J</b>	<b>0.0024 J</b>	<b>0.0045 J</b>	<b>0.0024 J</b>	<b>0.0014 J</b>	0.00045 UJ
8260B	Toluene	108-88-3	mg/kg	0.00041 U	0.00041 U	0.00056 UJ	0.00043 UJ	0.00051 UJ	0.00029 U	0.00052 UJ

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-001D-S	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 FD 1151BLDG6-15-001DU	1145BLDG6-SB01-15D-SO 2010/03/31 15 - 15_5 SPS 1151BLDG6-15-001T	1145BLDG6-SB01-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-002D-S	1145BLDG6-SB01-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-003D-S	1145BLDG6-SB02-15D-SO 2010/03/30 15 - 15_5 N 1151BLDG6-15-004D-S	1145BLDG6-SB02-30D-SO 2010/03/30 30 - 30_5 N 1151BLDG6-30-005D-S
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00022 UJ	0.00023 U	0.0002 U	0.00022 UJ	0.00019 UJ	0.00027 UJ	0.0002 UJ
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00038 UJ	0.0004 U	0.00038 U	0.00038 UJ	0.00033 UJ	0.00046 UJ	0.00035 UJ
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	0.00044 U	-	-	-	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00013 UJ	0.00014 U	0.00032 U	0.00013 UJ	0.00011 UJ	0.00016 UJ	0.00012 UJ
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.0006 UJ	0.00062 U	0.00018 U	0.00059 UJ	0.00052 UJ	0.00071 UJ	0.00054 UJ
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	0.00034 U	-	-	-	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.00077 UJ	0.0008 U	0.00047 U	0.00077 UJ	0.00066 UJ	0.00091 UJ	0.00069 UJ
8260B	Xylene, m+p	179601-23-1	mg/kg	0.0006 UJ	0.00062 UJ	-	0.00059 UJ	0.00052 UJ	<b>2.1 J</b>	<b>1.3 J</b>
8260B	Xylene, o	95-47-6	mg/kg	0.00035 UJ	0.00036 UJ	-	<b>0.0015 J</b>	0.0003 UJ	<b>0.98 J</b>	<b>0.71 J</b>
8260B	Xylenes, total	1330-20-7	mg/kg	0.00035 UJ	0.00036 U	0.00094 U	<b>0.0015 J</b>	0.0003 UJ	<b>3.1 J</b>	<b>2 J</b>

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB02-45D-SO 2010/03/30 45 - 45_5 N 1151BLDG6-45-006D-S	1145BLDG6-SB03-15D-SO 2010/03/31 15 - 15_5 N 1151BLDG6-15-007D-S	1145BLDG6-SB03-30D-SO 2010/03/31 30 - 30_5 N 1151BLDG6-30-008D-S	1145BLDG6-SB03-45D-SO 2010/03/31 45 - 45_5 N 1151BLDG6-45-009D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 N 1151BLDG6-15-010D-S	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 FD 1151BLDG6-15-010DU	1145BLDG6-SB04-15D-SO 2010/04/02 15 - 15_5 SPS 1151BLDG6-15-010T
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00019 U	0.00025 UJ	0.00024 UJ	0.00021 UJ	0.0002 U	0.00026 U	0.0099 U
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00033 U	0.00042 UJ	0.00042 UJ	0.00037 UJ	0.00034 U	0.00045 U	0.012 U
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	-	-	-	-	0.039 U
8260B	Trichloroethene	79-01-6	mg/kg	0.00011 U	0.00014 UJ	0.00014 UJ	0.00013 UJ	0.00012 U	0.00015 U	0.021 U
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00051 U	0.00065 UJ	0.00065 UJ	0.00057 UJ	0.00052 U	0.0007 U	0.017 U
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	-	-	-	-	0.012 U
8260B	Vinyl chloride	75-01-4	mg/kg	0.00066 U	0.00084 UJ	0.00084 UJ	0.00073 UJ	0.00067 U	0.0009 U	0.034 U
8260B	Xylene, m+p	179601-23-1	mg/kg	0.00051 U	0.00065 UJ	0.00065 UJ	0.00057 UJ	0.00052 U	0.0007 U	-
8260B	Xylene, o	95-47-6	mg/kg	0.0003 U	0.00038 UJ	<b>0.0023 J</b>	0.00033 UJ	0.00031 U	0.00041 U	-
8260B	Xylenes, total	1330-20-7	mg/kg	0.0003 U	0.00038 UJ	<b>0.0023 J</b>	0.00033 UJ	0.00031 U	0.00041 U	0.035 U

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB04-30D-SO 2010/04/02 30 - 30_5 N 1151BLDG6-30-011D-S	1145BLDG6-SB04-45D-SO 2010/04/02 45 - 45_5 N 1151BLDG6-45-012D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 N 1151BLDG6-15-013D-S	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 FD 1151BLDG6-15-013DU	1145BLDG6-SB05-15D-SO 2010/04/06 15 - 15_5 SPS 1151BLDG6-15-013T	1145BLDG6-SB05-30D-SO 2010/04/06 30 - 30_5 N 1151BLDG6-30-014D-S	1145BLDG6-SB05-45D-SO 2010/04/06 45 - 45_5 N 1151BLDG6-45-015D-S
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00024 U	0.00021 U	0.00026 U	0.00025 U	0.00021 U	0.00035 UJ	0.00024 U
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00042 U	0.00036 U	0.00045 U	0.00043 U	0.00042 U	0.00059 UJ	0.00041 U
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	-	-	0.00048 U	-	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00014 U	0.00012 U	0.00015 UJ	0.00015 UJ	0.00035 U	0.0002 UJ	0.00014 UJ
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00065 U	0.00055 U	0.00069 U	0.00066 U	0.0002 U	0.00092 UJ	0.00064 U
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	-	-	0.00037 U	-	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.00084 U	0.00071 U	0.00089 U	0.00086 U	0.00051 U	0.0012 UJ	0.00083 U
8260B	Xylene, m+p	179601-23-1	mg/kg	<b>0.038</b>	0.00055 U	0.00069 UJ	0.00066 UJ	-	<b>0.82 J</b>	0.00064 UJ
8260B	Xylene, o	95-47-6	mg/kg	<b>0.046</b>	0.00032 U	0.00041 UJ	0.00039 UJ	-	<b>0.29 J</b>	0.00038 UJ
8260B	Xylenes, total	1330-20-7	mg/kg	<b>0.084</b>	0.00032 U	0.00041 UJ	0.00039 UJ	0.001 U	<b>1.1 J</b>	0.00038 UJ

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1145BLDG6-SB06-15D-SO 2010/04/01 15 - 15_5 N 1151BLDG6-15-016D-S	1145BLDG6-SB06-30D-SO 2010/04/01 30 - 30_5 N 1151BLDG6-30-017D-S	1145BLDG6-SB06-45D-SO 2010/04/01 45 - 45_5 N 1151BLDG6-45-018D-S	1145BLDG6-SB07-15D-SO 2010/04/05 15 - 15_5 N 1151BLDG6-15-019D-S	1145BLDG6-SB07-30D-SO 2010/04/05 30 - 30_5 N 1151BLDG6-30-020D-S	1145BLDG6-SB07-45D-SO 2010/04/05 45 - 45_5 N 1151BLDG6-45-021D-S	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS001D-SO
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00022 U	0.00027 UJ	0.00021 UJ	0.00034 U	0.027 U	0.00024 U	0.00021 UJ
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00038 U	0.00047 UJ	0.00035 U	0.00058 U	0.025 U	0.00041 U	0.00036 UJ
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	-	-	-	-	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00013 U	0.00016 UJ	0.00012 UJ	0.0002 U	0.014 U	0.00014 U	0.00012 UJ
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00059 U	0.00072 UJ	0.00055 U	0.0009 U	0.031 U	0.00064 U	0.00055 U
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	-	-	-	-	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.00075 U	0.00093 UJ	0.00071 U	0.0012 U	0.017 U	0.00082 U	0.00071 UJ
8260B	Xylene, m+p	179601-23-1	mg/kg	0.00059 U	<b>2.8 J</b>	0.00055 UJ	<b>120 J</b>	<b>19</b>	0.00064 U	0.00055 UJ
8260B	Xylene, o	95-47-6	mg/kg	0.00034 U	<b>0.98 J</b>	0.00032 UJ	<b>35 J</b>	<b>6</b>	0.00037 U	0.00032 UJ
8260B	Xylenes, total	1330-20-7	mg/kg	0.00034 U	<b>3.8 J</b>	0.00032 UJ	<b>150 J</b>	<b>25</b>	0.00037 U	0.00032 UJ



**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 FD 1149AOC49-SS001DUP-SO	1149DOCK-SB01-01D-SO 2010/04/07 1 - 1_5 SPS 1149AOC49-SS001TRIP-	1149DOCK-SB01-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-002D-SO	1149DOCK-SB01-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-003D-SO	1149DOCK-SB02-01D-SO 2010/04/07 1 - 1_5 N 1149AOC49-SS004D-SO	1149DOCK-SB02-02D-SO 2010/04/07 2 - 2_5 N 1149AOC49-02-005D-SO	1149DOCK-SB02-05D-SO 2010/04/07 5 - 5_5 N 1149AOC49-05-006D-SO
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00024 UJ	0.00021 U	0.00032 UJ	0.00029 UJ	0.00028 UJ	0.00024 UJ	0.00024 UJ
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00041 UJ	0.00041 U	0.00055 UJ	0.0005 UJ	0.00048 UJ	0.00042 UJ	0.00041 UJ
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	0.00046 U	-	-	-	-	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00014 UJ	0.00034 U	0.00019 UJ	0.00017 UJ	0.00016 UJ	0.00014 UJ	0.00014 UJ
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00063 U	0.0002 U	0.00085 UJ	0.00078 U	0.00074 U	0.00065 U	0.00063 UJ
8260B	Vinyl acetate	108-05-4	mg/kg	-	0.00036 U	-	-	-	-	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.00082 UJ	0.0005 U	0.0011 UJ	0.001 UJ	0.00095 UJ	0.00083 UJ	0.00082 UJ
8260B	Xylene, m+p	179601-23-1	mg/kg	0.00063 UJ	-	<b>0.071 J</b>	0.00078 UJ	0.00074 UJ	0.00065 UJ	<b>2.2 J</b>
8260B	Xylene, o	95-47-6	mg/kg	0.00037 UJ	-	0.0005 UJ	0.00046 UJ	0.00043 UJ	0.00038 UJ	0.00037 UJ
8260B	Xylenes, total	1330-20-7	mg/kg	0.00037 UJ	0.001 U	<b>0.071 J</b>	0.00046 UJ	0.00043 UJ	0.00038 UJ	<b>1.2 J</b>

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 FD 1105BLDG5-SS001DUP-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS001D-SO	1105BLDG5-SS001D-SO 2010/03/18 4 - 5 SPS 1105BLDG5-SS001TRIP-SO	1105BLDG5-SS002D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS002D-SO	1105BLDG5-SS003D-SO 2010/03/18 2 - 3 N 1105BLDG5-SS003D-SO	1105BLDG5-SS004D-SO 2010/03/18 0_5 - 1 N 1105BLDG5-SS004D-SO	1105BLDG5-SS005D-SO 2010/03/18 4 - 5 N 1105BLDG5-SS005D-SO
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00032 U	0.00033 UJ	0.00042 U	0.00021 U	0.00031 UJ	0.00025 UJ	0.00029 U
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00056 U	0.00057 UJ	0.00022 U	0.00036 U	0.00054 UJ	0.00043 UJ	0.0005 U
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	0.00059 U	-	-	-	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00019 U	0.00019 UJ	0.00033 U	0.00012 U	0.00019 UJ	0.00015 UJ	0.00017 U
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00087 U	0.00088 UJ	0.00038 U	0.00056 U	0.00084 UJ	0.00066 UJ	0.00077 U
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	0.00047 U	-	-	-	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.0011 U	0.0011 UJ	0.00079 U	0.00072 U	0.0011 UJ	0.00085 UJ	0.001 U
8260B	Xylene, m+p	179601-23-1	mg/kg	0.00087 U	0.00088 UJ	-	0.00056 U	0.00084 UJ	0.00066 UJ	0.00077 U
8260B	Xylene, o	95-47-6	mg/kg	0.00051 U	0.00052 UJ	-	0.00033 U	0.00049 UJ	0.00039 UJ	0.00045 U
8260B	Xylenes, total	1330-20-7	mg/kg	0.00051 U	0.00052 UJ	0.00079 U	0.00033 U	0.00049 UJ	0.00039 UJ	0.00045 U

**Table 2.4 – Soil Data from the 2014 RCRA Facility Investigation**

Method	Chemical	CASRN	Units	1105BLDG5-SS006D-SO 2010/03/18 0 - 0_5 N 1105BLDG5-SS006D-SO	1105BLDG5-SS007D-SO 2010/04/23 0 - 0_5 N 1105BLDG5-SS007D-SO	1105BLDG5-SS019D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS019D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 FD 1105BLDG5-SS020DUP-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 N 1105BLDG5-SS020D-SO	1105BLDG5-SS020D-SO 2010/03/19 0 - 0_5 SPS 1105BLDG5-SS020TRIP-S	1105BLDG5-SS021D-SO 2010/03/19 7 - 8 N 1105BLDG5-SS021D-SO
8260B	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00023 U	0.00023 U	0.00031 U	0.00024 U	0.00029 U	0.00041 U	0.0003 U
8260B	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0004 U	0.0004 U	0.00054 U	0.00041 U	0.0005 U	0.00022 U	0.00051 U
8260B	trans-1,4-Dichloro-2-butene	110-57-6	mg/kg	-	-	-	-	-	0.00058 U	-
8260B	Trichloroethene	79-01-6	mg/kg	0.00014 U	0.00014 U	0.00019 UJ	0.00014 UJ	0.00017 UJ	0.00032 U	0.00017 UJ
8260B	Trichlorofluoromethane	75-69-4	mg/kg	0.00061 U	0.00061 U	0.00084 U	0.00064 U	0.00077 U	0.00037 U	0.00079 U
8260B	Vinyl acetate	108-05-4	mg/kg	-	-	-	-	-	0.00046 U	-
8260B	Vinyl chloride	75-01-4	mg/kg	0.00079 U	0.00079 U	0.0011 U	0.00083 U	0.00099 U	0.00078 U	0.001 U
8260B	Xylene, m+p	179601-23-1	mg/kg	0.00061 U	0.00061 UJ	0.00084 UJ	0.00064 UJ	0.00077 UJ	-	0.00079 UJ
8260B	Xylene, o	95-47-6	mg/kg	0.00036 U	0.00036 UJ	0.00049 UJ	0.00038 UJ	0.00045 UJ	-	0.00046 UJ
8260B	Xylenes, total	1330-20-7	mg/kg	0.00036 U	0.00036 U	0.00049 UJ	0.00038 UJ	0.00045 UJ	0.00078 U	0.00046 UJ

**Acronyms and Definitions:**

**Bold** = chemical detected at the indicated concentration  
CASRN = Chemical Abstracts Service Registry Number  
FD = Field duplicate  
N = normal sample  
RCRA = Resource Conservation and Recovery Act  
J = estimated concentration  
U = not detected at the indicated method detection limit  
UJ = not detected at the indicated method detection limit, However, the associated numerical value is approximate  
VOC = volatile organic compound  
mg/kg = micrograms per kilogram

**Column headers are given in this format:**

Boring ID  
Sample date  
Depth Interval (ft bgs)  
Sample type (N/FD)  
Sample ID

**Example (for the first sample in the table):**

1145BLDG6-SB01-15D-SO  
3/31/2010  
15 - 15\_5  
N  
1151BLDG6-15-001D-S

**Sources:**

USACE. 2014. RCRA Facility Investigation Report, Parcel 11, Revision 2.0. Final May.

*This Page Intentionally Left Blank*

**Table 2.5 – Soil Data from the Northern Area Groundwater**

Method	Chemical	CASRN	Units	MW29 2019/07/08 10 - 11 N 11VAL- MW29SB-D10- 11SO	MW29 2019/07/09 40 - 41 N 11VAL- MW29SB-D40- 41SO	MW30 2019/07/10 10 - 12 FD 11VAL- MW30SB-D10- 12SO-DUP	MW30 2019/07/10 10 - 12 N 11VAL- MW30SB-D10- 12SO	MW30 2019/07/11 40 - 42 N 11VAL- MW30SB-D40- 42SO	MW31 2019/07/12 10 - 12 N 11VAL- MW31SB-D10- 12SO	MW31 2019/07/12 40 - 42 N 11VAL- MW31SB-D40- 42SO	MW32 2019/07/13 10 - 12 N 11VAL- MW32SB-D10- 12SO	MW32 2019/07/13 40 - 42 N 11VAL- MW32SB-D40- 42SO
8260C	(1,1-Dimethylethyl)benzene	98-06-6	mg/kg	0.00088 U	0.00062 U	0.00061 UJ	0.00059 UJ	0.00057 U	0.00067 U	0.00069 U	0.00078 U	0.00047 U
8260C	(1-Methylpropyl)benzene	135-98-8	mg/kg	0.0012 U	0.00086 U	0.00085 UJ	0.00082 UJ	0.00079 U	0.00093 U	0.00096 U	0.0011 U	0.00065 U
8260C	1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	0.00067 U	0.00047 U	0.00047 UJ	0.00045 UJ	0.00043 U	0.00051 U	0.00052 U	0.00059 U	0.00035 U
8260C	1,1,1-Trichloroethane	71-55-6	mg/kg	0.00059 UJ	0.00041 U	0.00041 UJ	0.00039 UJ	0.00038 U	0.00045 U	0.00046 U	0.00052 U	0.00031 U
8260C	1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.0011 U	0.00078 U	0.00077 UJ	0.00074 UJ	0.00072 U	0.00084 U	0.00087 U	0.00098 U	0.00059 U
8260C	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	mg/kg	0.0014 UJ	0.00095 U	0.00094 UJ	0.00091 UJ	0.00088 U	0.001 U	0.0011 U	0.0012 U	0.00072 U
8260C	1,1,2-Trichloroethane	79-00-5	mg/kg	0.00072 U	0.00051 U	0.0005 UJ	0.00048 UJ	0.00046 U	0.00054 U	0.00056 U	0.00064 U	0.00038 U
8260C	1,1-Dichloroethane	75-34-3	mg/kg	0.00047 UJ	0.00033 U	0.00033 UJ	0.00032 UJ	0.00031 U	0.00036 U	0.00037 U	0.00042 U	0.00025 U
8260C	1,1-Dichloroethene	75-35-4	mg/kg	0.00042 UJ	0.0003 U	0.0003 UJ	0.00028 UJ	0.00027 U	0.00032 U	0.00033 U	0.00038 U	0.00023 U
8260C	1,1-Dichloropropene	563-58-6	mg/kg	0.0006 UJ	0.00042 U	0.00042 UJ	0.0004 UJ	0.00039 U	0.00046 U	0.00047 U	0.00054 U	0.00032 U
8260C	1,2,3-Trichlorobenzene	87-61-6	mg/kg	0.0012 U	0.00086 U	0.00085 UJ	0.00082 UJ	0.00079 U	0.00093 U	0.00096 U	0.0011 U	0.00065 U
8260C	1,2,3-Trichloropropane	96-18-4	mg/kg	0.0012 U	0.00087 U	0.00086 UJ	0.00083 UJ	0.0008 U	0.00094 U	0.00097 U	0.0011 U	0.00066 U
8260C	1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.0012 U	0.00086 U	0.00085 UJ	0.00082 UJ	0.00079 U	0.00093 U	0.00096 U	0.0011 U	0.00065 U
8260C	1,2,4-Trimethylbenzene	95-63-6	mg/kg	<b>0.001 J</b>	0.00059 U	0.00058 UJ	0.00056 UJ	<b>0.0008 J</b>	<b>0.00063 J</b>	0.00065 U	0.00074 U	0.00044 U
8260C	1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.0014 U	0.001 U	0.001 UJ	0.00096 UJ	0.00093 U	0.0011 U	0.0011 U	0.0013 U	0.00076 U
8260C	1,2-Dibromoethane	106-93-4	mg/kg	0.00044 U	0.00031 U	0.00031 UJ	0.0003 UJ	0.00029 U	0.00033 U	0.00034 U	0.00039 U	0.00023 U
8260C	1,2-Dichlorobenzene	95-50-1	mg/kg	0.001 U	0.00073 U	0.00073 UJ	0.0007 UJ	0.00068 U	0.00079 U	0.00082 U	0.00093 U	0.00055 U
8260C	1,2-Dichloroethane	107-06-2	mg/kg	0.0012 UJ	0.00084 U	0.00083 UJ	0.0008 UJ	0.00077 U	0.0009 U	<b>0.0028 J</b>	0.0011 U	0.00063 U
8260C	1,2-Dichloropropane	78-87-5	mg/kg	0.00098 U	0.00069 U	0.00068 UJ	0.00066 UJ	0.00063 U	0.00074 U	0.00076 U	0.00087 U	0.00052 U
8260C	1,3,5-Trimethylbenzene	108-67-8	mg/kg	0.00057 U	0.0004 U	0.0004 UJ	0.00038 UJ	<b>0.0004 J</b>	0.00043 U	0.00045 U	0.00051 U	0.0003 U
8260C	1,3-Dichlorobenzene	541-73-1	mg/kg	0.00049 U	0.00034 U	0.00034 UJ	0.00033 UJ	0.00032 U	0.00037 U	0.00038 U	0.00043 U	0.00026 U
8260C	1,3-Dichloropropane	142-28-9	mg/kg	0.00093 U	0.00065 U	0.00065 UJ	0.00062 UJ	0.0006 U	0.00071 U	0.00073 U	0.00082 U	0.00049 U
8260C	1,4-Dichlorobenzene	106-46-7	mg/kg	0.0013 U	0.0009 U	0.00089 UJ	0.00085 UJ	0.00082 U	0.00097 U	0.00099 U	0.0011 U	0.00068 U
8260C	1-Chloro-4-methylbenzene	106-43-4	mg/kg	0.0014 U	0.00099 U	0.00098 UJ	0.00094 UJ	0.00091 U	0.0011 U	0.0011 U	0.0012 U	0.00074 U
8260C	1-Methyl-4-(1-methylethyl)benzene	99-87-6	mg/kg	0.001 U	0.00072 U	0.00071 UJ	0.00069 UJ	0.00067 U	0.00078 U	0.0008 U	0.00091 U	0.00055 U
8260C	2,2-Dichloropropane	594-20-7	mg/kg	0.00062 UJ	0.00044 U	0.00043 UJ	0.00042 UJ	0.0004 U	0.00047 U	0.00048 U	0.00055 U	0.00033 U
8260C	2-Butanone	78-93-3	mg/kg	0.0023 UJ	0.0016 U	0.0016 UJ	0.0015 UJ	0.0015 U	0.0017 U	0.0018 U	0.002 U	0.0012 U
8260C	2-Hexanone	591-78-6	mg/kg	0.0012 U	0.00085 U	0.00084 UJ	0.00081 UJ	0.00078 U	0.00092 U	0.00094 U	0.0011 U	0.00064 U
8260C	2-Methoxy-2-methylpropane	1634-04-4	mg/kg	0.00098 UJ	0.00069 U	0.00068 UJ	0.00066 UJ	0.00063 U	0.00074 U	0.00076 U	0.00087 U	0.00052 U
8260C	4-Methyl-2-pentanone	108-10-1	mg/kg	0.0015 U	0.0011 U	0.001 UJ	0.001 UJ	0.00097 U	0.0011 U	0.0012 U	0.0013 U	0.0008 U
8260C	Acetone	67-64-1	mg/kg	<b>0.032 J</b>	0.0016 U	<b>0.005 J</b>	<b>0.0019 J</b>	<b>0.0074 J</b>	<b>0.04</b>	0.0018 U	<b>0.015 J</b>	<b>0.004 J</b>
8260C	Benzene	71-43-2	mg/kg	<b>0.0073 J</b>	<b>0.0022 J</b>	<b>0.00098 J</b>	<b>0.0013 J</b>	<b>0.0058</b>	<b>0.0037 J</b>	<b>0.0044 J</b>	<b>0.00073 J</b>	<b>0.0051</b>
8260C	Bromobenzene	108-86-1	mg/kg	0.00085 U	0.0006 U	0.00059 UJ	0.00057 UJ	0.00055 U	0.00064 U	0.00066 U	0.00075 U	0.00045 U
8260C	Bromochloromethane	74-97-5	mg/kg	0.0015 UJ	0.0011 U	0.0011 UJ	0.001 UJ	0.00099 U	0.0012 U	0.0012 U	0.0014 U	0.00081 U
8260C	Bromodichloromethane	75-27-4	mg/kg	0.00086 U	0.00061 U	0.0006 UJ	0.00058 UJ	0.00056 U	0.00066 U	0.00068 U	0.00077 U	0.00046 U
8260C	Bromoform	75-25-2	mg/kg	0.00065 U	0.00046 U	0.00045 UJ	0.00044 UJ	0.00042 U	0.0005 U	0.00051 U	0.00058 U	0.00035 U
8260C	Bromomethane	74-83-9	mg/kg	0.0014 UJ	0.00099 U	0.00098 UJ	0.00094 UJ	0.00091 U	0.0011 U	0.0011 U	0.0012 U	0.00074 U
8260C	Butylbenzene	104-51-8	mg/kg	0.0011 U	0.00076 U	0.00075 UJ	0.00072 UJ	0.0007 U	0.00082 U	0.00084 U	0.00095 U	0.00057 U
8260C	Carbon disulfide	75-15-0	mg/kg	0.0008 UJ	0.00056 U	0.00056 UJ	0.00054 UJ	0.00052 U	0.00061 U	0.00062 U	0.00071 U	0.00042 U

**Table 2.5 – Soil Data from the Northern Area Groundwater**

Method	Chemical	CASRN	Units	MW29 2019/07/08 10 - 11 N 11VAL- MW29SB-D10- 11SO	MW29 2019/07/09 40 - 41 N 11VAL- MW29SB-D40- 41SO	MW30 2019/07/10 10 - 12 FD 11VAL- MW30SB-D10- 12SO-DUP	MW30 2019/07/10 10 - 12 N 11VAL- MW30SB-D10- 12SO	MW30 2019/07/11 40 - 42 N 11VAL- MW30SB-D40- 42SO	MW31 2019/07/12 10 - 12 N 11VAL- MW31SB-D10- 12SO	MW31 2019/07/12 40 - 42 N 11VAL- MW31SB-D40- 42SO	MW32 2019/07/13 10 - 12 N 11VAL- MW32SB-D10- 12SO	MW32 2019/07/13 40 - 42 N 11VAL- MW32SB-D40- 42SO
8260C	Carbon tetrachloride	56-23-5	mg/kg	0.00086 UJ	0.00061 U	0.0006 UJ	0.00058 UJ	0.00056 U	0.00066 U	0.00068 U	0.00077 U	0.00046 U
8260C	Chlorobenzene	108-90-7	mg/kg	0.00047 U	0.00033 U	0.00033 UJ	0.00032 UJ	0.00031 U	0.00036 U	0.00037 U	0.00042 U	0.00025 U
8260C	Chloroethane	75-00-3	mg/kg	0.00073 UJ	0.00052 U	0.00051 UJ	0.00049 UJ	0.00048 U	0.00056 U	0.00057 U	0.00065 U	0.00039 U
8260C	Chloroform	67-66-3	mg/kg	0.00042 UJ	0.0003 U	0.0003 UJ	0.00028 UJ	0.00027 U	0.00032 U	0.00033 U	0.00038 U	0.00023 U
8260C	Chloromethane	74-87-3	mg/kg	0.00082 UJ	0.00057 U	0.00057 UJ	0.00055 UJ	0.00053 U	0.00062 U	0.00064 U	0.00072 U	0.00043 U
8260C	cis-1,2-Dichloroethene	156-59-2	mg/kg	0.0015 UJ	0.001 U	0.001 UJ	0.00097 UJ	0.00094 U	0.0011 U	0.0011 U	0.0013 U	0.00077 U
8260C	cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.001 U	0.00073 U	0.00073 UJ	0.0007 UJ	0.00068 U	0.00079 U	0.00082 U	0.00093 U	0.00055 U
8260C	Cumene	98-82-8	mg/kg	0.00085 U	0.0006 U	0.00059 UJ	0.00057 UJ	0.00055 U	0.00064 U	0.00066 U	0.00075 U	0.00045 U
8260C	Dibromochloromethane	124-48-1	mg/kg	0.00042 U	0.0003 U	0.0003 UJ	0.00028 UJ	0.00027 U	0.00032 U	0.00033 U	0.00038 U	0.00023 U
8260C	Dibromomethane	74-95-3	mg/kg	0.00095 U	0.00067 U	0.00066 UJ	0.00063 UJ	0.00061 U	0.00072 U	0.00074 U	0.00084 U	0.0005 U
8260C	Dichlorodifluoromethane	75-71-8	mg/kg	0.0015 UJ	0.001 U	0.001 UJ	0.00097 UJ	0.00094 U	0.0011 U	0.0011 U	0.0013 U	0.00077 U
8260C	Ethyl methacrylate	97-63-2	mg/kg	0.00024 U	0.00017 U	0.00017 UJ	0.00016 UJ	0.00016 U	0.00019 U	0.00019 U	0.00022 U	0.00013 U
8260C	Ethylbenzene	100-41-4	mg/kg	<b>0.0016 J</b>	0.00039 U	0.00039 UJ	0.00037 UJ	<b>0.0011 J</b>	<b>0.00084 J</b>	<b>0.0007 J</b>	0.00049 U	<b>0.00052 J</b>
8260C	Hexachlorobutadiene	87-68-3	mg/kg	0.00054 U	0.00038 U	0.00037 UJ	0.00036 UJ	0.00035 U	0.00041 U	0.00042 U	0.00048 U	0.00029 U
8260C	Methylene chloride	75-09-2	mg/kg	0.0014 UJ	0.00096 U	0.00095 UJ	0.00092 UJ	0.00089 U	0.001 U	0.0011 U	0.0012 U	0.00073 U
8260C	Naphthalene	91-20-3	mg/kg	0.001 U	0.00072 U	0.00071 UJ	0.00069 UJ	0.00067 U	0.00078 U	0.0008 U	0.00091 U	0.00055 U
8260C	o-Chlorotoluene	95-49-8	mg/kg	0.001 U	0.00071 U	0.0007 UJ	0.00068 UJ	0.00065 U	0.00077 U	0.00079 U	0.0009 U	0.00054 U
8260C	Propylbenzene	103-65-1	mg/kg	0.00047 U	0.00033 U	0.00033 UJ	0.00032 UJ	0.00031 U	0.00036 U	0.00037 U	0.00042 U	0.00025 U
8260C	Styrene	100-42-5	mg/kg	0.00051 U	0.00036 U	0.00035 UJ	0.00034 UJ	0.00033 U	0.00038 U	0.00039 U	0.00045 U	0.00027 U
8260C	Tetrachloroethene	127-18-4	mg/kg	<b>0.0022 J</b>	0.0007 U	0.00069 UJ	0.00067 UJ	0.00064 U	0.00076 U	0.00078 U	0.00088 U	0.00053 U
8260C	Toluene	108-88-3	mg/kg	<b>0.006 J</b>	<b>0.0016 J</b>	<b>0.00071 J</b>	<b>0.00079 J</b>	<b>0.0054</b>	<b>0.0035 J</b>	<b>0.0033 J</b>	<b>0.00097 J</b>	<b>0.0027 J</b>
8260C	trans-1,2-Dichloroethene	156-60-5	mg/kg	0.00062 UJ	0.00044 U	0.00043 UJ	0.00042 UJ	0.0004 U	0.00047 U	0.00048 U	0.00055 U	0.00033 U
8260C	trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.0012 U	0.00086 U	0.00085 UJ	0.00082 UJ	0.00079 U	0.00093 U	0.00096 U	0.0011 U	0.00065 U
8260C	Trichloroethene	79-01-6	mg/kg	0.00098 U	0.00069 U	0.00068 UJ	0.00066 UJ	0.00063 U	0.00074 U	0.00076 U	0.00087 U	0.00052 U
8260C	Trichlorofluoromethane	75-69-4	mg/kg	0.00055 UJ	0.00039 U	0.00039 UJ	0.00037 UJ	0.00036 U	0.00042 U	0.00043 U	0.00049 U	0.00029 U
8260C	Vinyl chloride	75-01-4	mg/kg	0.00059 UJ	0.00041 U	0.00041 UJ	0.00039 UJ	0.00038 U	0.00045 U	0.00046 U	0.00052 U	0.00031 U
8260C	Xylene, m+p	179601-23-1	mg/kg	<b>0.0023 J</b>	0.00093 U	0.00092 UJ	0.00089 UJ	<b>0.0022 J</b>	<b>0.0011 J</b>	<b>0.0016 J</b>	0.0012 U	<b>0.0011 J</b>
8260C	Xylene, o	95-47-6	mg/kg	<b>0.00074 J</b>	0.00038 U	0.00037 UJ	0.00036 UJ	<b>0.00072 J</b>	0.00041 U	<b>0.00051 J</b>	0.00048 U	<b>0.00046 J</b>
8260C	Xylenes, total	1330-20-7	mg/kg	<b>0.003 J</b>	0.00093 U	0.00092 UJ	0.00089 UJ	<b>0.0029 J</b>	<b>0.0011 J</b>	<b>0.0021 J</b>	0.0012 U	<b>0.0016 J</b>

**Acronyms and Definitions:**

**Bold** = chemical detected at the indicated concentration  
CASRN = Chemical Abstracts Service Registry Number  
FD = Field duplicate  
N = normal sample  
RCRA = Resource Conservation and Recovery Act  
J = estimated concentration  
U = not detected at the indicated method detection limit

UJ = not detected at the indicated method detection limit, However, the associated numerical value is approximate  
VOC = volatile organic compound  
mg/kg = micrograms per kilogram

**Column headers are given in this format:**

Well  
Sample date  
Depth Interval (ft bgs)  
Sample type (N/FD)  
Sample ID

**Example (for the first sample in the table):**

MW29  
7/8/2019  
10-11  
N  
11VAL-MW29SB-D10-11SO

**Sources:**

HDR. 2023. Northern Area Groundwater RCRA Facility Investigation Report, Fort Wingate Depot Activity. Final. June.

**Table 2.6 – 1,2-Dichloroethane Soil Vapor Results ( $\mu\text{g}/\text{m}^3$ ) from the Northern Area Groundwater RCRA Facility Investigation**

Sample Location	Depth (ft bgs)	Sample Type	Sample Date	Result ( $\mu\text{g}/\text{m}^3$ )
SG01	30	N	7/1/2019	0.089
SG06	30	N	7/2/2019	0.018
SG08	30	N	6/26/2019	0.054
SG09	30	N	7/1/2019	5.32
SG16	30	N	7/2/2019	0.201
SG20	30	N	6/26/2019	0.136
SG22	30	N	7/1/2019	0.158
SG27	30	N	6/25/2019	0.034
SG27	30	FD	6/25/2019	0.017
SG28	30	N	6/29/2019	0.405
SG30	30	N	6/28/2019	0.151
SG31	30	N	6/29/2019	0.327
SG36	30	N	6/30/2019	13.3
SG36	30	FD	6/30/2019	0.046
SG38R	30	N	6/29/2019	0.048
SG38R	30	FD	6/29/2019	0.179
SG39	30	N	6/25/2019	9.71
SG40	30	N	6/27/2019	0.553
SG41	30	N	6/28/2019	0.036
SG42	30	N	6/25/2019	0.185
SG43	30	N	6/28/2019	0.117
SG44	30	N	6/26/2019	0.979
SG44	30	FD	6/26/2019	1.82
SG45	30	N	6/28/2019	0.619
SG45	30	FD	6/28/2019	0.745
SG46R	30	N	7/1/2019	0.018
SG46R	30	FD	7/1/2019	0.023
SG47	30	N	7/1/2019	<b>88</b>
SG47	30	FD	7/1/2019	<b>91.4</b>
SG48	30	N	6/27/2019	<b>748</b>
SG50	30	N	6/27/2019	2.27
SG51	30	N	6/24/2019	<b>351</b>
SG54	30	N	7/1/2019	2.09
SG56	30	N	6/27/2019	4.89
SG59	30	N	6/24/2019	<b>3,325</b>
SG64	30	N	6/29/2019	0.798
SG65	30	N	6/27/2019	0.398
SG68R	30	N	7/1/2019	0.688
SG69	30	N	6/26/2019	0.28
SG70	30	N	6/25/2019	25.6

**Table 2.6 – 1,2-Dichloroethane Soil Vapor Results ( $\mu\text{g}/\text{m}^3$ ) from the Northern Area Groundwater RCRA Facility Investigation**

Sample Location	Depth (ft bgs)	Sample Type	Sample Date	Result ( $\mu\text{g}/\text{m}^3$ )
SG71	22	N	7/1/2019	0.027
SG74	30	N	6/29/2019	2.4
SG75	30	N	6/27/2019	31.7
SG75	30	FD	6/27/2019	35.3
SG78	30	N	7/2/2019	5.64
SG79	30	N	6/30/2019	5.59
SG80	30	N	6/28/2019	3.57
SG81	30	N	6/26/2019	8.59
SG83	30	N	7/2/2019	36.1
SG83	30	FD	7/2/2019	36.9
SG84	30	N	6/25/2019	275
SG85	30	N	7/2/2019	6.62
SG90R	30	N	6/30/2019	0.124
SG91	30	N	6/26/2019	1.28
SG92	30	N	6/28/2019	2.73
SG93	30	N	6/30/2019	0.374
SG93	30	FD	6/30/2019	0.388
SG95	30	N	7/1/2019	0.465
SG96	30	N	7/2/2019	3.67
SG98RR	30	N	7/2/2019	1.96
SG99	30	N	6/30/2019	0.02
SG100	30	N	6/26/2019	1.67

**Notes:**

Cells shaded in yellow indicate results greater than the NMED residential vapor intrusion screening level of  $36 \mu\text{g}/\text{m}^3$ . Taken from NMED *Risk Assessment Guidance for Site Investigations and Remediation*, November 2022 Revised (Appendix A, Table A-4).

**Acronyms and Abbreviations:**

FD = Field duplicate  
N = normal sample  
NMED = New Mexico Environment Department  
RCRA = Resource Conservation and Recovery Act  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

**Source:**

HDR Environmental, Operations and Construction. 2023. Northern Area Groundwater RCRA Facility Investigation Report, Fort Wingate Depot Activity, McKinley County, New Mexico. June. Final



**Table 2.7 – 2022 Groundwater Data**

Method	Chemical	CASRN	Units	VISL	MW18D 2022/04/20 N MW18D042022	MW18D 2022/10/12 N MW18D102022	MW20 2022/04/20 N MW20042022	MW20 2022/10/12 N MW20102022	MW22D 2022/04/21 N MW22D042022	MW22D 2022/10/13 N MW22D102022	MW29 2022/04/14 N MW29042022	MW29 2022/10/05 N MW29102022	MW30 2022/04/20 N MW30042022	MW30 2022/10/07 N MW30102022	MW31 2022/04/21 N MW31042022	MW31 2022/10/07 N MW31102022	MW32 2022/04/11 N MW32042022
8015C	Diesel fuel	68334-30-5	µg/L	N/A	100 U	100 U	130 J	97 U	110 U	110 U	150 U	100 U	110 U	100 U	97 U	65 J	73 J
8015C	Gasoline	8006-61-9	µg/L	N/A	31 J	52 J	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
8260C	(1,1-Dimethylethyl)benzene	98-06-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	(1-Methylpropyl)benzene	135-98-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,1,1,2-Tetrachloroethane	630-20-6	µg/L	37	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,1-Trichloroethane	71-55-6	µg/L	7,400	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	32	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/L	1,500	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,1,2-Trichloroethane	79-00-5	µg/L	6.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloroethane	75-34-3	µg/L	76	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloroethene	75-35-4	µg/L	190	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloropropene	563-58-6	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2,3-Trichlorobenzene	87-61-6	µg/L	36	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	1,2,3-Trichloropropane	96-18-4	µg/L	22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2,4-Trichlorobenzene	120-82-1	µg/L	36	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	1,2,4-Trimethylbenzene	95-63-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2-Dibromo-3-chloropropane	96-12-8	µg/L	0.28	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2-Dibromoethane	106-93-4	µg/L	1.8	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2-Dichlorobenzene	95-50-1	µg/L	2,600	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2-Dichloroethane	107-06-2	µg/L	22	63	91	0.8 J	1.5	0.29 J	0.34 J	0.2 U	0.2 U	0.2 U	0.2 U	27	24	0.2 U
8260C	1,3,5-Trimethylbenzene	108-67-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,3-Dichlorobenzene	541-73-1	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,3-Dichloropropane	142-28-9	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,4-Dichlorobenzene	106-46-7	µg/L	8,400	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1-Chloro-4-methylbenzene	106-43-4	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1-Methyl-4-(1-methylethyl)benzene	99-87-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	2,2-Dichloropropane	594-20-7	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	2-Butanone	78-93-3	µg/L	2,200,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	2-Hexanone	591-78-6	µg/L	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	2-Methoxy-2-methylpropane	1634-04-4	µg/L	N/A	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.18 J	0.3 U
8260C	4-Methyl-2-pentanone	108-10-1	µg/L	550,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	Acetone	67-64-1	µg/L	23,000,000	6.7 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	Benzene	71-43-2	µg/L	16	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromobenzene	108-86-1	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromochloromethane	74-97-5	µg/L	N/A	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Bromodichloromethane	75-27-4	µg/L	8.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromoform	75-25-2	µg/L	1,200	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Bromomethane	74-83-9	µg/L	17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Butylbenzene	104-51-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Carbon disulfide	75-15-0	µg/L	1,200	0.31 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Carbon tetrachloride	56-23-5	µg/L	4.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chlorobenzene	108-90-7	µg/L	410	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chloroethane	75-00-3	µg/L	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Chloroform	67-66-3	µg/L	8.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chloromethane	74-87-3	µg/L	43	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	cis-1,2-Dichloroethene	156-59-2	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	cis-1,3-Dichloropropene	10061-01-5	µg/L	48	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Cumene	98-82-8	µg/L	880	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Dibromochloromethane	124-48-1	µg/L	32	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Dibromomethane	74-95-3	µg/L	120	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Table 2.7 – 2022 Groundwater Data

Method	Chemical	CASRN	Units	VISL	MW32 2022/10/03 N MW32102022	TMW10 2022/04/14 N TMW10042022	TMW10 2022/10/06 N TMW10102022	TMW33 2022/04/15 N TMW33042022	TMW33 2022/10/07 N TMW33102022	TMW34 2022/04/19 FD TMW34042022D	TMW34 2022/04/19 N TMW34042022	TMW34 2022/10/11 FD TMW34102022D	TMW34 2022/10/11 N TMW34102022	TMW35 2022/04/20 N TMW35042022	TMW35 2022/10/11 N TMW35102022
8015C	Diesel fuel	68334-30-5	µg/L	N/A	60 J	100 U	100 U	100 U	320 J	89 J	120 UJ	71 J	110 J	110 U	120 U
8015C	Gasoline	8006-61-9	µg/L	N/A	20 U	20 U	20 U	23 J	16 J	20 U	20 U	20 U	20 U	20 U	20 U
8260C	(1,1-Dimethylethyl)benzene	98-06-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	(1-Methylpropyl)benzene	135-98-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,1,1,2-Tetrachloroethane	630-20-6	µg/L	37	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,1-Trichloroethane	71-55-6	µg/L	7,400	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	32	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/L	1,500	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,1,2-Trichloroethane	79-00-5	µg/L	6.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloroethane	75-34-3	µg/L	76	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloroethene	75-35-4	µg/L	190	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,1-Dichloropropene	563-58-6	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2,3-Trichlorobenzene	87-61-6	µg/L	36	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	1,2,3-Trichloropropane	96-18-4	µg/L	22	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2,4-Trichlorobenzene	120-82-1	µg/L	36	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	1,2,4-Trimethylbenzene	95-63-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2-Dibromo-3-chloropropane	96-12-8	µg/L	0.28	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,2-Dibromoethane	106-93-4	µg/L	1.8	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2-Dichlorobenzene	95-50-1	µg/L	2,600	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,2-Dichloroethane	107-06-2	µg/L	22	0.2 U	0.2 U	0.2 U	38	43	0.2 U	0.2 U	0.2 U	0.2 U	0.64 J	0.53 J
8260C	1,3,5-Trimethylbenzene	108-67-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1,3-Dichlorobenzene	541-73-1	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,3-Dichloropropane	142-28-9	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1,4-Dichlorobenzene	106-46-7	µg/L	8,400	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	1-Chloro-4-methylbenzene	106-43-4	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	1-Methyl-4-(1-methylethyl)benzene	99-87-6	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	2,2-Dichloropropane	594-20-7	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	2-Butanone	78-93-3	µg/L	2,200,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	2-Hexanone	591-78-6	µg/L	N/A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	2-Methoxy-2-methylpropane	1634-04-4	µg/L	N/A	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	4-Methyl-2-pentanone	108-10-1	µg/L	550,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	Acetone	67-64-1	µg/L	23,000,000	10 U	10 U	5.2 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
8260C	Benzene	71-43-2	µg/L	16	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromobenzene	108-86-1	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromochloromethane	74-97-5	µg/L	N/A	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Bromodichloromethane	75-27-4	µg/L	8.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Bromoform	75-25-2	µg/L	1,200	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Bromomethane	74-83-9	µg/L	17	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Butylbenzene	104-51-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Carbon disulfide	75-15-0	µg/L	1,200	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Carbon tetrachloride	56-23-5	µg/L	4.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chlorobenzene	108-90-7	µg/L	410	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chloroethane	75-00-3	µg/L	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Chloroform	67-66-3	µg/L	8.1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Chloromethane	74-87-3	µg/L	43	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	cis-1,2-Dichloroethene	156-59-2	µg/L	N/A	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	cis-1,3-Dichloropropene	10061-01-5	µg/L	48	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Cumene	98-82-8	µg/L	880	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Dibromochloromethane	124-48-1	µg/L	32	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Dibromomethane	74-95-3	µg/L	120	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

**Table 2.7 – 2022 Groundwater Data**

Method	Chemical	CASRN	Units	VISL	MW18D 2022/04/20 N MW18D042022	MW18D 2022/10/12 N MW18D102022	MW20 2022/04/20 N MW20042022	MW20 2022/10/12 N MW20102022	MW22D 2022/04/21 N MW22D042022	MW22D 2022/10/13 N MW22D102022	MW29 2022/04/14 N MW29042022	MW29 2022/10/05 N MW29102022	MW30 2022/04/20 N MW30042022	MW30 2022/10/07 N MW30102022	MW31 2022/04/21 N MW31042022	MW31 2022/10/07 N MW31102022	MW32 2022/04/11 N MW32042022
8260C	Dichlorodifluoromethane	75-71-8	µg/L	7.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Ethylbenzene	100-41-4	µg/L	35	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Hexachlorobutadiene	87-68-3	µg/L	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methyl acetate	79-20-9	µg/L	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methylcyclohexane	108-87-2	µg/L	180	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methylene chloride	75-09-2	µg/L	4,700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Naphthalene	91-20-3	µg/L	46	1 U	1 U	1 U	<b>0.59 J</b>	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	o-Chlorotoluene	95-49-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Propylbenzene	103-65-1	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Styrene	100-42-5	µg/L	9,200	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Toluene	108-88-3	µg/L	19,000	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	trans-1,2-Dichloroethene	156-60-5	µg/L	250	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	trans-1,3-Dichloropropene	10061-02-6	µg/L	48	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Trichloroethene	79-01-6	µg/L	5.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Trichlorofluoromethane	75-69-4	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Vinyl chloride	75-01-4	µg/L	1.5	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Xylene, m+p	179601-23-1	µg/L	370	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Xylene, o	95-47-6	µg/L	490	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

**Table 2.7 – 2022 Groundwater Data**

Method	Chemical	CASRN	Units	VISL	MW32 2022/10/03 N MW32102022	TMW10 2022/04/14 N TMW10042022	TMW10 2022/10/06 N TMW10102022	TMW33 2022/04/15 N TMW33042022	TMW33 2022/10/07 N TMW33102022	TMW34 2022/04/19 FD TMW34042022D	TMW34 2022/04/19 N TMW34042022	TMW34 2022/10/11 FD TMW34102022D	TMW34 2022/10/11 N TMW34102022	TMW35 2022/04/20 N TMW35042022	TMW35 2022/10/11 N TMW35102022
8260C	Dichlorodifluoromethane	75-71-8	µg/L	7.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Ethylbenzene	100-41-4	µg/L	35	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Hexachlorobutadiene	87-68-3	µg/L	3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methyl acetate	79-20-9	µg/L	N/A	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methylcyclohexane	108-87-2	µg/L	180	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Methylene chloride	75-09-2	µg/L	4,700	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	Naphthalene	91-20-3	µg/L	46	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
8260C	o-Chlorotoluene	95-49-8	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Propylbenzene	103-65-1	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Styrene	100-42-5	µg/L	9,200	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Toluene	108-88-3	µg/L	19,000	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	trans-1,2-Dichloroethene	156-60-5	µg/L	250	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	trans-1,3-Dichloropropene	10061-02-6	µg/L	48	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Trichloroethene	79-01-6	µg/L	5.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
8260C	Trichlorofluoromethane	75-69-4	µg/L	N/A	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Vinyl chloride	75-01-4	µg/L	1.5	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
8260C	Xylene, m+p	179601-23-1	µg/L	370	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
8260C	Xylene, o	95-47-6	µg/L	490	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

**Acronyms and Definitions:**

**Bold** = chemical detected at the indicated concentration  
CASRN = Chemical Abstracts Service Registry Number  
FD = Field duplicate  
N = normal sample  
N/A = not applicable  
TPH = total petroleum hydrocarbons  
J = estimated concentration  
U = not detected at the indicated limit of detection  
VOC = volatile organic compound  
VISL = vapor intrusion screening level  
µg/L = micrograms per liter

Cells shaded in yellow indicate results greater than the NMED residential VISL. Taken from NMED Risk Assessment Guidance for Site Investigations and Remediation, November 2022 Revised.

**Column headers are given in this format:**

Well Number	Example: MW18D
Sample date	4/20/2022
Sample type (N/FD)	N
Sample ID	MW18D042022

**Sources:**

Eco and Associates. 2023. Northern Area Groundwater RCRA Facility Investigation Report, Groundwater Periodic Monitoring Report, January through June 2022, Fort Wingate Depot Activity, McKinley County, New Mexico. March.  
Eco and Associates. 2023. Northern Area Groundwater RCRA Facility Investigation Report, Groundwater Periodic Monitoring Report, July through December 2022, Fort Wingate Depot Activity, McKinley County, New Mexico. November.

**Table 3.1 – Summary of Samples to be Collected**

Proposed Sampling Identification <sup>1</sup>	Sample Matrix	# Sampling Events	Depth (ft bgs)	Analysis
1145BLDG6-SV01-5D-SV-date	Soil vapor	2	5	<b>Soil vapor:</b> <ul style="list-style-type: none"> <li>• VOCs via TO-15</li> <li>• TPH via TO-3</li> </ul> <b>Soil:</b> <ul style="list-style-type: none"> <li>• VOCs via 8260F</li> <li>• TPH via 8015D</li> </ul>
1145BLDG6-SV01-10D-SV-date		2	10	
1145BLDG6-SV01-15D-SV-date		2	15	
1145BLDG6-SS01-TBD-SO	Soil	1	TBD	
1145BLDG6-SV02-5D-SV-date	Soil vapor	2	5	
1145BLDG6-SV02-10D-SV-date		2	10	
1145BLDG6-SV02-15D-SV-date		2	15	
1145BLDG6-SS02-TBD-SO	Soil	1	TBD <sup>2</sup>	
1145BLDG6-SV03-5D-SV-date	Soil vapor	2	5	
1145BLDG6-SV03-10D-SV-date		2	10	
1145BLDG6-SV03-15D-SV-date		2	15	
1145BLDG6-SS03-TBD-SO	Soil	1	TBD <sup>2</sup>	
1145BLDG6-SV04-5D-SV-date	Soil vapor	2	5	
1145BLDG6-SV04-10D-SV-date		2	10	
1145BLDG6-SV04-15D-SV-date		2	15	
1145BLDG6-SS04-TBD-SO	Soil	1	TBD <sup>2</sup>	
1145BLDG6-SV05-5D-SV-date	Soil vapor	2	5	
1145BLDG6-SV05-10D-SV-date		2	10	
1145BLDG6-SV05-15D-SV-date		2	15	
1145BLDG6-SS05-TBD-SO	Soil	1	TBD <sup>2</sup>	
1145BLDG6-SV06-5D-SV-date	Soil vapor	2	5	
1145BLDG6-SV06-10D-SV-date		2	10	
1145BLDG6-SV06-15D-SV-date		2	15	
1145BLDG6-SS06-TBD-SO	Soil	1	TBD <sup>2</sup>	
1145BLDG6-SV07-5D-SV-date	Soil vapor	2	5	
1145BLDG6-SV07-10D-SV-date		2	10	
1145BLDG6-SV07-15D-SV-date		2	15	
1145BLDG6-SS07-TBD-SO	Soil	1	TBD <sup>2</sup>	
1145BLDG6-SV08-5D-SV-date	Soil vapor	2	5	

**Table 3.1 – Summary of Samples to be Collected**

Proposed Sampling Identification <sup>1</sup>	Sample Matrix	# Sampling Events	Depth (ft bgs)	Analysis
1145BLDG6-SV08-10D-SV-date		2	10	
1145BLDG6-SV08-15D-SV-date		2	15	
1145BLDG6-SS08-TBD-SO	Soil	1	TBD <sup>2</sup>	

1     **Acronyms and abbreviations:**

2     1,2-DCA = 1,2-dichloroethane

3     TBD = to be determined

4     TPH = total petroleum hydrocarbons

5     UST = underground storage tank

6     VOCs = volatile organic compounds

7     **Notes:**

8     1 – see **Section 4.9** for the derivation of sample nomenclature

9     2 – A sampling will only be collected if photoionization detector readings greater than 100 ppmv are  
10    encountered in the boring (see **Section 4.2.2**)

**Table 4.1 – Summary of Analytical Methods, Sample Containers, Preservation, and Holding Times**

<b>Matrix</b>	<b>Analyte/ Analytical Group</b>	<b>Analytical Method</b>	<b>Sample Volume/Container</b>	<b>Preservation</b>	<b>Preparation Holding Time</b>	<b>Maximum Holding Time (collection until extraction/extraction until analysis)</b>
Soil Vapor	VOCs	TO-15	1L/6L Summa Canister	None	N/A	30 days
	TPH	TO-3	1L/6L Summa Canister	None	N/A	30 days
Soil	VOCs	8260D	2 x Terracore, 40-mL VOA Vials with septa cap, pre-tared with stir bar and DI water or sodium bisulfate  1 x Terracore, 40-mL VOA vial with closed cap, pre-tared with methanol	Cool to ≤ 6°C (methanol)	N/A	14 days if preserved with sodium bisulfate and methanol  48-hours if frozen and preserved with DI water
	TPH – Gasoline-Range Organics	8015D	2 x Terra core, 40-mL VOA vials with closed cap, pre-tared with methanol	Cool to ≤ 6°C (methanol)	N/A	14 days
	TPH – Diesel-Range Organics	8015D	4-oz or 8-oz Glass Jar	Cool to ≤ 6°C	14 days	14/40 days

**Definitions:**

°C = degrees Celsius  
DI = deionized  
L = liter  
mL - milliliter

N/A = not applicable  
oz = ounces  
TPH = total petroleum hydrocarbons  
TO = toxic organic

VOA = volatile organic analysis  
VOC = volatile organic compound

**Table 4.2 – Summary of Samples Collected per Sampling Event**

Matrix	Analyte/ Analytical Group	Sample Locations	Sample Depths	Number of Primary Samples/Event	Number of FDs/Event	Total Number of Samples/Event
Soil Vapor	VOCs	Eight	5, 10, and 15 feet bgs	24	3	27
	TPH	Eight	5, 10, and 15 feet bgs	24	3	27
Soil	VOCs	Up to Eight	One sample per boring at depth of highest PID reading	Up to 8	1	9
	TPH	Up to Eight	One sample per boring at depth of highest PID reading	Up to 8	1	9

**Definitions:**

bgs = below ground surface  
FD = field duplicate  
PID = photoionization detector  
TPH = total petroleum hydrocarbons  
VOCs = volatile organic compounds



**Table 4.3 – Quality Control Samples for Precision and Accuracy**

Applicable Matrices	Data Quality Indicator	Quality Control Type	Minimum Frequency	Measurement Performance Criteria (MPC)
Soil, soil vapor	Precision	Field Duplicate Sample	One every 10 samples (10%)	RPD $\leq$ 50%
Soil, soil vapor	Accuracy/ Contamination	Equipment Blank	One per week for reusable equipment	No analytes detected $> \frac{1}{2}$ LOQ or $> 1/10$ th the amount measured in any sample or $1/10$ th the regulatory limit, whichever is greater
Soil	Accuracy/ Contamination	Trip Blank	One set (two VOAs) per each cooler containing VOC samples	No analytes detected $> \frac{1}{2}$ LOQ or $> 1/10$ th the amount measured in any sample or $1/10$ th the regulatory limit, whichever is greater
Soil	Accuracy/ Contamination	Method Blank	One per preparation or analytical batch, at least one every 20 samples (rounded up) (5%)	No analytes detected $> \frac{1}{2}$ LOQ or $> 1/10$ th the amount measured in any sample or $1/10$ th the regulatory limit, whichever is greater
Soil	Accuracy/ Precision	Laboratory Control Sample or Blank Spike	One per preparation or analytical batch, at least one every 20 samples (rounded up) (5%)	Per QSM criteria. Control limits for each method included in Worksheet #28 of the UFP-QAPP.
Soil	Accuracy/ Precision	MS Percent Recovery (QSM Percent Recovery Goals)	One every 20 samples (rounded up) (5%)	Per QSM criteria. Control limits for each method included in Worksheet #28 of the UFP-QAPP.
Soil, soil vapor	Accuracy/ Precision	Surrogate Spike (for organics only)	All samples and QC	Per QSM criteria. Control limits for each method included in Worksheet #28 of the UFP-QAPP.

**Notes:**

Additional Laboratory QC specific to each analytical method and as required by the QSM are discussed in the UFP-QAPP worksheets 24 and 28.

**Definitions:**

LOQ = Limit of Quantitation  
MS = matrix spike  
MSD = matrix spike duplicate

QAPP = Quality Assurance Project Plan  
QC = quality control  
QSM = Quality Systems Manual (U.S. Department of Defense)

RPD = relative percent difference  
VOA = volatile organic analysis  
VOC = volatile organic compound

**Table 4.4 – Data Validation Codes and Definitions**

<b>Data Qualifiers</b>	<b>Definitions</b>
U	The analyte was not detected and was reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.
J	The reported result was an estimated value with an unknown bias.
J+	The result was an estimated quantity, but the result may be biased high.
J-	The result was an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected and was reported as less than the LOD. However, the associated numerical value is approximate.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance (J-flag) or rejection (R-flag) of the data will be decided by the project team during the data usability assessment and will be documented in the data validation report

**Note:** Analytical data will report all detections at or above the Detection Limit (DL) and qualify all results between the DL and limit of quantitation (LOQ) “J” as estimated. All non-detect results will be reported at the LOD and qualified “U”, per DoD (2021) QSM.

**Table 4.5 – Comparison of VISLs to Laboratory Quantitation Limits for Soil Vapor**

Method	Chemical	Surrogate <sup>(1)</sup>	CASRN	Human Health Screening Levels (µg/m <sup>3</sup> )			Detection Limits (µg/m <sup>3</sup> )		
				Residential VISL		Selected <sup>(4)</sup>	LOD	LOQ	DL
				NMED <sup>(2)</sup>	USEPA <sup>(3)</sup>				
TO-3	TPH (gasoline range)		GRO	217,000		217,000	102.5	61.35	28.63
TO-15	1,1,1-Trichloroethane		71-55-6	174,000		174,000	2.72	1.36	0.51
TO-15	1,1,2,2-Tetrachloroethane		79-34-5	16.1		16.1	3.43	2.57	0.63
TO-15	1,1,2-Trichloroethane		79-00-5	6.95		6.95	2.72	2.04	0.4
TO-15	1,1-Dichloroethane		75-34-3	585		585	2.02	1.01	0.42
TO-15	1,1-Dichloroethene		75-35-4	6,950		6,950	1.98	1.48	0.5
TO-15	1,2,4-Trichlorobenzene		120-82-1	69.5		69.5	14.8	12.6	5.3
TO-15	1,2,4-Trimethylbenzene		95-63-6	--	6,950	6,950	9.83	1.84	0.86
TO-15	1,2-Dibromoethane (EDB)		106-93-4	1.56		1.56	3.84	2.88	0.87
TO-15	1,2-Dichlorobenzene		95-50-1	6,950		6,950	3	2.25	0.98
TO-15	1,2-Dichloroethane		107-06-2	36		36	2.02	1.51	0.46
TO-15	1,2-Dichloropropane		78-87-5	93.6		93.6	2.31	1.73	0.45
TO-15	1,3,5-Trimethylbenzene		108-67-8	--	6,950	6,950	9.83	1.84	0.83
TO-15	1,3-Dichlorobenzene	1,4-Dichlorobenzene	541-73-1	85.1		85.1	3	2.25	0.64
TO-15	1,3-Butadiene		106-99-0	31.2		31.2	1.1	0.82	0.45
TO-15	1,4-Dichlorobenzene		106-46-7	85.1		85.1	3	2.25	1
TO-15	1,4-Dioxane		123-91-1	187		187	7.2	2.7	0.4
TO-15	2,2,4-Trimethylpentane		540-84-1	--	--	--	2.33	1.75	0.51
TO-15	2-Butanone (Methyl Ethyl Ketone)		78-93-3	174,000		174,000	5.89	5.01	0.7
TO-15	2-Hexanone		591-78-6	--	1,040	1,040	8.19	6.96	2.9
TO-15	2-Propanol		67-63-0	--	243,000	243,000	4.91	4.17	1.5
TO-15	3-Chloropropene		107-05-1	--	156	156	6.26	2.34	0.84
TO-15	4-Ethyltoluene		622-96-8	--	--	--	2.45	1.84	0.6
TO-15	4-Methyl-2-pentanone		108-10-1	104,000		104,000	2.04	1.53	1.2
TO-15	Acetone		67-64-1	1,080,000		1,080,000	11.8	5.93	4.3
TO-15	alpha-Chlorotoluene		100-44-7	--	19.1	19.1	2.58	1.94	0.87
TO-15	Benzene		71-43-2	120		120	1.59	1.19	0.35

**Table 4.5 – Comparison of VISLs to Laboratory Quantitation Limits for Soil Vapor**

Method	Chemical	Surrogate <sup>(1)</sup>	CASRN	Human Health Screening Levels ( $\mu\text{g}/\text{m}^3$ )			Detection Limits ( $\mu\text{g}/\text{m}^3$ )		
				Residential VISL		Selected <sup>(4)</sup>	LOD	LOQ	DL
				NMED <sup>(2)</sup>	USEPA <sup>(3)</sup>				
TO-15	Bromodichloromethane		75-27-4	25.3		25.3	3.35	1.67	0.59
TO-15	Bromoform		75-25-2	851		851	5.16	3.87	1.3
TO-15	Bromomethane		74-83-9	174		174	19.4	6.6	5.7
TO-15	Carbon Disulfide		75-15-0	24,300		24,300	6.22	5.29	4.7
TO-15	Carbon Tetrachloride		56-23-5	156		156	3.14	2.35	0.57
TO-15	Chlorobenzene		108-90-7	1740		1740	2.3	1.15	0.35
TO-15	Chloroethane		75-00-3	348,000		348,000	5.27	4.48	1.7
TO-15	Chloroform		67-66-3	40.7		40.7	2.44	1.22	0.37
TO-15	Chloromethane		74-87-3	520		520	10.3	3.51	1.5
TO-15	cis-1,2-Dichloroethene		156-59-2	--	13,900	13,900	1.98	1.48	0.44
TO-15	cis-1,3-Dichloropropene	1,3-Dichloropropene	10061-01-5	234		234	2.26	1.7	0.57
TO-15	Cumene		98-82-8	13,900		13,900	2.45	1.84	0.88
TO-15	Cyclohexane		110-82-7	34,800		34,800	1.72	1.29	0.33
TO-15	Dibromochloromethane		124-48-1	34.7		34.7	4.25	3.19	0.88
TO-15	Ethanol		64-17-5	--	--	--	9.42	4.71	3.9
TO-15	Ethyl Benzene		100-41-4	374		374	2.17	1.62	0.48
TO-15	Freon 11		75-69-4	24,300		24,300	2.8	2.1	0.55
TO-15	Freon 113		76-13-1	1,040,000		1,040,000	3.83	2.87	0.88
TO-15	Freon 114		76-14-2	--	--	--	3.49	2.62	1
TO-15	Freon 12		75-71-8	3,480		3,480	2.47	1.85	0.36
TO-15	Heptane		142-82-5	--	139,000	139,000	8.19	1.53	0.57
TO-15	Hexachlorobutadiene		87-68-3	42.5		42.5	21.3	18.1	7.7
TO-15	Hexane		110-54-3	24,300		24,300	1.76	1.32	0.5
TO-15	m,p-Xylene	Xylenes	108-38-3	3,480		3,480	2.17	1.62	0.76
TO-15	Methyl tert-butyl ether		1634-04-4	3,600		3,600	7.21	2.7	0.44
TO-15	Methylene Chloride		75-09-2	20,900		20,900	17.3	5.9	1.2
TO-15	o-Xylene		95-47-6	3,480		3,480	2.17	1.62	0.4

**Table 4.5 – Comparison of VISLs to Laboratory Quantitation Limits for Soil Vapor**

Method	Chemical	Surrogate <sup>(1)</sup>	CASRN	Human Health Screening Levels ( $\mu\text{g}/\text{m}^3$ )			Detection Limits ( $\mu\text{g}/\text{m}^3$ )		
				Residential VISL		Selected <sup>(4)</sup>	LOD	LOQ	DL
				NMED <sup>(2)</sup>	USEPA <sup>(3)</sup>				
TO-15	Propylbenzene		103-65-1	--	34,800	34,800	2.45	1.84	0.31
TO-15	Styrene		100-42-5	34,800		34,800	2.12	1.59	0.43
TO-15	Tetrachloroethene		127-18-4	1,390		1,390	3.39	2.54	0.63
TO-15	Tetrahydrofuran		109-99-9	--	69,500	69,500	1.47	1.1	0.45
TO-15	Toluene		108-88-3	174,000		174,000	1.88	1.41	0.48
TO-15	trans-1,2-Dichloroethene		156-60-5	1,390		1,390	1.98	1.48	0.44
TO-15	trans-1,3-Dichloropropene	1,3-Dichloropropene	10061-02-6	234		234	2.26	1.7	0.39
TO-15	Trichloroethene		79-01-6	69.5		69.5	2.68	2.01	0.58
TO-15	Vinyl Chloride		75-01-4	55.9		55.9	1.27	0.95	0.3

**ABBREVIATIONS & ACRONYMS:**

Cells shaded in yellow show that the screening level is lower than the achievable detection limit. If identified as a chemical of potential concern, these analytes will be addressed in the uncertainty discussion.

CASRN = Chemical Abstracts Service Registry Number

DL = Detection Limit

LOD = Limit of Detection

LOQ = Limit of Quantitation

NMED = New Mexico Environment Department

TO = toxic organic

USEPA = US Environmental Protection Agency

VISL = Vapor Intrusion Screening Level

$\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

**Notes:**

1. For chemicals without a VISL, provides the surrogate chemical used for the screening level. Does not indicate laboratory surrogates.
2. NMED *Risk Assessment Guidance for Site Investigations and Remediation*, November 2022 Revised (Tables 6-5 and A-4, residential). Lesser of cancer and noncancer values given.
3. Calculated using EPA's *Vapor Intrusion Screening Level Calculator* (TR=1E-05, HQ=1). January 2024. Lesser of cancer and noncancer values given.
4. Selected value is the NMED VISL. If there is no NMED VISL, the EPA VISL was selected.

**Table 4.6 – Evaluation of Analytes with LOQs Greter than Screening Levels**

Analyte	CAS Number	Units	Human Health Screening Value <sup>(1)</sup>	Project Screening Level <sup>(2)</sup>	Project Screening Level Reference <sup>(2)</sup>	Limit of Quantitation (LOQ)	Limit of Detection (LOD)	Detection Limit (DL)	Concern (Y or N)	Justification
1,2-Dibromoethane (EDB)	106-93-4	µg/m <sup>3</sup>	1.56	2.88	LOD	3.84	2.88	0.87	YES	<p>Any detections of ethylene dibromide (1,2-Dibromoethane or EDB) will be flagged and discussed in the uncertainty section of the report.</p> <p>-The analytical lab is capable of reaching the screening level.</p> <p>-1,2-Dibromoethane has not been detected in soil and groundwater and, is, therefore, unlikley in soil vapor.</p> <p>-1,2-Dibromoethane can be biologically metabolized (broken down) under a wide range of environmental conditions. The environmental half-life of 1,2-dibromoethane is months to years. Once EDB is broken down to ethene, the half life of ethene (reduced to ethane) is weeks to months.</p> <p>The above justification is consistent with Table 1h and Table 1i in Enclosure 1 of the Phase 3, Limit of Detection / Limit of Quantitation Submission in Support of Analytical Performance Concerns at FWDA, Fort Wingate Depot Activity, McKinley County, New Mexico dated April 24, 2023.</p>

**Notes:**

- Human Health Screening Value is the lesser of cancer and noncancer value of the NMED Vapor Intrusion Screening Levels (VISLs) from NMED Risk Assessment Guidance for Site Investigations and Remediation, November 2022 Revised (Tables 6-5 and A-4, residential). If there is no NMED VISL, the lesser of cancer and noncancer calculated values using EPA's VISL Calculator (TR=1E-05, HQ=1) January 2024 was selected.
- If the Human Health Screening Value is less than the LOQ, the LOD becomes the *de facto* Project Screening Level.

**Reference:**

U.S. Army, 2023. Phase 3 Limit of Detection / Limit of Quantitation Submission in Support of Analytical Performance Concerns at FWDA, Fort Wingate Depot Activity, April. McKinley County, New Mexico. Enclosure 1.

**Table 4.7 – Comparison of Screening Levels to Laboratory Quantitation Limits for Soil**

Analyte	SL Surrogate	Analytical Method <sup>(1)</sup>	CASRN	Units	NMED Table A-1 and Table 6-2 Human Health Screening Levels Direct Contact <sup>(2)</sup>						EPA-RSL Table Human Health Screening Levels Direct Contact <sup>(3)</sup>			
					Residential		Industrial/ Occupational		Construction Worker		Residential		Industrial	
					cancer	noncancer	cancer	noncancer	cancer	noncancer	cancer adj to 1x10 <sup>-5</sup>	noncancer HQ=1	cancer adj to 1x10 <sup>-5</sup>	noncancer HQ=1
<b>Total Petroleum Hydrocarbons</b>														
GRO	-	SW8015D	8006-61-1	mg/kg	NS	100	NS	500	NS	500	-	-	-	-
DRO	-	SW8015D	68334-30-5	mg/kg	NS	1000	NS	3000	NS	3000	-	-	-	-
RRO	-	SW8015D	21274-30-0	mg/kg	NS	1000	NS	3000	NS	3000	-	-	-	-
<b>Volatile Organic Compounds</b>														
1,1,1,2-Tetrachloroethane	-	SW8260D	630-20-6	mg/kg	28.1	2350	137	38900	659	10600	-	-	-	-
1,1,1-Trichloroethane	-	SW8260D	71-55-6	mg/kg	NS	14400	NS	72500	NS	13600	-	-	-	-
1,1,2,2-Tetrachloroethane	-	SW8260D	79-34-5	mg/kg	7.98	1560	39.4	26000	197	7080	-	-	-	-
1,1,2-Trichloroethane	-	SW8260D	79-00-5	mg/kg	18.8	2.61	92.1	12.4	4300	2.30	-	-	-	-
1,1-Dichloroethane	-	SW8260D	75-34-3	mg/kg	78.6	15600	383	260000	1820	70800	-	-	-	-
1,1-Dichloroethene	-	SW8260D	75-35-4	mg/kg	NS	440	NS	2260	NS	424	-	-	-	-
1,1-Dichloropropene	1,3-Dichloropropene	SW8260D	563-58-6	mg/kg	29.3	141	146	695	781	130	-	-	-	-
1,2,3-Trichlorobenzene	-	SW8260D	87-61-6	mg/kg	NS	NS	NS	NS	NS	NS	NS	63	NS	930
1,2,3-Trichloropropane	-	SW8260D	96-18-4	mg/kg	0.0510	7.09	1.21	34.0	8.26	6.31	-	-	-	-
1,2,4-Trichlorobenzene	-	SW8260D	120-82-1	mg/kg	240	82.9	1250	423	8540	79.1	-	-	-	-
1,2,4-Trimethylbenzene	-	SW8260D	95-63-6	mg/kg	NS	NS	NS	NS	NS	NS	NS	300	NS	1800
1,2-Dibromo-3-Chloropropane	-	SW8260D	96-12-8	mg/kg	0.0858	5.88	1.18	41.1	5.53	8.29	-	-	-	-
1,2-Dibromoethane	-	SW8260D	106-93-4	mg/kg	0.672	135	3.31	738	16.3	140	-	-	-	-
1,2-Dichlorobenzene	-	SW8260D	95-50-1	mg/kg	NS	2150	NS	13000	NS	2500	-	-	-	-
1,2-Dichloroethane	-	SW8260D	107-06-2	mg/kg	8.32	55.6	40.7	286	195	53.8	-	-	-	-
1,2-Dichloropropane	-	SW8260D	78-87-5	mg/kg	17.8	29.0	86.8	137	415	25.4	-	-	-	-
1,3,5-Trimethylbenzene	-	SW8260D	108-67-8	mg/kg	NS	NS	NS	NS	NS	NS	NS	270	NS	1500
1,3-Dichloropropane	-	SW8260D	142-28-9	mg/kg	NS	NS	NS	NS	NS	NS	NS	1600	NS	23000
1,3-Dichlorobenzene	1,4-Dichlorobenzene	SW8260D	541-73-1	mg/kg	1290	5480	6730	90800	45900	24800	-	-	-	-
1,4-Dichlorobenzene	-	SW8260D	106-46-7	mg/kg	1290	5480	6730	90800	45900	24800	-	-	-	-
2,2-Dichloropropane	1,2-Dichloropropane	SW8260D	594-20-7	mg/kg	17.8	29.0	86.8	137	415	25.4	-	-	-	-
2-Butanone (MEK)	-	SW8260D	78-93-3	mg/kg	NS	37400	NS	411000	NS	91700	-	-	-	-
2-Chlorotoluene	-	SW8260D	95-49-8	mg/kg	NS	1560	NS	26000	NS	7080	-	-	-	-
2-Hexanone	-	SW8260D	591-78-6	mg/kg	NS	NS	NS	NS	NS	NS	NS	200	NS	1300
4-Chlorotoluene	-	SW8260D	106-43-4	mg/kg	NS	NS	NS	NS	NS	NS	NS	1600	NS	23000
4-Methyl-2-Pentanone (MIBK)	-	SW8260D	108-10-1	mg/kg	NS	5810	NS	81600	NS	20200	-	-	-	-
Acetone	-	SW8260D	67-64-1	mg/kg	NS	66300	NS	960000	NS	242000	-	-	-	-
Benzene	-	SW8260D	71-43-2	mg/kg	17.8	114	87.2	729	423	142	-	-	-	-
Bromobenzene	-	SW8260D	108-86-1	mg/kg	NS	NS	NS	NS	NS	NS	NS	290	NS	1800
Bromochloromethane	-	SW8260D	74-97-5	mg/kg	NS	NS	NS	NS	NS	NS	NS	150	NS	630
Bromodichloromethane	-	SW8260D	75-27-4	mg/kg	6.19	1560	30.2	26000	143	7080	-	-	-	-
Bromoform	-	SW8260D	75-25-2	mg/kg	674	1230	1760	18300	23700	5380	-	-	-	-
Bromomethane	-	SW8260D	74-83-9	mg/kg	NS	17.7	NS	94.5	NS	17.9	-	-	-	-
Carbon Disulfide	-	SW8260D	75-15-0	mg/kg	NS	1550	NS	8540	NS	1620	-	-	-	-
Carbon Tetrachloride	-	SW8260D	56-23-5	mg/kg	10.7	144	52.5	1020	252	202	-	-	-	-
Chlorobenzene	-	SW8260D	108-90-7	mg/kg	NS	378	NS	2160	NS	412	-	-	-	-
Chloroethane	-	SW8260D	75-00-3	mg/kg	NS	19000	NS	89500	NS	16600	-	-	-	-
Chloroform	-	SW8260D	67-66-3	mg/kg	5.90	306	28.7	2000	134	391	-	-	-	-
Chloromethane	-	SW8260D	74-87-3	mg/kg	41.1	268	201	1260	956	235	-	-	-	-
cis-1,2-Dichloroethene	-	SW8260D	156-59-2	mg/kg	NS	156	NS	2600	NS	708	-	-	-	-
cis-1,3-Dichloropropene	1,3-Dichloropropene	SW8260D	10061-01-5	mg/kg	29.3	141	146	695	781	130	-	-	-	-

**Table 4.7 – Comparison of Screening Levels to Laboratory Quantitation Limits for Soil**

Analyte	SL Surrogate	Analytical Method <sup>(1)</sup>	CASRN	Units	Lowest Human Health Screening Level Direct Contact <sup>(4)</sup>	Lowest Human Health Screening Level Direct Contact Source <sup>(4)</sup>	Human Health Screening Levels - Groundwater Protection			Achievable Laboratory Limits		
							NMED Table A-3 and Table 6-4 Risk-based SSL <sup>(5)</sup>	NMED Table A-3 NMGW/MCL based SSL <sup>(5)</sup>	EPA-RSL Calculator Risk-based SSL <sup>(6)</sup>	LOQ	LOD	DL
							DAF = 20	DAF = 20	adjusted to DAF = 20			
<b>Total Petroleum Hydrocarbons</b>												
GRO	-	SW8015D	8006-61-1	mg/kg	100	NMED SSL	4.94	NS	-	2	1.5	0.759
DRO	-	SW8015D	68334-30-5	mg/kg	1000	NMED SSL	13.2	NS	-	8	7	3.64
RRO	-	SW8015D	21274-30-0	mg/kg	1000	NMED SSL	13.2	NS	-	24	23.4	7.82
<b>Volatile Organic Compounds</b>												
1,1,1,2-Tetrachloroethane	-	SW8260D	630-20-6	mg/kg	28.1	NMED SSL	0.0360	NS	-	0.005	0.004	0.00222
1,1,1-Trichloroethane	-	SW8260D	71-55-6	mg/kg	13600	NMED SSL	51.1	1.28	-	0.005	0.004	0.00198
1,1,2,2-Tetrachloroethane	-	SW8260D	79-34-5	mg/kg	7.98	NMED SSL	0.00481	NS	-	0.005	0.0008	0.000285
1,1,2-Trichloroethane	-	SW8260D	79-00-5	mg/kg	2.30	NMED SSL	0.00223	0.0268	-	0.005	0.0032	0.00088
1,1-Dichloroethane	-	SW8260D	75-34-3	mg/kg	78.6	NMED SSL	0.136	NS	-	0.005	0.0008	0.00021
1,1-Dichloroethene	-	SW8260D	75-35-4	mg/kg	424	NMED SSL	1.95	0.0479	-	0.005	0.0016	0.00059
1,1-Dichloropropene	1,3-Dichloropropene	SW8260D	563-58-6	mg/kg	29.3	NMED SSL	0.0281	NS	-	0.005	0.0004	0.000164
1,2,3-Trichlorobenzene	-	SW8260D	87-61-6	mg/kg	63.0	EPA RSL	NS	NS	0.418	0.005	0.0032	0.00081
1,2,3-Trichloropropane	-	SW8260D	96-18-4	mg/kg	0.0510	NMED SSL	0.0000582	NS	-	0.005	0.0008	0.000218
1,2,4-Trichlorobenzene	-	SW8260D	120-82-1	mg/kg	79.1	NMED SSL	0.176	3.10	-	0.005	0.0016	0.00073
1,2,4-Trimethylbenzene	-	SW8260D	95-63-6	mg/kg	300	EPA RSL	NS	NS	1.62	0.005	0.004	0.00231
1,2-Dibromo-3-Chloropropane	-	SW8260D	96-12-8	mg/kg	0.0858	NMED SSL	0.0000233	0.00139	-	0.01	0.009	0.00366
1,2-Dibromoethane	-	SW8260D	106-93-4	mg/kg	0.672	NMED SSL	0.000352	0.000236	-	0.005	0.0016	0.00052
1,2-Dichlorobenzene	-	SW8260D	95-50-1	mg/kg	2150	NMED SSL	4.58	9.08	-	0.005	0.004	0.00187
1,2-Dichloroethane	-	SW8260D	107-06-2	mg/kg	8.32	NMED SSL	0.00814	0.0238	-	0.005	0.0016	0.0007
1,2-Dichloropropane	-	SW8260D	78-87-5	mg/kg	17.8	NMED SSL	0.0243	0.0277	-	0.005	0.0016	0.00055
1,3,5-Trimethylbenzene	-	SW8260D	108-67-8	mg/kg	270	EPA RSL	NS	NS	1.73	0.005	0.004	0.00242
1,3-Dichloropropane	-	SW8260D	142-28-9	mg/kg	1600	EPA RSL	NS	NS	2.57	0.005	0.0004	0.000173
1,3-Dichlorobenzene	1,4-Dichlorobenzene	SW8260D	541-73-1	mg/kg	1290	NMED SSL	0.0720	1.12	-	0.005	0.0016	0.00048
1,4-Dichlorobenzene	-	SW8260D	106-46-7	mg/kg	1290	NMED SSL	0.0720	1.12	-	0.005	0.0008	0.000245
2,2-Dichloropropane	1,2-Dichloropropane	SW8260D	594-20-7	mg/kg	17.8	NMED SSL	0.0243	0.0277	-	0.005	0.0016	0.00044
2-Butanone (MEK)	-	SW8260D	78-93-3	mg/kg	37400	NMED SSL	20.1	NS	-	0.02	0.0128	0.00389
2-Chlorotoluene	-	SW8260D	95-49-8	mg/kg	1560	NMED SSL	3.56	NS	-	0.005	0.0016	0.00051
2-Hexanone	-	SW8260D	591-78-6	mg/kg	200	EPA RSL	NS	NS	0.175	0.02	0.0128	0.00489
4-Chlorotoluene	-	SW8260D	106-43-4	mg/kg	1600	EPA RSL	NS	NS	4.83	0.005	0.0008	0.000361
4-Methyl-2-Pentanone (MIBK)	-	SW8260D	108-10-1	mg/kg	5810	NMED SSL	4.80	NS	-	0.02	0.0128	0.00436
Acetone	-	SW8260D	67-64-1	mg/kg	66300	NMED SSL	49.8	NS	-	0.072	0.07	0.0356
Benzene	-	SW8260D	71-43-2	mg/kg	17.8	NMED SSL	0.0380	0.0418	-	0.005	0.0004	0.000151
Bromobenzene	-	SW8260D	108-86-1	mg/kg	290	EPA RSL	NS	NS	0.842	0.005	0.0016	0.00049
Bromochloromethane	-	SW8260D	74-97-5	mg/kg	150	EPA RSL	NS	NS	0.415	0.005	0.004	0.00246
Bromodichloromethane	-	SW8260D	75-27-4	mg/kg	6.19	NMED SSL	0.00621	NS	-	0.005	0.004	0.00213
Bromoform	-	SW8260D	75-25-2	mg/kg	674	NMED SSL	0.147	NS	-	0.0051	0.005	0.00255
Bromomethane	-	SW8260D	74-83-9	mg/kg	17.7	NMED SSL	0.0343	NS	-	0.01	0.0032	0.00135
Carbon Disulfide	-	SW8260D	75-15-0	mg/kg	1550	NMED SSL	4.42	NS	-	0.005	0.004	0.00166
Carbon Tetrachloride	-	SW8260D	56-23-5	mg/kg	10.7	NMED SSL	0.0334	0.0367	-	0.005	0.004	0.00201
Chlorobenzene	-	SW8260D	108-90-7	mg/kg	378	NMED SSL	0.836	1.08	-	0.005	0.004	0.00206
Chloroethane	-	SW8260D	75-00-3	mg/kg	16600	NMED SSL	107	NS	-	0.01	0.0064	0.00199
Chloroform	-	SW8260D	67-66-3	mg/kg	5.90	NMED SSL	0.0109	NS	-	0.01	0.0008	0.00029
Chloromethane	-	SW8260D	74-87-3	mg/kg	41.1	NMED SSL	0.0952	NS	-	0.01	0.0016	0.00077
cis-1,2-Dichloroethene	-	SW8260D	156-59-2	mg/kg	156	NMED SSL	0.184	0.352	-	0.005	0.0008	0.000201
cis-1,3-Dichloropropene	1,3-Dichloropropene	SW8260D	10061-01-5	mg/kg	29.3	NMED SSL	0.0281	NS	-	0.005	0.0004	0.0001



**Table 4.7 – Comparison of Screening Levels to Laboratory Quantitation Limits for Soil**

Analyte	SL Surrogate	Analytical Method <sup>(1)</sup>	CASRN	Units	NMED Table A-1 and Table 6-2 Human Health Screening Levels Direct Contact <sup>(2)</sup>						EPA-RSL Table Human Health Screening Levels Direct Contact <sup>(3)</sup>			
					Residential		Industrial/ Occupational		Construction Worker		Residential		Industrial	
					cancer	noncancer	cancer	noncancer	cancer	noncancer	cancer adj to 1x10 <sup>-5</sup>	noncancer HQ=1	cancer adj to 1x10 <sup>-5</sup>	noncancer HQ=1
Dibromochloromethane	-	SW8260D	124-48-1	mg/kg	13.9	1230	67.4	18300	340	5380	-	-	-	-
Dibromomethane	-	SW8260D	74-95-3	mg/kg	NS	57.9	NS	288	NS	53.9	-	-	-	-
Dichlorodifluoromethane	-	SW8260D	75-71-8	mg/kg	NS	182	NS	865	NS	161	-	-	-	-
Ethylbenzene	-	SW8260D	100-41-4	mg/kg	75.1	3930	368	29000	1770	5800	-	-	-	-
Hexachlorobutadiene	-	SW8260D	87-68-3	mg/kg	68.3	61.6	52.1	916	2400	269	-	-	-	-
Isopropylbenzene	-	SW8260D	98-82-8	mg/kg	NS	2360	NS	14200	NS	2740	-	-	-	-
m,p-Xylenes	Xylenes	SW8260D	179601-23-1	mg/kg	NS	871	NS	4280	NS	798	-	-	-	-
Methyl Tert-Butyl Ether	-	SW8260D	1634-04-4	mg/kg	975	37800	4820	178000	24200	33100	-	-	-	-
Methylene Chloride	-	SW8260D	75-09-2	mg/kg	766	409	14400	5130	89600	1210	-	-	-	-
Naphthalene	-	SW8260D	91-20-3	mg/kg	22.6	162	108	843	633	159	-	-	-	-
n-Butylbenzene	-	SW8260D	104-51-8	mg/kg	NS	NS	NS	NS	NS	NS	NS	3900	NS	58000
n-Propylbenzene	-	SW8260D	103-65-1	mg/kg	NS	NS	NS	NS	NS	NS	NS	3800	NS	24000
o-Xylene	-	SW8260D	95-47-6	mg/kg	NS	805	NS	3940	NS	736	-	-	-	-
4-Isopropyltoluene	Isopropylbenzene	SW8260D	99-87-6	mg/kg	NS	2360	NS	14200	NS	2740	-	-	-	-
Sec-Butylbenzene	-	SW8260D	135-98-8	mg/kg	NS	NS	NS	NS	NS	NS	NS	7800	NS	120000
Styrene	-	SW8260D	100-42-5	mg/kg	NS	7260	NS	51300	NS	10200	-	-	-	-
Tert-Butylbenzene	-	SW8260D	98-06-6	mg/kg	NS	NS	NS	NS	NS	NS	NS	7800	NS	120000
Tetrachloroethene	-	SW8260D	127-18-4	mg/kg	337	111	1650	629	7910	120	-	-	-	-
Toluene	-	SW8260D	108-88-3	mg/kg	NS	5230	NS	61300	NS	14000	-	-	-	-
Trans-1,2-Dichloroethene	-	SW8260D	156-60-5	mg/kg	NS	210	NS	1100	NS	206	-	-	-	-
Trans-1,3-Dichloropropene	1,3-Dichloropropene	SW8260D	10061-02-6	mg/kg	29.3	141	146	695	781	130	-	-	-	-
Trichloroethene	-	SW8260D	79-01-6	mg/kg	15.5	6.77	112	36.5	5370	6.90	-	-	-	-
Trichlorofluoromethane	-	SW8260D	75-69-4	mg/kg	NS	1230	NS	6030	NS	1130	-	-	-	-
Vinyl Chloride	-	SW8260D	75-01-4	mg/kg	0.742	113	28.4	816	161	162	-	-	-	-

**Table 4.7 – Comparison of Screening Levels to Laboratory Quantitation Limits for Soil**

Analyte	SL Surrogate	Analytical Method <sup>(1)</sup>	CASRN	Units	Lowest Human Health Screening Level Direct Contact <sup>(4)</sup>	Lowest Human Health Screening Level Direct Contact Source <sup>(4)</sup>	Human Health Screening Levels - Groundwater Protection			Achievable Laboratory Limits		
							NMED Table A-3 and Table 6-4 Risk-based SSL <sup>(5)</sup>	NMED Table A-3 NMGW/MCL based SSL <sup>(5)</sup>	EPA-RSL Calculator Risk-based SSL <sup>(6)</sup>	LOQ	LOD	DL
							DAF = 20	DAF = 20	adjusted to DAF = 20			
Dibromochloromethane	-	SW8260D	124-48-1	mg/kg	13.9	NMED SSL	0.00755	NS	-	0.005	0.004	0.00227
Dibromomethane	-	SW8260D	74-95-3	mg/kg	53.9	NMED SSL	0.0335	NS	-	0.005	0.0008	0.000317
Dichlorodifluoromethane	-	SW8260D	75-71-8	mg/kg	161	NMED SSL	7.23	NS	-	0.01	0.0064	0.00274
Ethylbenzene	-	SW8260D	100-41-4	mg/kg	75.1	NMED SSL	0.264	12.3	-	0.005	0.0008	0.000305
Hexachlorobutadiene	-	SW8260D	87-68-3	mg/kg	52.1	NMED SSL	0.0413	NS	-	0.005	0.004	0.00217
Isopropylbenzene	-	SW8260D	98-82-8	mg/kg	2360	NMED SSL	11.4	NS	-	0.005	0.004	0.00241
m,p-Xylenes	Xylenes	SW8260D	179601-23-1	mg/kg	798	EPA RSL	2.98	154	-	0.0032	0.003	0.00104
Methyl Tert-Butyl Ether	-	SW8260D	1634-04-4	mg/kg	975	NMED SSL	0.553	NS	-	0.02	0.0064	0.00211
Methylene Chloride	-	SW8260D	75-09-2	mg/kg	409	NMED SSL	0.471	0.0221	-	0.005	0.0032	0.0016
Naphthalene	-	SW8260D	91-20-3	mg/kg	22.6	NMED SSL	0.0583	NS	-	0.0067	0.005	0.00331
n-Butylbenzene	-	SW8260D	104-51-8	mg/kg	3900	EPA RSL	NS	NS	64.6	0.005	0.0016	0.00056
n-Propylbenzene	-	SW8260D	103-65-1	mg/kg	3800	EPA RSL	NS	NS	24.5	0.005	0.0016	0.00058
o-Xylene	-	SW8260D	95-47-6	mg/kg	736	NMED SSL	2.98	NS	-	0.005	0.0008	0.000266
4-Isopropyltoluene	Isopropylbenzene	SW8260D	99-87-6	mg/kg	2360	NMED SSL	11.4	NS	-	0.005	0.0032	0.00114
Sec-Butylbenzene	-	SW8260D	135-98-8	mg/kg	7800	EPA RSL	NS	NS	117	0.005	0.0016	0.00077
Styrene	-	SW8260D	100-42-5	mg/kg	7260	NMED SSL	20.6	1.71	-	0.005	0.0008	0.00028
Tert-Butylbenzene	-	SW8260D	98-06-6	mg/kg	7800	EPA RSL	NS	NS	31.1	0.005	0.0016	0.0005
Tetrachloroethene	-	SW8260D	127-18-4	mg/kg	111	NMED SSL	0.321	0.0398	-	0.005	0.004	0.00191
Toluene	-	SW8260D	108-88-3	mg/kg	5230	NMED SSL	12.1	11.1	-	0.005	0.0008	0.000227
Trans-1,2-Dichloroethene	-	SW8260D	156-60-5	mg/kg	206	NMED SSL	0.342	0.503	-	0.005	0.0008	0.00039
Trans-1,3-Dichloropropene	1,3-Dichloropropene	SW8260D	10061-02-6	mg/kg	29.3	NMED SSL	0.0281	NS	-	0.005	0.0002	0.000083
Trichloroethene	-	SW8260D	79-01-6	mg/kg	6.77	NMED SSL	0.0161	0.0310	-	0.005	0.004	0.00191
Trichlorofluoromethane	-	SW8260D	75-69-4	mg/kg	1130	NMED SSL	15.7	NS	-	0.01	0.009	0.0032
Vinyl Chloride	-	SW8260D	75-01-4	mg/kg	0.742	NMED SSL	0.00217	0.0134	-	0.005	0.0032	0.00134

**Notes:**

- Analytical Method - USEPA Test Methods for Evaluating Solid Waste latest edition (the most current version of each method the laboratory is accredited to will be used).
- NMED Risk Assessment Guidance for Site Investigations and Remediation, November 2022 Revised (Appendix A, Table A-1, residential, commercial/industrial, construction worker).
- USEPA RSL Summary Table (TR=1E-06, HQ=1), November 2023 (resident soil and industrial soil). The RSLs for carcinogenic analytes are adjusted to a TR=1E-05. Provided for analytes without a NMED SSL.
- The lesser of the NMED screening level for residents, industrial/occupational workers, and construction workers (or EPA RSL (target excess cancer risk level of 1 x 10<sup>-5</sup>) if there is no NMED screening level.
- NMED Risk Assessment Guidance for Site Investigations and Remediation, November 2022 Revised (Appendix A, Table A-3, risk-based SSL and NMGW/MCL-based SSL, and Table 6-4 for petroleum hydrocarbon mixtures; DAF=20).
- USEPA RSL Calculator (TR=1E-06, HQ=1), November 2023 (protection of groundwater risk-based SSL). All analytes are adjusted to a DAF of 20.

Cells shaded in blue show that the screening level is lower than the achievable LOQ. If identified as a chemical of potential concern, these analytes will be addressed in the uncertainty discussion.

**Acronyms and Abbreviations:**

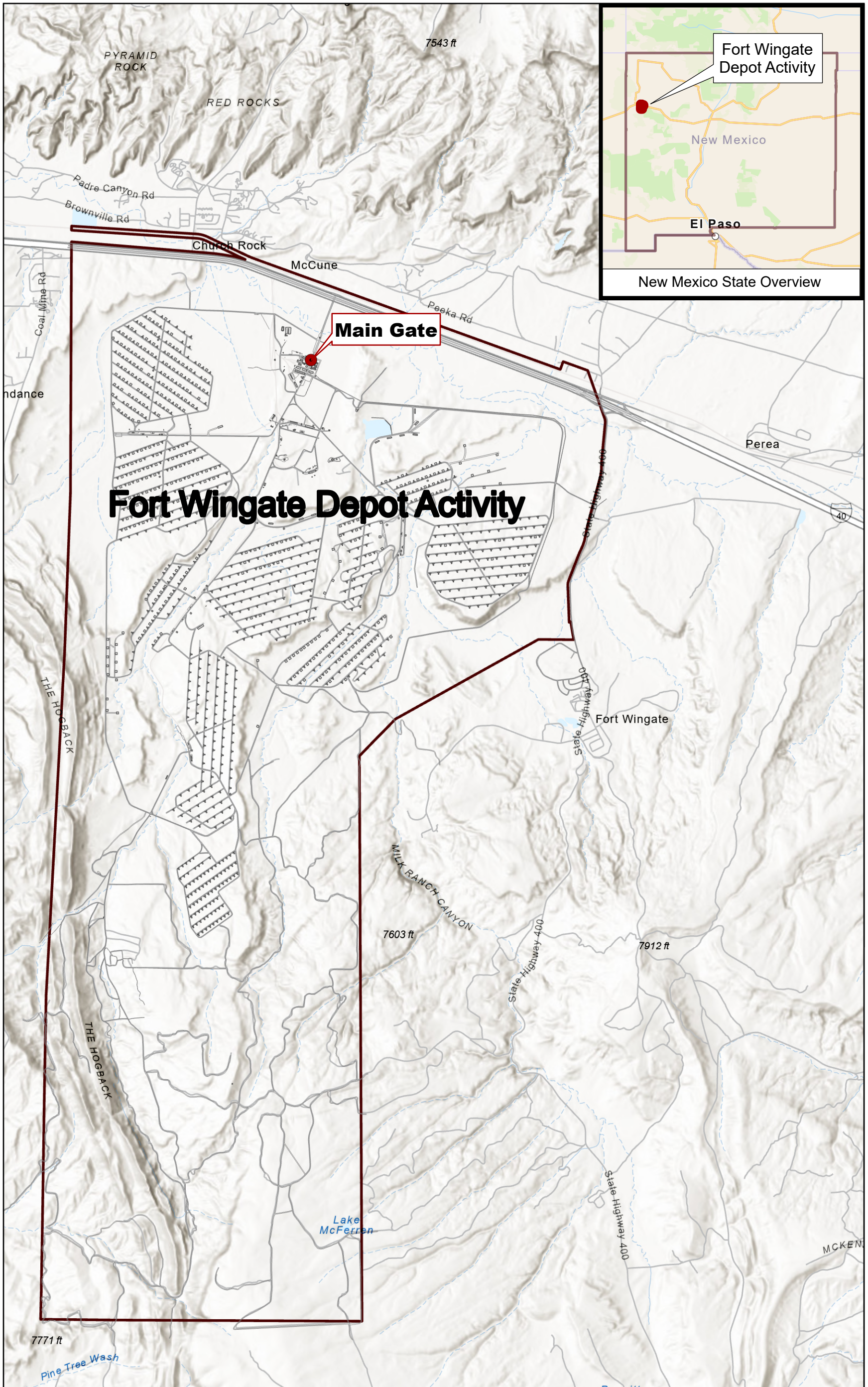
CASRN = Chemical Abstracts Service Registry Number  
 DAF = Dilution attenuation factor  
 DL = Detection limit  
 DRO = Diesel-range organics  
 FWDA = Fort Wingate Depot Activity  
 GRO = Gasoline-range organics  
 HQ = Hazard quotient

LOD = Limit of detection  
 LOQ = Limit of quantitation  
 MCL = Maximum contaminant level  
 mg/kg = Milligram per kilogram  
 N/A = Not applicable  
 NMED = New Mexico Environment Department  
 NMGW = New Mexico groundwater

NS = No standard  
 RRO = Residual-range organics  
 RSL = Regional screening level  
 SIM = Selected ion mode  
 SL-SSL = soil leachate-based SSL  
 SSL = Soil screening level  
 USEPA = United States Environmental Protection Agency

## **FIGURES**

*This Page Intentionally Left Blank*



Client	USACE, Albuquerque District			
Notes	Administration Area Soil Vapor Investigation Work Plan, Fort Wingate Depot Activity, McKinley County, New Mexico			
Revised	1/26/2024	GIS by	AM	1/26/2024
Scale	1:55,000	Checked by	MR	1/26/2024
		PM	CR	1/26/2024

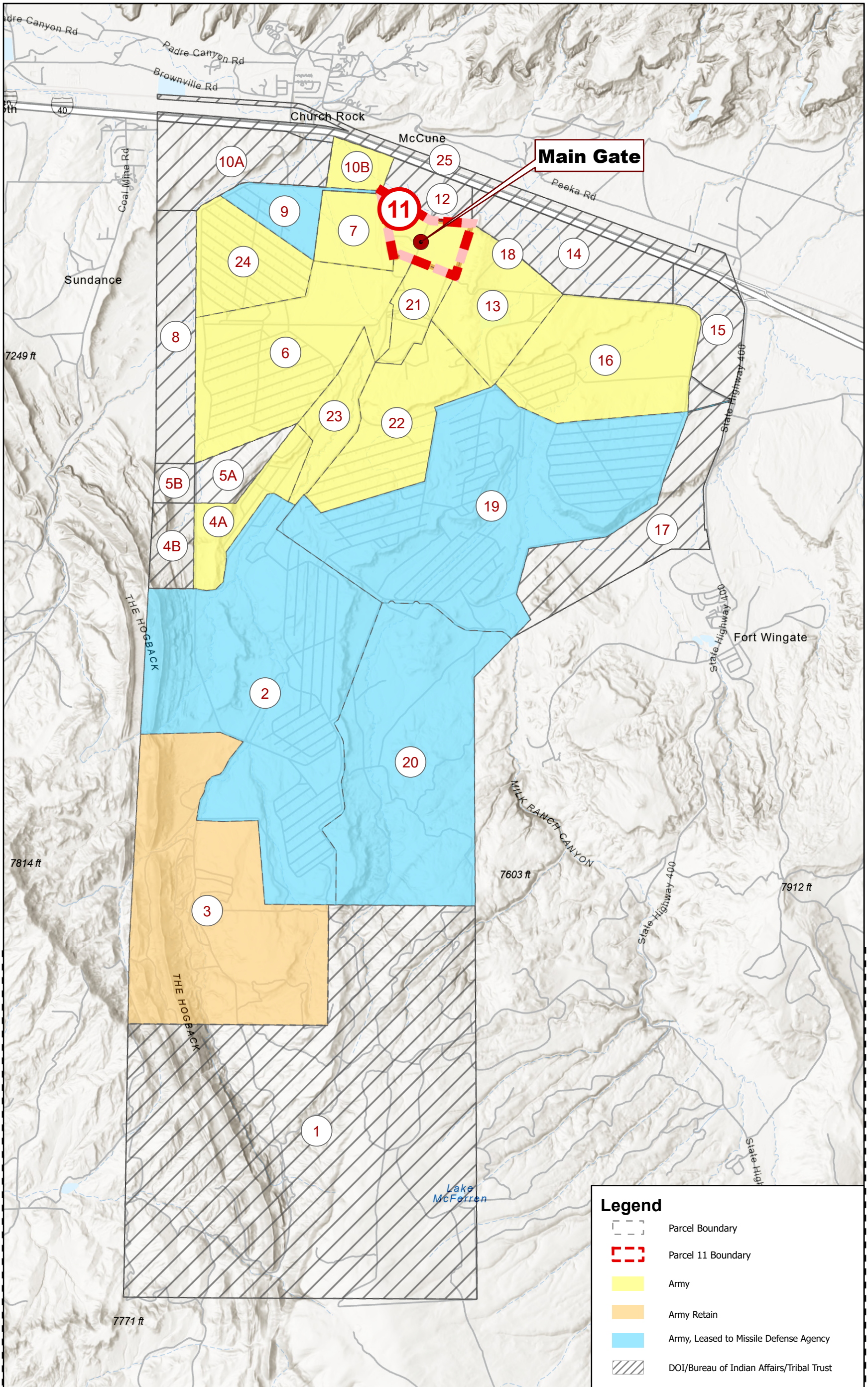


**FIGURE 1.1**

**Facility Location Map**

Basemap: Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Path: C:\Users\p002696\Projects\US\_Army\Maps\Working\US\_Army\_MMRP\_Parcel11.aprx

*This Page Intentionally Left Blank*



**Legend**

- Parcel Boundary
- Parcel 11 Boundary
- Army
- Army Retain
- Army, Leased to Missile Defense Agency
- DOI/Bureau of Indian Affairs/Tribal Trust

Client	USACE, Albuquerque District			
Notes	Administration Area Soil Vapor Investigation Work Plan, Fort Wingate Depot Activity, McKinley County, New Mexico			
Revised	1/26/2024	GIS by	AM	1/26/2024
Scale	1:50,000	Checked by	MR	1/26/2024
		CR	CR	1/26/2024

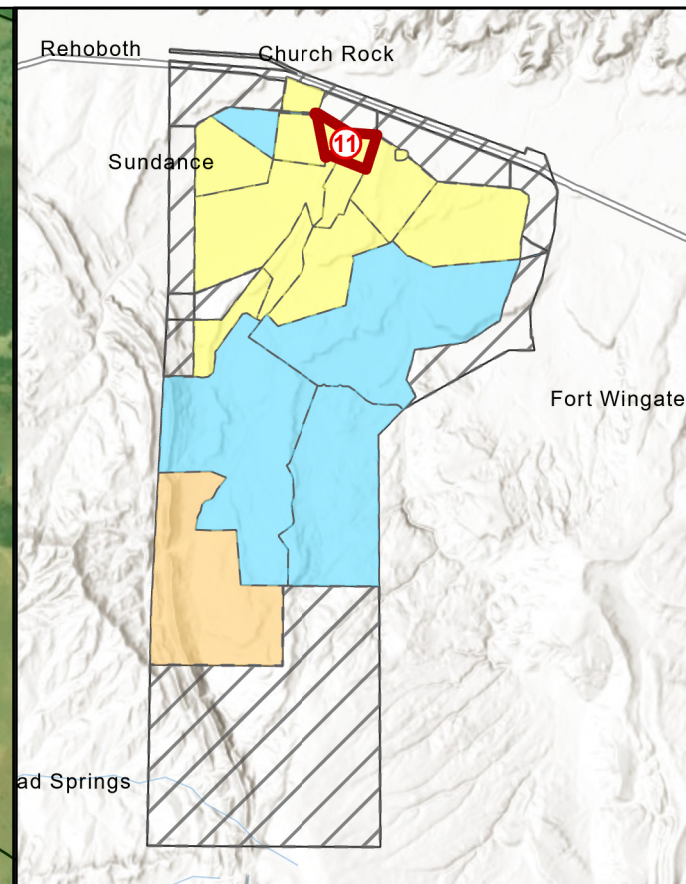
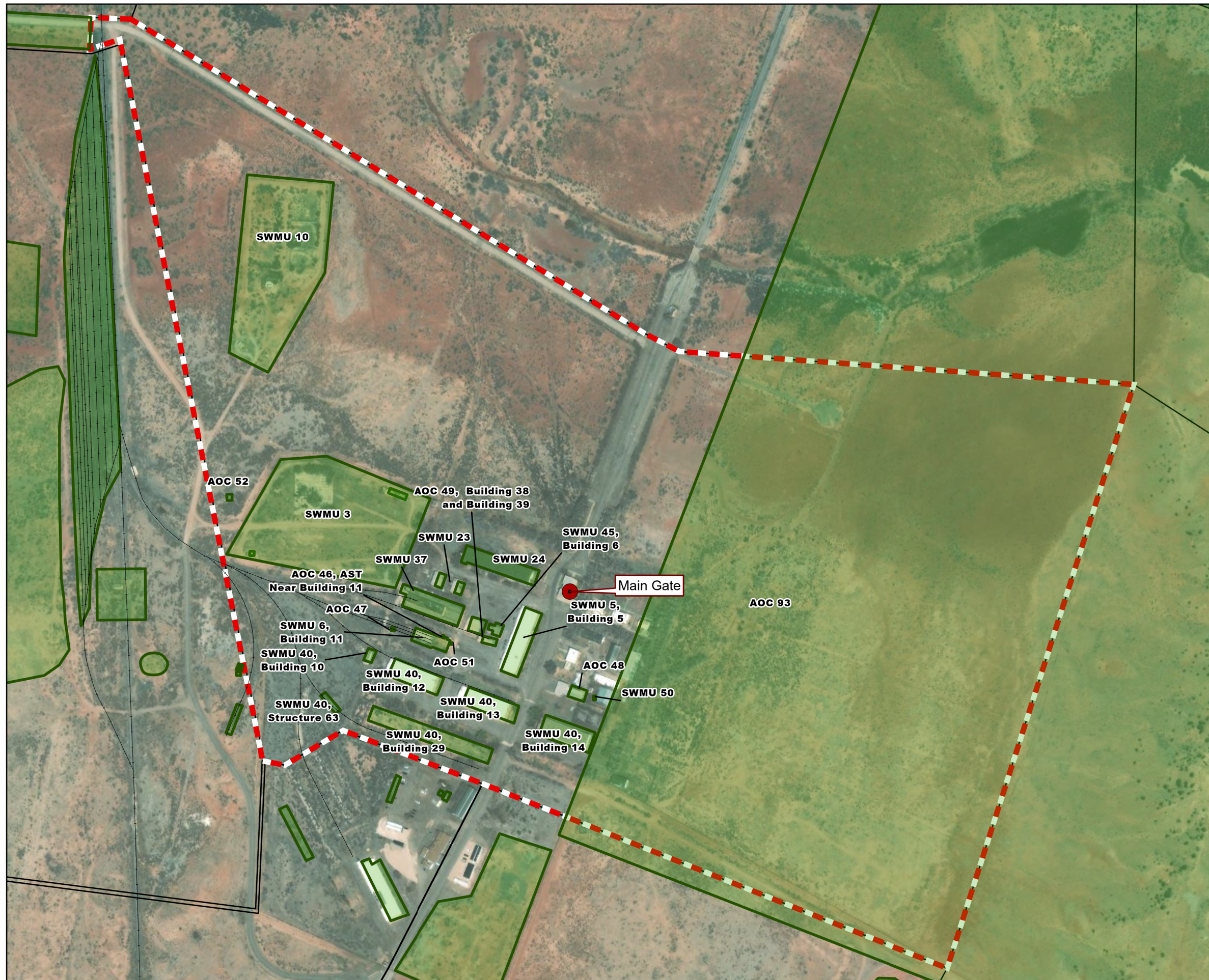


**FIGURE 1.2**

**Parcel Map**

*This Page Intentionally Left Blank*





**Legend**

- AOC/SWMU Boundary
- Parcel 11 Boundary

0 250 500 Feet

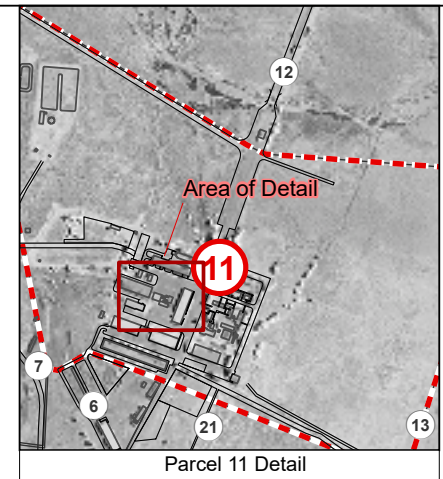
N

Administration Area Soil Vapor Investigation Work Plan,  
Fort Wingate Depot Activity,  
McKinley County, New Mexico

**FIGURE 1.3**  
**Parcel 11 AOC and SWMU Locations**

Client	USACE, Albuquerque District	GIS by	AM	2/2/2024
		Checked by	MR	2/2/2024
		PM	CR	2/2/2024

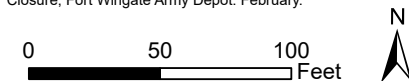
*This Page Intentionally Left Blank*



**Legend**

- Monitoring Well
- Approximate UST Excavation
- Soil Vapor Investigation Area

Data in this figure was taken from the following sources:  
 Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

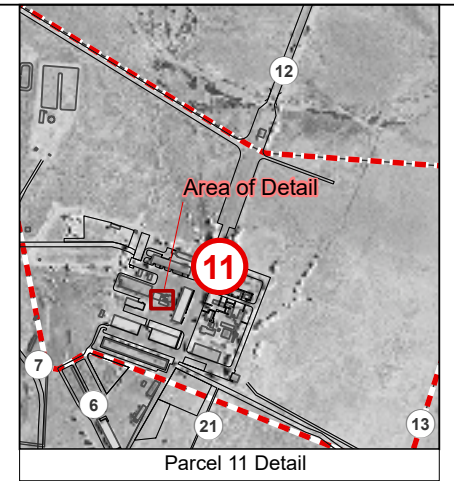


Administration Area Soil Vapor Investigation Work Plan,  
 Fort Wingate Depot Activity,  
 McKinley County, New Mexico

**Figure 1.4**  
**Soil Vapor Investigation Area**

Client	USACE, Albuquerque District	GIS by	AM	3/6/2024
		Checked by	MR	3/6/2024
		PM	CR	3/6/2024

*This Page Intentionally Left Blank*



**Legend**

- ⊗ Confirmation sample (Envirotech 1993)
- Piping
- ▭ Former UST
- ▭ Approximate UST Excavation

**Estimated Depth of Excavation**

- ▭ 4 ft bgs
- ▭ 14 ft bgs
- ▭ 15 ft bgs

Data in this figure was taken from the following sources:

Excavation/UST outlines and sample locations: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot, Fort Wingate. February.

Piping locations: USACE, 2014. Final RCRA Facility Investigation Report, Parcel 11, Revision 2, Fort Wingate Depot Activity McKinley County, New Mexico. May 23, 2014.

0 10 20 Feet

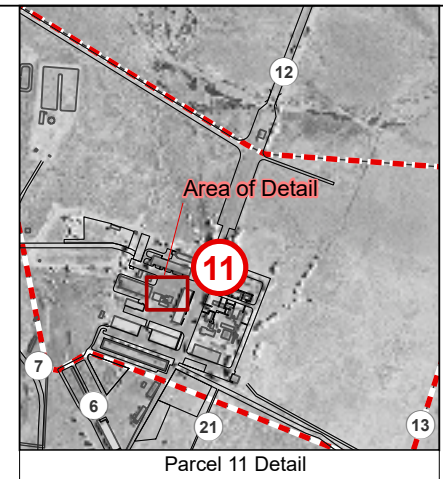
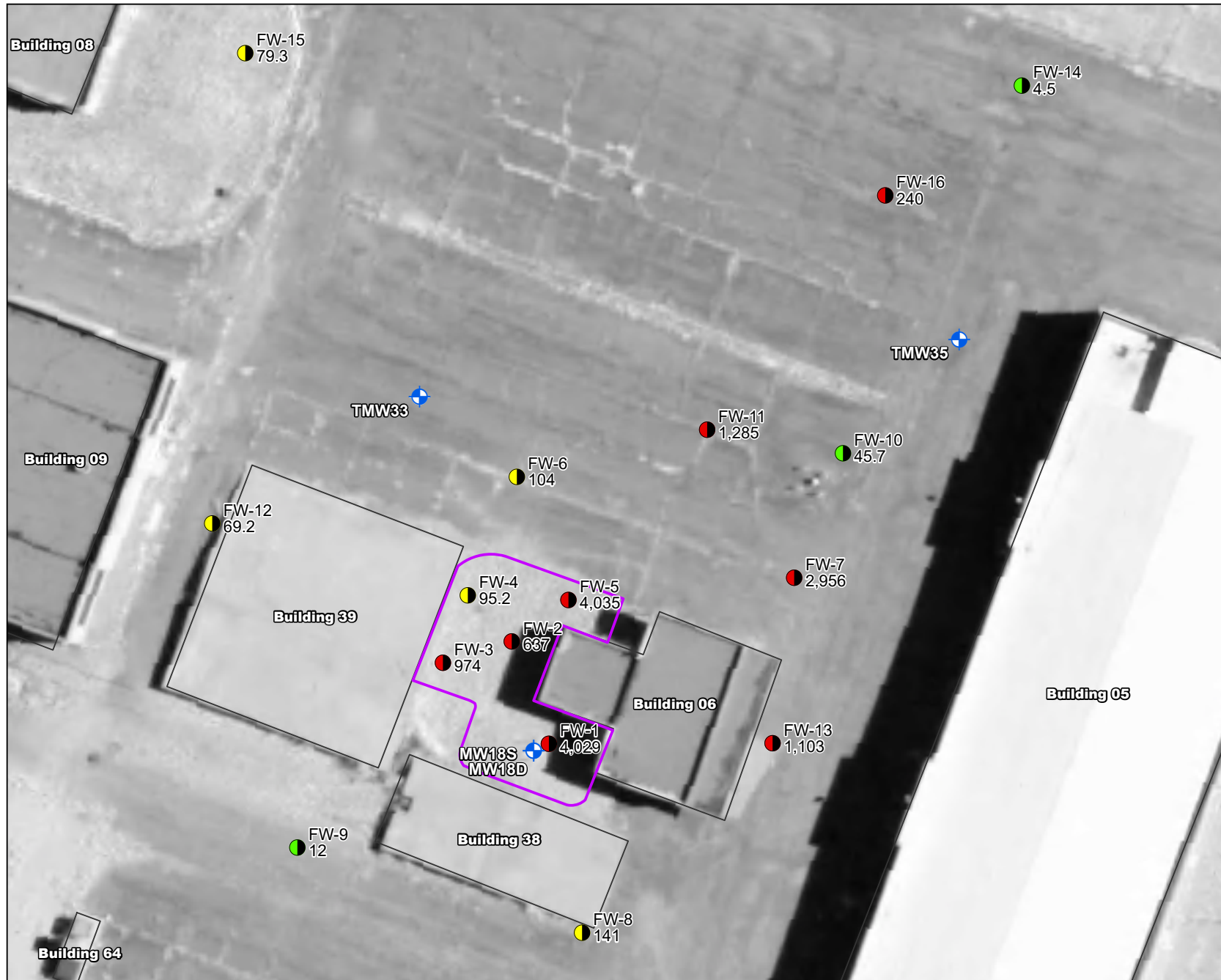
N

Administration Area Soil Vapor Investigation Work Plan,  
Fort Wingate Depot Activity,  
McKinley County, New Mexico

**Figure 2.1**  
**Former USTs, Piping,**  
**and Excavation Extent at Building 06**

Client	USACE, Albuquerque District	GIS by	AM	3/5/2024
		Checked by	MR	3/5/2024
		PM	CR	3/5/2024

*This Page Intentionally Left Blank*



**Legend**

Monitoring Well

Soil borings locations (USACE 1993) and maximum photoionization detector readings (ppmv) and interpretations, as follows:

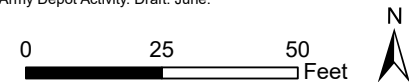
- >150 ppmv, elevated
- 51-150 ppmv, slightly elevated
- 0-50 ppmv, not elevated

Approximate UST Excavation

Data in this figure was taken from the following sources:

Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

Boring locations and photoionization detector readings: USACE, 1993. Investigation of Soils Contamination, Fort Wingate Army Depot Activity. Draft. June.



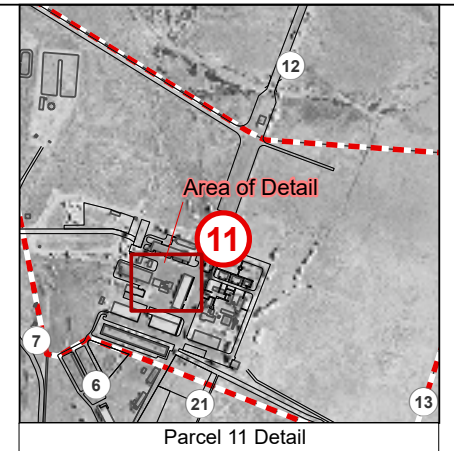
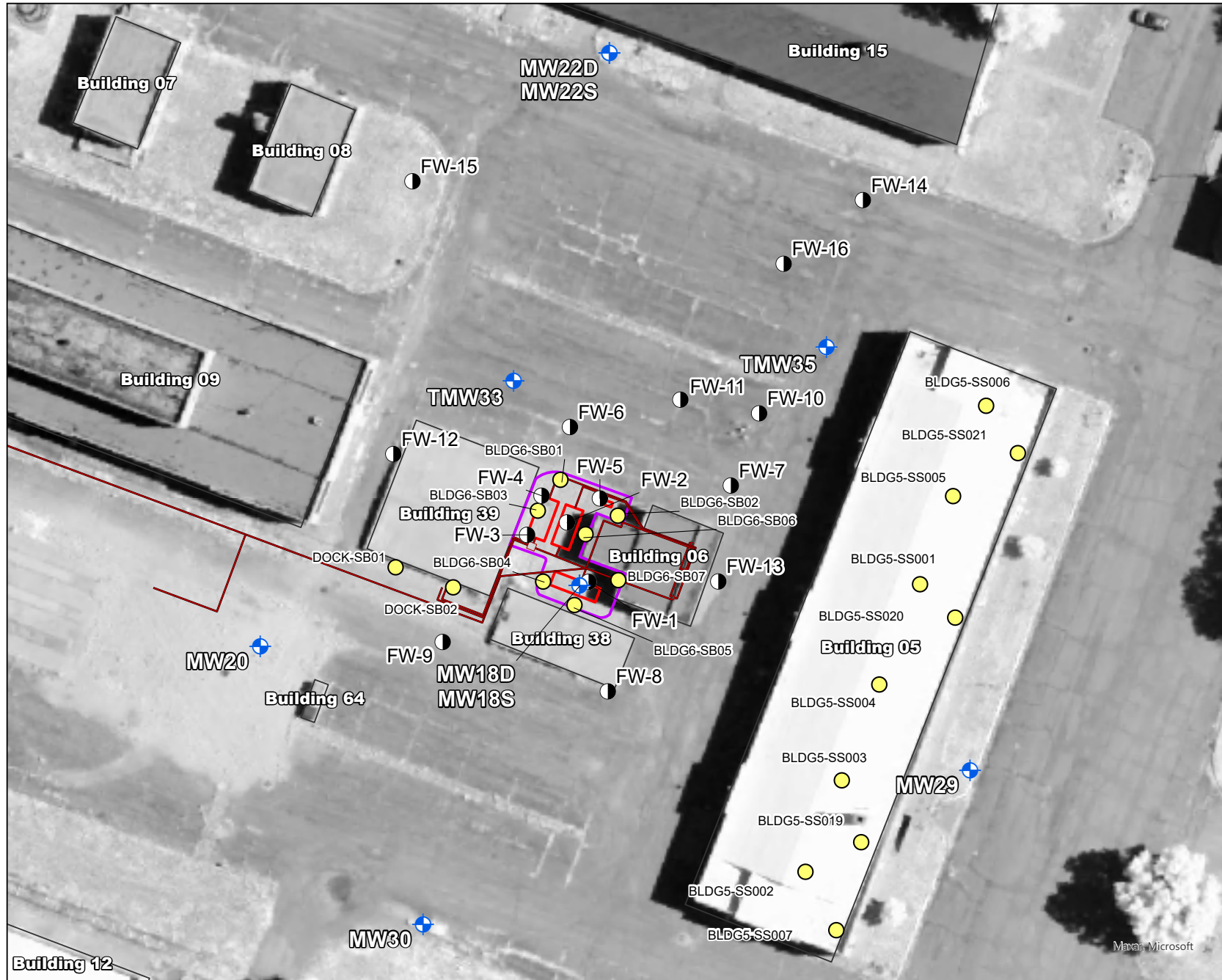
Administration Area Soil Vapor Investigation Work Plan,  
Fort Wingate Depot Activity,  
McKinley County, New Mexico

**Figure 2.2**  
**Maximum Photoionization Detector Reading**  
**from USACE (1993) Investigation**

Client	USACE, Albuquerque District	GIS by	AM	3/12/2024
		Checked by	MR	3/12/2024
		PM	CR	3/12/2024

*This Page Intentionally Left Blank*





- Legend**
- ◆ Monitoring Well
  - Soil Boring (USACE 1993)
  - Soil Boring (USACE 2014)
  - Piping
  - Former UST
  - Approximate UST Excavation

USACE (2014) sample location IDs have been abbreviated. Full location IDs are as follows:

BLDG5-SS### = 1105BLDG5-SS###D-SO  
 BLDG6-SB### = 1145BLDG6-SB###D-SO  
 DOCK-SB## = 1149DOCK-SB##

Data in this figure was taken from the following sources:

Excavation and UST outlines: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

Piping and boring locations: USACE, 2014. Final RCRA Facility Investigation Report, Parcel 11, Revision 2, Fort Wingate Depot. May 23, 2014.

Boring locations: USACE, 1993. Investigation of Soils Contamination, Fort Wingate Army Depot Activity. Draft. June.

0 25 50  
Feet

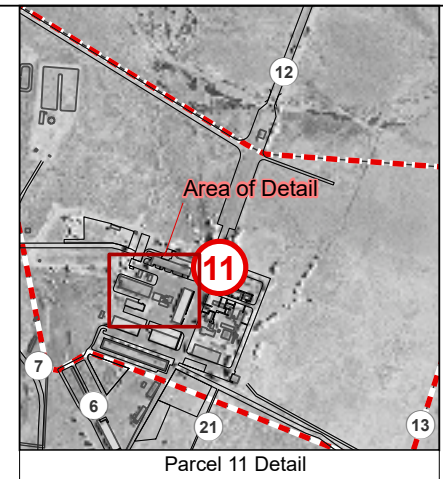
N

Administration Area Soil Vapor Investigation Work Plan,  
 Fort Wingate Depot Activity,  
 McKinley County, New Mexico

**Figure 2.3**  
**Historical Soil Boring Locations**

Client	USACE, Albuquerque District	GIS by	AM	3/12/2024
		Checked by	MR	3/12/2024
		PM	CR	3/12/2024

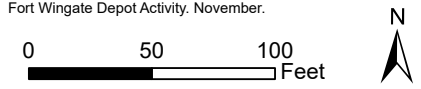
*This Page Intentionally Left Blank*



**Legend**

- Monitoring Well (Groundwater elevation, feet above mean sea level)
- Groundwater elevation contour (feet above mean sea level)
- Groundwater Flow Direction
- Approximate UST Excavation

Data in this figure was taken from the following sources:  
 Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.  
 Groundwater elevations: Eco and Associates, 2023. Groundwater Periodic Monitoring Report, July through December 2022, Fort Wingate Depot Activity. November.

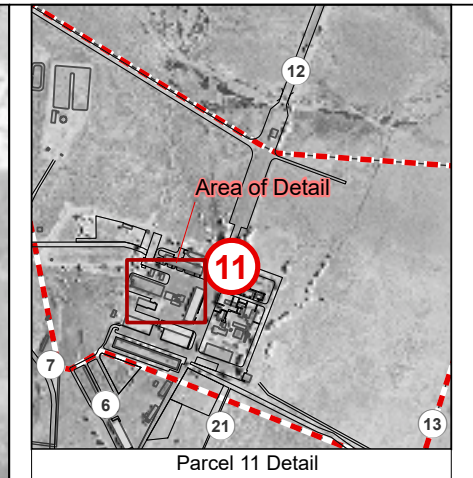


Administration Area Soil Vapor Investigation Work Plan,  
 Fort Wingate Depot Activity,  
 McKinley County, New Mexico

**Figure 2.4**  
**Groundwater Monitoring Well Locations**

Client	USACE, Albuquerque District	GIS by	AM	3/5/2024
		Checked by	MR	3/5/2024
		PM	CR	3/5/2024

*This Page Intentionally Left Blank*



**Legend**

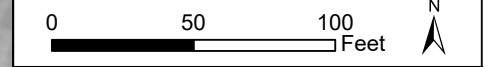
- Monitoring Well
- Temporary soil vapor probe locations (HDR 2023), 1,2-dichloroethane soil vapor concentrations ( $\mu\text{g}/\text{m}^3$ ), and comparisons to VISLs (NMED 2022), as follows:
  - exceeds VISL with target hazard quotient of 1 ( $243 \mu\text{g}/\text{m}^3$ )
  - exceeds VISL with target risk  $1\text{E}-5$  ( $36 \mu\text{g}/\text{m}^3$ )
  - below VISL
- Approximate UST Excavation

Definitions:  
 NS = not sampled  
 VISL = New Mexico Residential Vapor Intrusion Screening Level

Data in this figure was taken from the following sources:  
 Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot, February.

Soil vapor probe locations and results: HDR, 2023. Final Northern Area Groundwater RCRA Facility Investigation Report, Revision 3, June 30.

VISLs: NMED, 2022. Risk Assessment Guidance for Site Investigations and Remediation, Volume 1 Soil Screening Guidance for Human Health Risk Assessments, November.

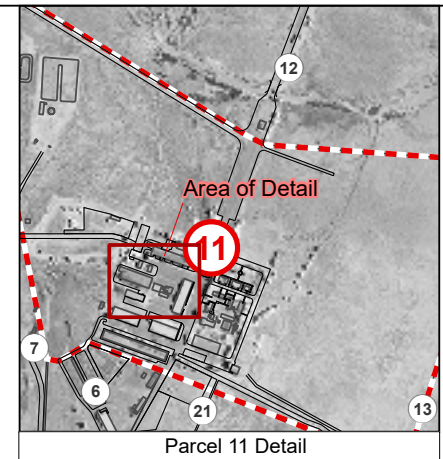


Administration Area Soil Vapor Investigation Work Plan,  
 Fort Wingate Depot Activity,  
 McKinley County, New Mexico

**Figure 2.5**  
**Northern Area Groundwater RFI**  
**1,2-Dichloroethane Soil Vapor Results**

Client	USACE, Albuquerque District	GIS by	AM	3/5/2024
		Checked by	MR	3/5/2024
		PM	CR	3/5/2024

*This Page Intentionally Left Blank*



**Legend**

Monitoring well locations, analytical results from October 2022 (Eco 2023), and comparisons of 1,2-DCA concentrations to VISLs (NMED 2022), as follows:

- exceeds VISL
- below VISL

Results separated by a "/" indicate parent and field duplicate results  
 New Mexico Residential Groundwater VISL (NMED 2022) for 1,2-DCA (22.3 µg/L). There are no groundwater VISLs for TPH-GRO and TPH-DRO

All Results are given in µg/L  
 Definitions:

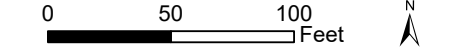
- J = Estimated Value
- U = non-detect at the indicated limit of detection
- GRO = Gasoline Range Organics
- DRO = Diesel Range Organics
- TPH = Total Petroleum Hydrocarbons
- VISL = Vapor Intrusion Screening Level
- 1,2-DCA = 1,2-dichloroethane

Approximate UST Excavation

Data in this figure was taken from the following sources:  
 Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.

Groundwater analytical results: Eco, 2023. Groundwater Periodic Monitoring Report, July through December 2022, Fort Wingate Depot Activity, November.

VISLs: NMED, 2022. Risk Assessment Guidance for Site Investigations and Remediation, Volume I Soil Screening Guidance for Human Health Risk Assessments, November.



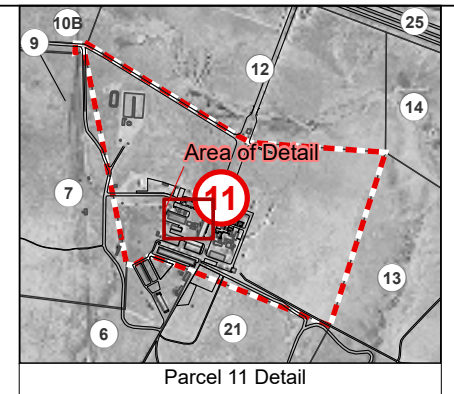
Administration Area Soil Vapor Investigation Work Plan,  
 Fort Wingate Depot Activity,  
 McKinley County, New Mexico

**Figure 2.6**  
**1,2-DCA and TPH (µg/L) in Groundwater,**  
**October 2022**

Client	USACE, Albuquerque District	GIS by	AM	3/5/2024
		Checked by	MR	3/5/2024
		PM	CR	3/5/2024

*This Page Intentionally Left Blank*





- Legend**
- 1,2-DCA soil source area (dashed where inferred)
  - Proposed Soil Vapor Probe Locations
  - Approximate UST Excavation

Monitoring well locations, analytical results from October 2022 (Eco 2023); and comparisons of 1,2-DCA concentrations to NMED (2022) VISLs, as follows:

- ⊕ exceeds VISL
- ⊕ below VISL

Results separated by a "/" indicate parent and field duplicate results  
 New Mexico Residential Groundwater VISL (NMED 2022) for 1,2-DCA (22.3 µg/L).  
 There are no groundwater VISLs for TPH-GRO and TPH-DRO

Soil borings locations (USACE 1993) and maximum photoionization detector readings (ppmv) and interpretations, as follows:

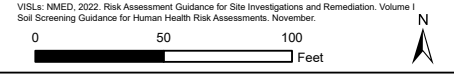
- >150 ppmv, elevated
- 51-150 ppmv, slightly elevated
- 0-50 ppmv, not elevated

Temporary soil vapor probe locations (HDR 2023) locations, 1,2-dichloroethane soil vapor concentrations (µg/m<sup>3</sup>), and comparisons to VISLs (NMED 2022), as follows:

- exceeds VISL with target hazard quotient of 1 (243 µg/m<sup>3</sup>)
- exceeds VISL with target risk 1E-5 (36 µg/m<sup>3</sup>)
- below VISL

Definitions:  
 1,2-DCA = 1,2-dichloroethane  
 VISL = New Mexico Residential Vapor Intrusion Screening Level

Data in this figure was taken from the following sources:  
 Excavation outline: Envirotech, 1993. Underground Storage Tank Closure, Fort Wingate Army Depot. February.  
 Boring locations and photoionization detector readings: USACE, 1993. Investigation of Soils Contamination, Fort Wingate Army Depot Activity. Draft. June.  
 Soil vapor probe locations and results: HDR, 2023. Final Northern Area Groundwater RCRA Facility Investigation Report, Revision 3. June 30.  
 Groundwater analytical results: Eco, 2023. Groundwater Periodic Monitoring Report, July through December 2022, Fort Wingate Depot Activity. November.



Administration Area Soil Vapor Investigation Work Plan,  
 Fort Wingate Depot Activity,  
 McKinley County, New Mexico

**Figure 3.1**  
**1,2-DCA Source Area Evaluation**  
**and Proposed Soil Vapor Probe Locations**

Client	USACE, Albuquerque District	GIS by	AM	3/12/2024
		Checked by	MR	3/12/2024
		PM	CR	3/12/2024

Path: C:\Users\p002696f\Projects\US\_Army\Maps\Working\US\_Army\_MM RP\_Parcel11.aprx

*This Page Intentionally Left Blank*

### FLUSH COMPLETION

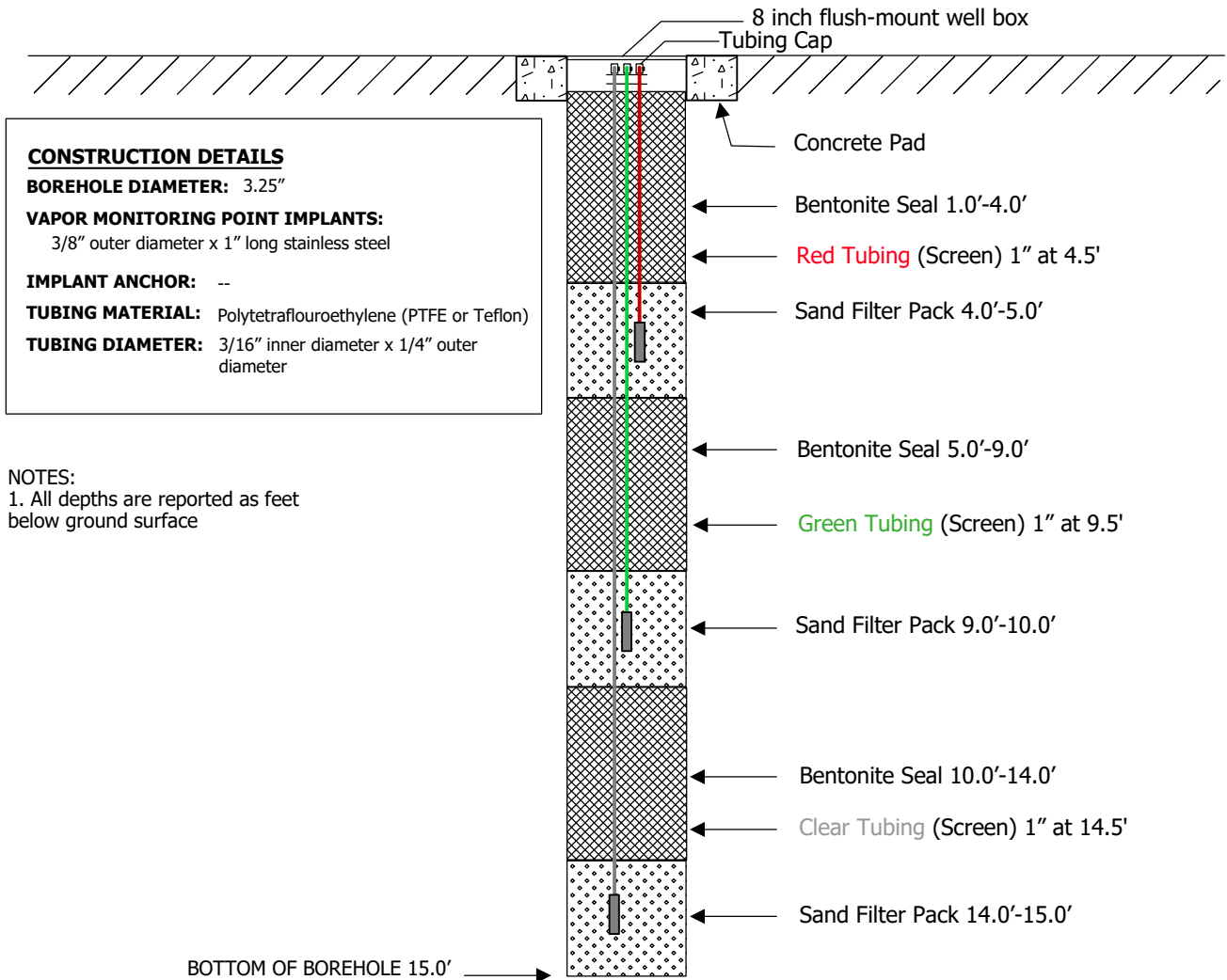


DIAGRAM IS NOT TO SCALE

Administration Area Soil Vapor Investigation Work Plan,  
 Fort Wingate Depot Activity,  
 McKinley County, New Mexico

**Figure 4.1**  
**Example Soil Vapor Probe Diagram**

Client	USACE, Albuquerque District	Drawn by	ER	3/7/2024
		Checked by	MR	3/7/2024
		PM	CR	3/7/2024

*This Page Intentionally Left Blank*

**APPENDIX A**  
**RESPONSE TO NMED COMMENTS**

*This Page Intentionally Left Blank*

NMED Comments  
Final Northern Area Groundwater RCRA Facility Investigation Report  
Fort Wingate Depot Activity, McKinley County, New Mexico

Comment No.	Page	Section or Topic	Comment / Recommendation	Parsons Response/Action
<b>Disapproval Letter, January 25, 2022, HWB-FWDA-21-004</b>				
27	4-1	Section 4.1.2, Soil Vapor Analytical Results	<p><b>Permittee Statement:</b> "1,2-DCA analytical results are presented on Figure 4-1.1 and Table 4-1.1."</p> <p><b>NMED Comment:</b> Figure 4-1.1 (1,2-DCA Soil Vapor Plume) depicts the boundary of the plume; however, the extent of the plume (e.g., north, south and east of Building BOOS) is not delineated. Since the data indicates that the soil vapor concentration of 1,2-DCA beneath Building B005 potentially exceeds applicable vapor intrusion screening levels, the Permittee must propose to investigate the risk associated with vapor intrusion within Building B005 in the revised Report. Submit a work plan to investigate risks associated with vapor intrusion within Building B005 no later than June 30, 2022, as applicable.</p>	<p>Concur.</p> <p>A Soil Vapor Investigation Work Plan has been developed for the Administration Area.</p>
42	5-3 and 5-4	Sections 5.2.2 and 5.3.1.2, Fate and Transport,	<p><b>Permittee Statements:</b> "This figure illustrates the relationship between these two plumes as follows: the groundwater VOC plume originates in the same vicinity as the soil vapor plume." And, "Based upon soil vapor results, the groundwater plume has a continuing source of contamination (Figure 5-2.1). If the soil vapor source exists, the groundwater plume will persist."</p> <p><b>NMED Comment:</b> VOCs detected as soil vapor continue to partition into groundwater and act as a source of the groundwater plume. Submit a work plan to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building B006 no later than June 30, 2022.</p>	<p>Concur.</p> <p>A Soil Vapor Investigation Work Plan has been developed for the Administration Area.</p>
50	6-1	Section 6.2, Soil Vapor VOC Plume	<p><b>Permittee Statement:</b> "To design a remedy for the soil vapor plume, it is recommended that the horizontal limits of the plume be defined by collection and analysis of additional soil vapor samples to the north, south and east of Building B005."</p> <p><b>NMED Comment:</b> NMED concurs with the recommendation. Submit a work plan to investigate the extent of the soil vapor plume no later than June 30, 2022 (see Comment 42).</p>	<p>Concur.</p> <p>A Soil Vapor Investigation Work Plan has been developed for the Administration Area.</p>

NMED Comments  
Final Northern Area Groundwater RCRA Facility Investigation Report  
Fort Wingate Depot Activity, McKinley County, New Mexico

Comment No.	Page	Section or Topic	Comment / Recommendation	Parsons Response/Action
<b>Second Disapproval Letter, July 25, 2022, HWB-FWDA-21-004</b>				
17		Permittee's Response to NMED's Disapproval Comment 27, dated January 25, 2022	<p><b>Permittee Statement:</b> "The Army proposes to address potential soil contamination associated with Building B005 as part of a separate work plan to further investigate data gaps in the Administration Area. Furthermore, B005 is not occupied and is not suitable for occupancy due to the dilapidated interior. Signage will be posted at each entrance indicating that the building is not suitable for occupancy. Therefore, due to the lack of potential for indoor air exposure, the Army does not consider there to be a vapor intrusion hazard at B005."</p> <p><b>NMED Comment:</b> It is possible that Building B005 may be used for occupancy in the future. Posting signage alone does not ensure safety for future occupants. Submit a separate work plan to investigate risks associated with vapor intrusion within Building B005, as required by NMED's previous Disapproval Comment 27 no later than July 30, 2023.</p>	<p>Concur.</p> <p>A Soil Vapor Investigation Work Plan has been developed for the Administration Area.</p>
25		Permittee's Response to NMED's Disapproval Comment 42, dated January 25, 2022	<p><b>Permittee Statement:</b> "The Army plans to submit a separate work plan to assess the extent of the soil vapor plume as part of a separate effort to further investigate data gaps in the Administration Area. The Army respectfully requests that this effort be treated independently from the Northern Area Groundwater RFI that is the subject of this report."</p> <p><b>NMED Comment:</b> NMED concurs to treat the work plan to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building B006 independently from the Northern Area Groundwater RFI. The work plan must be submitted to NMED no later than July 30, 2023. No revision is required to the Report.</p>	<p>Concur.</p> <p>A Soil Vapor Investigation Work Plan has been developed for the Administration Area.</p>



NMED Comments  
Final Northern Area Groundwater RCRA Facility Investigation Report  
Fort Wingate Depot Activity, McKinley County, New Mexico

Comment No.	Page	Section or Topic	Comment / Recommendation	Parsons Response/Action
<b>Third Disapproval Letter, March 27, 2023, HWB-FWDA-21-004</b>				
18		Permittee's Response to NMED's Second Disapproval Comment 25, dated July 25, 2022	<p><b>Permittee Statement:</b> "The Army will propose to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building B006, as [a] work plan to further investigate data gaps in the Administration Area. The Army is pursuing a comprehensive approach to contracting for upcoming related requirements at FWDA that is requiring additional time to develop. The Army is therefore respectfully requesting to revise the proposed submittal date for the work plan to November 30, 2023."</p> <p><b>NMED Comment:</b> The work plan is required to be submitted by <b>July 30, 2023</b>. Submit a separate letter work plan for this investigation no later than <b>July 30, 2023</b>. Extension requests are not appropriate in a Disapproval response. If an extension is required and the Permittee can show good cause, the extension request must be submitted in a separate letter and in accordance with Permit Section I.M.</p>	<p>Concur.</p> <p>A Soil Vapor Investigation Work Plan has been developed for the Administration Area.</p>
<b>Approval with Modifications Letter, October 19, 2023, HWB-FWDA-21-004</b>				
25		Permittee's Response to NMED's Third Disapproval Comment 18, dated March 27, 2023	<p><b>Permittee Statement:</b> "As proposed in the Army's April 24, 2023, letter to NMED regarding outstanding documents, the Army plans to submit a Phase 2 Groundwater RFI Work Plan by March 15, 2024, to address this requirement."</p> <p><b>NMED Comment:</b> The Permittee's April 24, 2023 letter is not an approved document and does not explain why the submittal due date is to be deferred to March 15, 2024 for the submission of the work plan to investigate the extent of the soil vapor plume, including the potential for vapor intrusion, in the vicinity of Building B006. Submit a formal extension request detailing the reasons for an extension as required by Section I.M of the Permit; otherwise, submit the required document upon receipt of this letter since the required date for submittal of the work plan of July 30, 2023 has already passed, which has resulted in the Permittee being out of compliance.</p>	<p>Concur.</p> <p>A Soil Vapor Investigation Work Plan has been developed for the Administration Area.</p>

*This Page Intentionally Left Blank*

**APPENDIX B**  
**SOIL VAPOR PROBE SAMPLING FORM**

*This Page Intentionally Left Blank*

## SOIL VAPOR SAMPLING SHEET

Project #:	Site: <i>Fort Wingate Depot Activity, Administration Area</i>
Sampler:	Sampling Date:
Soil Vapor Probe ID: 1145BLDG6-SV ___ - ___ D	
Ambient Temp (°F):	Ambient Barometric Pressure (inHg):
Monitoring Equipment: <input type="checkbox"/> Multi Rae (PID) <input type="checkbox"/> _____ (Other)	
PID Reading (ppmv):	

**SAMPLE PURGE INFORMATION**

1. Pre-Purge Check for presence of measurable water: \_\_\_\_\_ .

2. Vacuum Shut In Test  PASS  FAIL Start inHg: \_\_\_\_\_ End inHg: \_\_\_\_\_

3. Purged 3 casing volumes prior to sample collection. Total Volume Purged: \_\_\_\_\_ ml

4. Leak Testing Compound: _____	Borehole radius: _____ (in)/12 = _____ Br (decimal ft)
Probe radius: _____ (in)/12 = _____ Pr (decimal ft)	Probe height: _____ (in)/12 = _____ Ph (decimal ft)
Probe Tubing internal radius: _____ (in)/12 = _____ PTr (decimal ft)	Probe Tubing Length: _____ ft
Sample Tubing internal radius: _____ (in)/12 = _____ STr (decimal ft)	Sample Tubing Length: _____ ft

Probe Tip Vol. = 3.14 x Probe radius(\_\_\_\_\_)^2 x Probe height(\_\_\_\_\_) x 28316.8(conversion from ft3 to mL) = \_\_\_\_\_ mL

Probe Tubing Vol. = 3.14 PTr(\_\_\_\_\_)^2 x Probe tubing length (\_\_\_\_\_) x 28316.8(conversion from ft3 to mL) = \_\_\_\_\_ mL

Sample Tubing Vol. = 3.14 STr(\_\_\_\_\_)^2 x Sample tubing length (\_\_\_\_\_) x 28316.8(conversion from ft3 to mL) = \_\_\_\_\_ mL

Sandpack Vol. = 3.14 x Br(\_\_\_\_\_)^2 x Sandpack Length(\_\_\_\_\_) x 28316.8(conversion from ft3 to mL) x 0.3(porosity) = \_\_\_\_\_ mL

Purge Vol. = 3 x [Probe Tip Vol. (\_\_\_\_\_) + Probe Tubing Vol (\_\_\_\_\_) + Sample Tubing Vol (\_\_\_\_\_) + Sandpack Vol. (\_\_\_\_\_) ]

Purge Vol. = \_\_\_\_\_ mL

Sample I.D.: 1145BLDG6-SV ___ - ___ D-SV- _____		
Canister Vacuum Test: <input type="checkbox"/> PASS <input type="checkbox"/> FAIL inHg: _____		
Canister Serial/ID #:	Sample Manifold #:	Flow Rate: _____ ml/min
Sample Time: Start:	End:	Duration: _____ min
Canister Volume: Initial:	Final:	inHg

Dup. Sample I.D. (if applicable): 1145BLDG6-SV ___ - ___ D-SV- _____		
Canister Vacuum Test: <input type="checkbox"/> PASS <input type="checkbox"/> FAIL inHg: _____		
Canister Serial/ID #:	Sample Manifold #:	Flow Rate: _____ ml/min
Sample Time: Start:	End:	Duration: _____ min
Canister Volume: Initial:	Final:	inHg

Laboratory: Eurofins Air Toxics

Analyzed For: TO-3 and TO-15

Samplers Signature: \_\_\_\_\_