

Final Revision 1

Groundwater Periodic Monitoring Report

January through June 2016

Fort Wingate Depot Activity

McKinley County, New Mexico

November 2017

Contract No. W912PP-15-C-0014

Prepared for:



**U.S. Army Corps
of Engineers®**

U.S. Army Corps of Engineers
Fort Worth District
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14. ABSTRACT This Groundwater Periodic Monitoring Report documents the activities conducted from January through June 2016 at Fort Wingate Depot Activity (FWDA) under the Interim Facility-Wide Groundwater Monitoring Plan, Version 8. The report describes the monitoring activities, presents the analytical data, evaluates the data, and makes recommendations for future investigation at FWDA.					
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**RE: APPROVAL WITH MODIFICATIONS
FINAL REVISION 1 GROUNDWATER PERIODIC MONITORING REPORT
JANUARY THROUGH JUNE 2016
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO
EPA ID# NM6213820974
HWB-FWDA-16-013**

Dear Messrs. Patterson and Smith:

The New Mexico Environment Department (NMED) is in receipt of the Fort Wingate Depot Activity (Permittee) *Final Revision 1, Groundwater Periodic Monitoring Report January through June 2016* (Report), dated November 2017. NMED has reviewed the Report and hereby issues this Approval with Modifications.

1. The Permittee's Response to Comment 2.g of the Disapproval

Permittee Statement: "Screening and cleanup levels had not been established for delta-hexachlorocyclohexane (delta-bhc) when the report was prepared. The laboratory limit of detection (LOD) as reported in the laboratory data files (Appendix C – Attachment 2) is 0.021 ug/L. The detected concentration is below the LOD. EPA Regional Screening Levels were established for delta-bhc in 2017. The 2017 screening levels were added to Table 5-7. The report text was revised to state that the detected concentration was below the screening

level.”

NMED Comment: Table 5-7, *Summary of Pesticides Analytical Results*, does not include the screening level of delta-hexachlorocyclohexane (delta-bhc). The screening level of beta-hexachlorocyclohexane (beta-bhc) is 0.25 ug/L. Revise Table 5-7 to include the screening level of delta-bhc. In addition, the laboratory data files in Appendix C, Attachment 2, contain multiple analytical reports, which are not relevant to pesticides analysis. Provide a reference to the relevant information (e.g., file name, job number) in a response letter.

2. The Permittee’s Response to Comment 6 of the Disapproval

Permittee Statement: “The reductive dechlorination pathway for 1,2-dichloroethane is to chloroethane and subsequently ethane. Vinyl chloride is the reductive dechlorination daughter product of cis-1,2-dichloroethene... There is no indication that vinyl chloride is accumulating at the site.”

NMED Comment: Although the Permittee’s statement is true, it should be noted that incomplete biodegradation of 1,2-dichloroethane does produce vinyl chloride. No revisions are necessary.

The Permittee must address all comments contained in this Approval with Modifications in all future reports and work plans. A response letter addressing Comment 1 must be submitted no later than **March 30, 2018**.

Messrs. Patterson and Smith
December 15, 2017
Page 3

Should you have any questions, please contact Ben Wear of my staff at (505) 476-6041.

Sincerely,



John E. Kieling, Chief
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File: FWDA 2017 and Reading, Groundwater, FWDA-16-013

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January through June 2016

Fort Wingate Depot Activity

McKinley County, New Mexico

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NMED HWB = New Mexico Environment Department, Hazardous Waste Bureau
 USEPA 6 = U.S. Environmental Protection Agency Region 6
 FWDA BEC = Fort Wingate Depot Activity Base Realignment and Closure Environmental Coordinator
 OH = Ohio
 NM = New Mexico
 BRACD = U.S. Army Base Realignment and Closure Division
 POC = Point of Contact, Steve Smith
 USACE SWF = U.S. Army Corps of Engineers Fort Worth District
 USACE = U.S. Army Corps of Engineers
 NN = Navajo Nation
 POZ = Pueblo of Zuni
 BIA - NRO = Bureau of Indian Affairs – Navajo Regional Office
 BIA SW = Bureau of Indian Affairs, Southwest Region
 DOI - BIA– Department of the Interior – Bureau of Indian Affairs

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List of Acronyms and Abbreviations

1	°C	degrees Celsius
2	ADR	Automated Data Review
3	AOC	area of concern
4	bgs	below ground surface
5	BRAC	Base Realignment and Closure
6	BTOC	below top of casing
7	CAS	Chemical Abstracts Service
8	CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
9	CFR	<i>Code of Federal Regulations</i>
10	CH2M	CH2M HILL, Incorporated
11	DO	dissolved oxygen
12	DoD	U.S. Department of Defense
13	DRO	diesel range organics
14	DTW	depth to water
15	EDB	ethylene dibromide
16	EDD	electronic data deliverable
17	EDMS	Electronic Data Management System
18	Eh	redox potential
19	EPA	U.S. Environmental Protection Agency
20	ERP	Environmental Restoration Program
21	ft/ft	foot per foot
22	FWDA	Fort Wingate Depot Activity
23	GPMP	Groundwater Periodic Monitoring Report
24	GRO	gasoline range organics
25	GWMP	Groundwater Monitoring Plan
26	HMX	octahydro-1.3.5.7-tetranitro-1.3.5.7-tetrazocine
27	HWMR	New Mexico Hazardous Waste Management Regulations
28	ID	identification
29	Innovar	Innovar Environmental, Inc.
30	J	analyte was positively identified; reported value is estimated
31	MAROS	Monitoring and Remediation Optimization System
32	MCL	maximum contaminant level
33	µg/L	microgram(s) per liter
34	µS/cm	microsiemen(s) per centimeter
35	mg/L	milligram(s) per liter
36	MS	matrix spike
37	MSD	matrix spike duplicate
38	mS/cm	millisiemen(s) per centimeter
39	mV	millivolt(s)
40	N	nitrogen
41	N/A	not applicable
42	NA	not analyzed
43	NAVD88	North American Vertical Datum of 1988
44	NC	not collected
45	NE	not established
46	NM	not measured
47	NMAC	New Mexico Administrative Code

List of Acronyms and Abbreviations

1	NMED	New Mexico Environment Department
2	NMHTWA	New Mexico Hazardous Waste Act
3	NMSA	New Mexico State Rules Act
4	NM WQCC	New Mexico Water Quality Control Commission
5	No.	number
6	NS	not sampled
7	NTU	nephelometric turbidity unit
8	OB/OD	Open Burn/Open Detonation
9	ORP	oxidation-reduction potential
10	pH	scale used to measure the concentration of hydrogen atoms (acidity) of a sample
11	QC	quality control
12	QSM	Quality Systems Manual
13	R	result is not usable for any purpose
14	RCRA	<i>Resource Conservation and Recovery Act</i>
15	RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine
16	RFI	<i>Resource Conservation and Recovery Act</i> Facility Investigation
17	RSL	Regional Screening Level
18	SVOC	semivolatile organic compound
19	SWMU	solid waste management unit
20	TCL	target compound list
21	TDS	total dissolved solids
22	TNT	trinitrotoluene
23	TOC	top of casing
24	TPH	total petroleum hydrocarbon(s)
25	TPMC	TerranearPMC
26	U	non-detected result below the limit of detection
27	UJ	analyte was not detected
28	USACE	U.S. Army Corps of Engineers
29	VOC	volatile organic compound

Executive Summary

This Groundwater Periodic Monitoring Report (GPMR) documents groundwater monitoring activities conducted at Fort Wingate Depot Activity (FWDA) from January through June 2016 in accordance with the *Interim Facility-Wide Groundwater Monitoring Plan, Version 8* (Innovar Environmental, Inc. [Innovar], 2015). Groundwater monitoring was performed by Sundance Consulting Inc. and CH2M at FWDA under contract to the U.S. Army Corps of Engineers, Fort Worth District, as part of the Environmental Restoration Program. The GPMR was prepared on behalf of the U.S. Department of the Army Base Realignment and Closure Division for submission to the New Mexico Environment Department (NMED) – Hazardous Waste Bureau, as required by Section V.A of the *Resource Conservation and Recovery Act* (RCRA) Permit U.S. Environmental Protection Agency (EPA) Identification (ID) Number (No.) NM6213820974 for FWDA (NMED, 2005; NMED, 2014; NMED, 2015). This GPMR summarizes the monitoring activities and results, evaluates the results, and provides recommendations for future monitoring events and investigations.

Field activities conducted during the reporting period included two groundwater elevation surveys and one groundwater sampling event. Groundwater elevation surveys were performed on January 14 and 15, 2016, and April 4, 2016. Depth to water was measured at 73 monitoring wells and piezometers; two wells were verified as dry during each monitoring event. The groundwater sampling event for the reporting period was performed from April 4 to April 15, 2016. Groundwater samples were collected from 61 monitoring wells listed in the Groundwater Monitoring Plan (Innovar, 2015). Monitoring well FW35 was dry and could not be sampled during this monitoring period. The groundwater samples were analyzed for the constituents listed in Table 2-1 of this GPMR. During this monitoring period, access to the Open Burn/Open Detonation Area was not allowed due to explosive hazards associated with the excavation and removal of unexploded ordnance, munitions, and explosives of concern.

Groundwater flow directions at FWDA are controlled by regional geologic structure orientation and by local topography and stratigraphy. The flow of groundwater in the Northern Area alluvium is from potentiometric highs in the east, north, and south toward a potentiometric low west of the Administration Area (Figures 4-1 and 4-2 in this GPMR). Hydraulic gradients in alluvium ranged from 0.003 foot per foot (ft/ft) to 0.03 ft/ft. Groundwater flow in the bedrock appears to flow radially to a potentiometric low south of monitoring well TMW32 in the eastern portion of the Workshop Area. Bedrock groundwater flow is to the west in the western portion of the Workshop Area, with an interpreted geologic structural feature impeding flow between the two areas. Groundwater elevation in the bedrock groundwater unit is slightly higher than in the alluvial groundwater unit and exists under hydraulically confined conditions in most of the Northern Area. Groundwater hydraulic gradients in the bedrock unit range from approximately 0.005 ft/ft to 0.006 ft/ft in the Workshop Area.

Nitrate, perchlorate, explosives, one volatile organic compound (VOC), one semivolatile organic compound (SVOC), and metals were detected in groundwater samples at concentrations above the regulatory screening levels. Six groundwater contaminant plumes have been identified: two nitrate plumes, one in the alluvial groundwater unit and one in the bedrock groundwater unit; two perchlorate plumes, one in the alluvial groundwater unit and one in the bedrock groundwater unit; an explosives plume in the alluvial groundwater unit; and a 1,2-dichloroethane plume in the alluvial groundwater unit. SVOC detections are sporadic and not attributed to contaminant plumes.

The highest concentrations of nitrate contamination occur in shallow alluvial groundwater units of the Northern Area. The nitrate plume in the alluvial groundwater unit appears to originate from the trinitrotoluene (TNT) Leaching Beds (Solid Waste Management Unit [SWMU] 1) and extends downgradient to the Administration Area. The nitrate concentrations in groundwater within the alluvial nitrate plume decline in the vicinity of the former water storage cistern (monitoring wells MW01 and MW02) and the installation water supply well. The extent of the alluvial nitrate plume is not defined to the west of the Administration Area. The bedrock nitrate plume is also present at the TNT Leaching Beds (SWMU 1), but extends upgradient from the site to the south. A portion of the

1 bedrock nitrate plume is collocated with the bedrock perchlorate plume. The collocated perchlorate and nitrate
2 plumes appear to have a common source at the Building 528 Complex (SWMU 27).

3 The highest perchlorate concentrations were detected in groundwater samples from the bedrock groundwater
4 unit in the Workshop Area. The northern boundary of the bedrock perchlorate plume has not been defined. The
5 alluvial perchlorate plume is located in the same vicinity as the bedrock plume. The source of perchlorate appears
6 to be the Building 528 Complex (SWMU 27).

7 The compound hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) is the primary explosive compound of interest. This
8 compound is consistently detected at concentrations above screening levels in the Workshop and eastern
9 Administration Areas. The explosives plume in the alluvial groundwater unit appears to originate from the TNT
10 Leaching Beds (SWMU 1) in the Workshop Area. Groundwater concentrations of explosive compounds (primarily
11 RDX) attenuate to levels below the screening level within 2,500 feet downgradient of the TNT Leaching Beds
12 (SWMU 1).

13 One VOC was detected in groundwater samples at concentrations above regulatory cleanup standards. The
14 compound 1,2-dichloroethane was historically used as a gasoline additive and degreasing solvent. The
15 1,2-dichloroethane plume in the alluvial groundwater unit is limited to a group of wells near a former fueling
16 facility (SWMU 45, Building 6) in the Administration Area. Groundwater samples collected from three alluvial
17 monitoring wells had concentrations above the EPA's maximum contaminant level of 5.0 micrograms per liter. No
18 other VOCs were detected above cleanup standards. The SVOC bis(2-ethylhexyl) phthalate was detected at
19 concentrations above the regulatory cleanup standard. The detection of bis(2-ethylhexyl) phthalate is likely
20 attributable to sampling and laboratory contamination.

21 Dissolved aluminum, arsenic, iron, lead, manganese, and selenium were detected above regulatory screening
22 levels in multiple groundwater samples. Because background groundwater concentrations have not been
23 accepted for FWDA, it cannot clearly be demonstrated whether the detected concentrations are a result of
24 natural conditions or anthropogenic sources of contamination. A background evaluation of FWDA groundwater
25 was issued to NMED in September 2014 and revisions are pending.

26 Additional delineation and investigation for groundwater plumes at FWDA are planned. A Supplemental RCRA
27 Facility Investigation Work Plan was submitted to NMED in February 2015 and is currently being revised to
28 address NMED comments. This GPMR proposes locations for additional groundwater monitoring wells necessary
29 to further delineate the alluvial and bedrock groundwater contaminant plumes.

1.0 Introduction

This Groundwater Periodic Monitoring Report (GPMR) documents groundwater monitoring activities conducted at Fort Wingate Depot Activity (FWDA) from January through June 2016 in accordance with the *Interim Facility-Wide Groundwater Monitoring Plan, Version 8* (Innovar Environmental, Inc. [Innovar], 2015). Groundwater monitoring was performed by Sundance Consulting Inc. and CH2M at FWDA under contract to the U.S. Army Corps of Engineers (USACE), Fort Worth District, as part of the Environmental Restoration Program (ERP). This GPMR was prepared on behalf of the U.S. Department of the Army Base Realignment and Closure (BRAC) Division for submission to the New Mexico Environment Department (NMED) – Hazardous Waste Bureau, as required by Section V.A of the *Resource Conservation and Recovery Act* (RCRA) Permit, U.S. Environmental Protection Agency (EPA) Identification (ID) Number (No.) NM6213820974 for FWDA (NMED, 2005; NMED, 2011; NMED, 2014; NMED 2015).

The U.S. Department of the Army BRAC Division is managing FWDA for closure and transfer of property. As part of the planned property transfer to the U.S. Department of the Interior, the installation has been divided into reuse parcels as specified by the RCRA Permit. Pending RCRA closure and property transfer of the reuse parcels, the ERP must comply with the RCRA Permit.

1.1 Site Description and Activities

FWDA is located in McKinley County in western New Mexico, approximately seven miles east of Gallup and 130 miles west of Albuquerque (Figure 1-1). The current facility occupies an area of approximately 24 square miles (15,277 acres).

FWDA was founded as a U.S. Cavalry post in the 1860s. In 1918, the facility became a munitions storage depot for the U.S. Department of the Army. The facility was operated by the U.S. Department of the Army for numerous missions from 1918 until 1993, when FWDA was selected for closure under the BRAC Act of 1988. In 2002, the U.S. Department of the Army reassigned many functions at FWDA to the BRAC Division, including property management and ERP activities. In addition to property management and ERP activities, FWDA is currently used for missile testing. The Missile Defense Agency leases portions of the installation for these tests.

Historical activities at FWDA that may have contributed to soil and groundwater contamination include munitions storage, maintenance, and disposal; the use and storage of petroleum fuels; and equipment maintenance (TerranearPMC [TPMC], 2008). The following areas had historical activities with known or potential impacts to site soils and/or groundwater:

- o The Administration Area in the northern portion of FWDA is the location of all active administrative and maintenance buildings. Munitions storage and shipping, fuel storage and dispensary, and mechanical maintenance activities were performed in this area.
- o The Workshop Area is located directly south of the Administration Area and encompasses former industrial facilities for munitions maintenance and renovation activities, including the former trinitrotoluene (TNT) washout facility and the TNT Leaching Beds (Solid Waste Management Unit [SWMU] 1) Area. The buildings and other structures were demolished in 2010.
- o The Igloo Areas cover almost half of the current FWDA and were used for the storage of various munitions. These areas consist of rows of earth-covered igloos (also known as earth-covered magazines) located in the central portion of the installation. The 10 Igloo Areas contain a total of 732 earth-covered igloos and 241 earthen revetments (Innovar, 2015).
- o The Open Burn/Open Detonation (OB/OD) Area includes munitions disposal locations in the southwestern and western portions of the installation. The Closed OB/OD Area was used from 1948 to 1955 and includes the Old Burning Ground, the Demolition Landfill Area, and the Old Demolition Area (Program

Management Company, 1999). The current OB/OD Area was used from 1955 to 1993 and contains the hazardous waste management unit identified in the RCRA Permit.

1.2 Hydrogeologic Setting

This section presents a brief description of the hydrogeologic setting at FWDA to provide context for the contaminant nature and extent discussions presented in Section 5 of this GPMR.

The geologic units exposed at FWDA were largely deposited in the Mesozoic Era and have been significantly modified by more recent erosion and redeposition. The lithified stratigraphic units are Triassic to Cretaceous in age with uplift and deformation occurring in the Cretaceous during the Laramide orogeny series of mountain-building events in western North America (McCraw et al., 2009). Quaternary alluvial and colluvial deposits unconformably overlie the Mesozoic bedrock in the lower elevation and northern portions of FWDA (Anderson et al., 2003).

The majority of FWDA is underlain by the Triassic-age Chinle Group, which is predominantly non-marine, red-bed siliciclastics. The Chinle Group consists of the Shinarump, Bluewater Creek, Petrified Forest, and Owl Rock Formations (Anderson et al., 2003). The Petrified Forest Formation directly underlies the majority of the installation and is subdivided into three members: the Blue Mesa, Sonsela, and Painted Desert. All three members of the Petrified Forest Formation outcrop in various locations across the installation. The Blue Mesa, Sonsela, and Painted Desert lithologies are green-gray smectitic¹ mudstone, light-gray to yellowish-brown cross-bedded sandstone, and reddish-brown and grayish-red smectitic mudstone, respectively (Innovar, 2015). In the eastern portion of FWDA, the older Bluewater Creek and Shinarump Formations outcrop intermittently between layers of Quaternary alluvium (Innovar, 2015).

Permian-age bedrock underlies the Mesozoic-age rock beneath FWDA. These strata do not outcrop in FWDA and are not known to be contaminated by historical activities at the installation. However, the deeper, older San Andres Limestone and Glorieta Sandstone Formations provide the potable water supply to the installation.

In the northern portion of the installation, the surface is covered by either remnants of the Chinle Group or Quaternary alluvial and colluvial deposits. The majority of the alluvial deposits are present in the Northern Area of the installation in lowland areas between bedrock remnants. Alluvial deposits are also present along intermittent streams draining the Nutria Monocline (also known as the Hogback) and Zuni Mountains. The intermittent streams flow downgradient through the northern portion of the installation before joining the south fork of the Rio Puerco. Based on soil boring logs from the installation, alluvial deposits are heterogeneous and are thickest near major drainages. The alluvium has been found to be up to 150 feet thick near the south fork of the Rio Puerco. In the Administration Area, alluvium thickness generally ranges between 30 and 70 feet.

The regional groundwater aquifer in the vicinity of FWDA is present in the Permian San Andres Limestone and Glorieta Sandstone Formations (Cooper and John, 1968; Summers, 1972). Shallow groundwater is also present in the unconsolidated alluvium and Mesozoic-age bedrock overlying these units but is typically of poor quality.

Groundwater flow in the San Andres-Glorieta aquifer is to the north beneath FWDA and is separated from the shallow groundwater units by shales and claystones across much of FWDA (Anderson et al., 2003). The top of the San Andres-Glorieta aquifer is approximately 1,100 feet below ground surface (bgs) near the Administration Area. Recharge to both the regional aquifer and to shallow groundwater units is from precipitation and snowmelt primarily in the upland areas and along faults south of FWDA.

¹ A liquid crystal characterized by the arrangement of its molecules in layers with the long molecular axes in a given layer being parallel to one another and those of other layers being perpendicular or slightly inclined to the plane of the layer.

Shallow groundwater flow in the southern portions of the installation (OB/OD Area) is to the north. Groundwater recharge occurs in the higher elevations and discharges to the arroyos. Significant thicknesses of alluvium are not present in the OB/OD Area, and shallow groundwater typically occurs in the bedrock units in these areas; however, water-bearing zones are occasionally identified in the alluvium present in arroyo bottoms.

The groundwater flow direction in the alluvium present in the northern portion of FWDA is predominantly to the southwest and west. Along the northern border of the installation, hydraulic communication exists between the groundwater and the Rio Puerco during periods of active stream flow. Groundwater flow in the alluvium occurs primarily in discontinuous, stream-deposited sand and gravel units. Groundwater flow in the bedrock units in the northern portion of FWDA is to the west and north. The direction of groundwater flow in the bedrock units is largely controlled by geologic structural features.

The depth to water (DTW) under FWDA is generally between 10 and 100 feet bgs. Groundwater is present at shallow depths in the alluvium along drainages, including the Rio Puerco, with DTW ranging from 15 to 68 feet bgs in Northern Area alluvial wells. Groundwater in the Northern Area bedrock aquifer wells is also shallow, with DTW ranging from 29 to 65 feet bgs in the bedrock monitoring wells.

1.3 Regulatory Background

Environmental restoration activities at FWDA began in 1989 under the *Comprehensive Environmental Response, Compensation, and Liability Act* of 1980 (CERCLA) guidelines, as part of the Installation Restoration Program. The one exception was the current OB/OD Area, which was classified as a RCRA Interim Status, thermal treatment unit.

Since that time, NMED has become the lead regulatory agency. In 2002, NMED determined that the remediation pathway would be solely through a RCRA permit for post-closure care of the current OB/OD Area with a RCRA corrective action module attached to address requirements for other SWMUs and areas of concern (AOCs). The RCRA Permit was finalized in December 2005 and became effective December 31, 2005 (NMED, 2005). Since the original permit issuance, the permit has been revised through NMED-issued modifications in 2011, 2014, and 2015 (NMED, 2011; NMED, 2014; NMED, 2015). The RCRA Permit identified one hazardous waste management unit within the current OB/OD Unit (Parcel 3) and a total of 93 SWMUs and AOCs.

Since the 1980s, a number of groundwater investigations have been completed at FWDA. Groundwater investigation efforts have primarily focused on five areas: the TNT Leaching Beds Area (SWMU 1 located within Parcel 21), the Administration Area (multiple SWMUs and AOCs located in Parcels 6, 7, and 11), the Eastern Landfill Area (SWMU 13 located within Parcel 18), Buildings 542 and 600 Area (SWMUs 11 and 4 located within Parcel 6), and the OB/OD Area (located within Parcel 3). Numerous groundwater monitoring wells have been installed to characterize the nature and extent of contamination that resulted from activities associated with the OB/OD Area and various SWMUs and AOCs. Figure 1-2 shows the current monitoring well network, pertinent site features, and the reuse parcels at FWDA.

The Interim Facility-Wide Groundwater Monitoring Plan (GWMP) is required by Permit Section V.A and describes the groundwater monitoring activities to be conducted as part of the ERP at FWDA. The current monitoring network has been designed to evaluate the horizontal and vertical extent of chemical constituents in groundwater and the transport of chemicals that originate from multiple sources. The current GWMP combines the original 2008 Plan, approved by NMED, and subsequent annual revisions. Revisions to the GWMP are based on an analysis of historical groundwater monitoring data and a data quality objective assessment. Sampling under the NMED-approved GWMP has been ongoing since 2008. The results of the monitoring activities are documented in semiannual groundwater monitoring reports and submitted to NMED, tribes, and other stakeholders.

1.4 Document Organization

The GPMR is organized to comply with the guidance presented in *General Reporting Requirements for Routine Groundwater Monitoring at RCRA Sites* (NMED, 2003). The remainder of this GPMR is organized into the following sections:

- o Section 2 provides a discussion of the activities or scope of services performed during the January through June 2016 reporting period.
- o Section 3 presents the applicable regulatory criteria against which sample analytical results are compared for FWDA.
- o Section 4 presents the results of the quarterly groundwater elevation surveys.
- o Section 5 presents the groundwater sample analytical data for the January through June 2016 monitoring period.
- o Section 6 presents a summary discussion of the groundwater monitoring results and provides recommendations for future monitoring events.
- o Section 7 presents a list of the works cited in this GPMR.

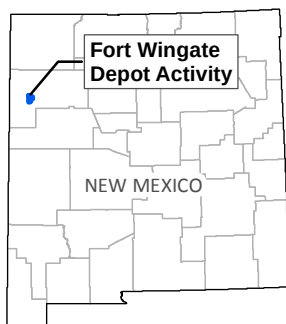
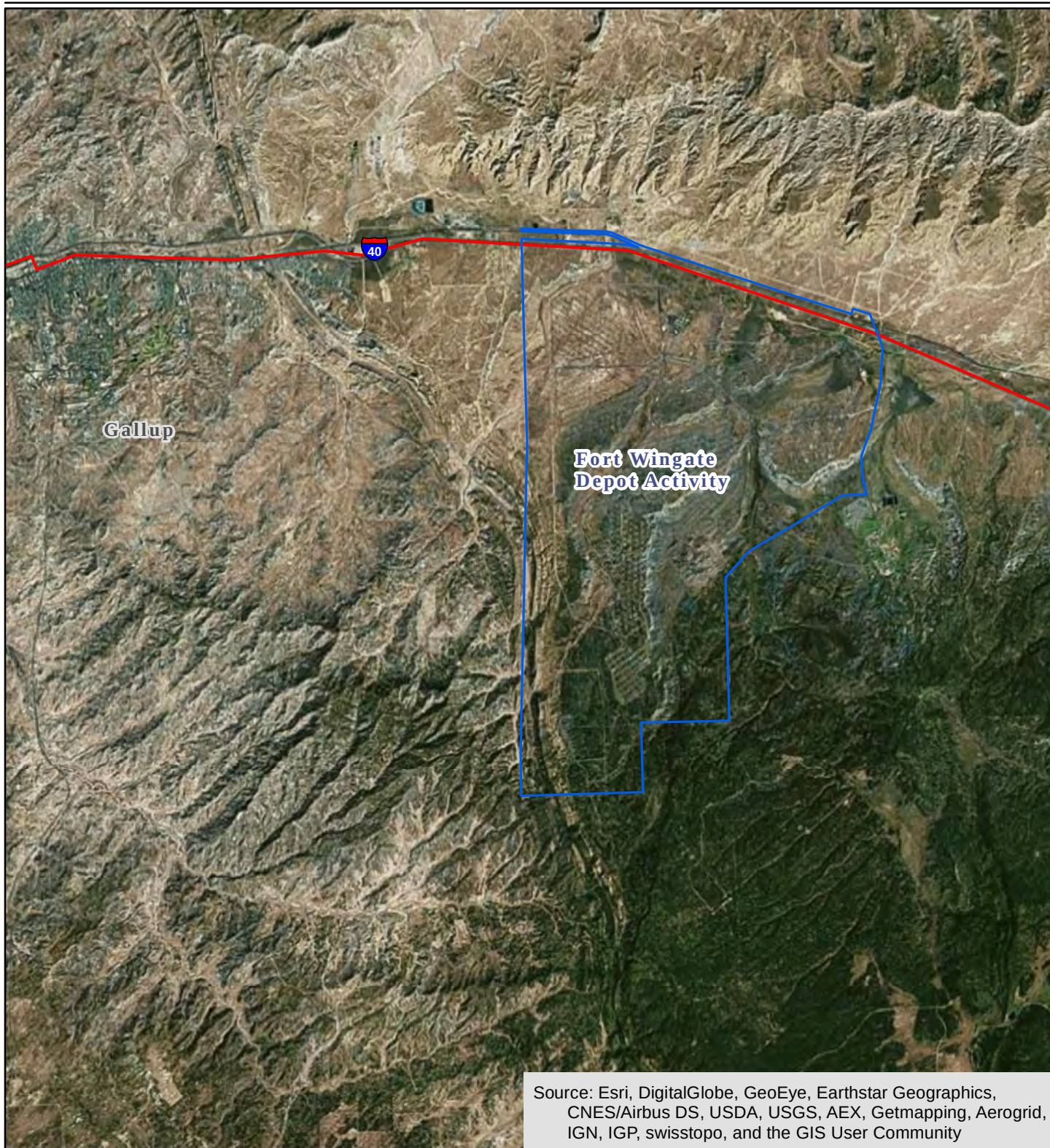


FIGURE 1-1 LOCATION MAP

Groundwater Periodic Monitoring
Report for January to June 2016
*Fort Wingate Depot Activity,
McKinley County, New Mexico*



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2.0 Scope of Services

This section presents an overview of the field activities, laboratory analyses, and data management activities conducted during the period from January through June 2016. Field activities conducted during the reporting period included two groundwater elevation surveys and one groundwater sampling event. All monitoring activities were conducted in accordance with the GWMP (Innovar, 2015). The groundwater monitoring locations are shown on Figure 1-2.

2.1 Groundwater Elevation Measurements

Groundwater elevation surveys were performed at FWDA on January 14 and 15, 2016, and April 4, 2016. During each of the elevation surveys, DTW was measured at 73 monitoring wells and piezometers; two wells were verified as dry. Of the 71 monitoring locations with water, 45 locations were alluvial monitoring wells, 16 locations were bedrock monitoring wells, and 10 locations were piezometers—all located in the Northern Area (Administration and Workshop Areas). No access to the OB/OD Area has been permitted for groundwater monitoring since April 2013 due to explosive hazards associated with the excavation and removal of unexploded ordnance, munitions, and explosives of concern. No groundwater elevation measurements were collected in the OB/OD Area during the current monitoring period.

As a health and safety consideration, water level measurements were collected by two-person teams. One team member documented the field measurements and the other operated the water level meter. The DTW was measured from the top of the casing reference point at each monitoring well and piezometer using a Solonist Model 101 water level meter. The DTW measurements were recorded in the field data sheets or field notebooks to the nearest 0.01 foot. Copies of the field notes are provided in Appendix A.

The portions of the water level meter that came into contact with groundwater were decontaminated after each use by washing with Liqui-Nox soap solution and rinsing with deionized water. Decontamination fluids were contained in 5-gallon buckets for later disposal at the FWDA evaporation tank. The portions of the water level meter that were lowered into wells were wiped down with paper towels as they were retrieved from the well casings.

The DTW data were tabulated and compared to historical data to identify potential field measurement errors. After this evaluation, the groundwater elevation at each monitoring location was calculated by subtracting the DTW from the surveyed elevation of the top of casing reference point. The groundwater elevation data were subsequently used to generate groundwater elevation contour maps and calculate hydraulic gradients for the alluvial and bedrock water-bearing units at FWDA. The groundwater elevation data and analyses are presented in Section 4 of this GPMR.

2.2 Groundwater Sampling

The groundwater sampling event for the reporting period was performed from April 4 to April 15, 2016. Groundwater samples were collected from 61 of the 78 monitoring wells listed in the GWMP (Innovar, 2015). The 16 monitoring wells in the OB/OD Area were not sampled due to the explosive hazards associated with the excavation and removal of unexploded ordnance and explosives of concern in the area. The groundwater samples were analyzed for the constituents listed in Table 2-1. The sample analytical results are presented in Section 5 of this GPMR. Variances from the GWMP are also discussed in Section 5. A field variance occurred during this monitoring period. Alluvial monitoring well FW35 was dry and could not be purged or sampled during this event.

Monitoring well purging and sampling was performed using a variety of sampling techniques: dedicated low-flow pneumatic pumps from BESST Products, dedicated pneumatic Bennett Sample Pumps, a non-dedicated Grundfos Redi-Flo2 submersible pump, and disposable bailers. During well purging operations, the water quality parameters of pH, temperature, specific conductance, dissolved oxygen (DO), turbidity, and oxidation-reduction potential (ORP) were measured using Horiba Instruments, Inc. Model U-52 water quality meters, and recorded on

2.0 Scope of Services

groundwater sampling field data sheets. All water quality meters were calibrated daily according to manufacturer specifications. The groundwater sampling field data sheets for each monitoring well are provided in Appendix B.

Monitoring wells equipped with dedicated low-flow pneumatic pumps were purged in accordance with the GWMP and NMED's position paper *Use of Low-Flow and Other Non-Traditional Sampling Techniques for RCRA Compliant Groundwater Monitoring* (NMED, 2001). Well purging was performed until water quality parameters stabilized within the following ranges: temperature (± 10 percent), pH (± 0.5 standard units), specific conductance (± 10 percent), DO (± 10 percent), turbidity (± 10 percent), and ORP (± 10 percent). In general, drawdown was minimized during final parameter stabilization and during sampling to ensure that formation water was being measured and sampled. Drawdown was minimized by slow purging of the wells; however, poor groundwater production from the screened intervals resulted in greater than desired drawdown in some wells. During the initial period of low-flow pumping prior to stabilization, drawdown in several wells was greater than 0.5 foot, but only greater than 1.0 foot in two wells during this monitoring event.

Monitoring wells not equipped with low-flow pumps were purged by pumping or bailing three well volumes of the water standing in the well (including the saturated annular space). Water quality parameters were measured during the well purging operations until they stabilized within the ranges presented above. If a monitoring well was emptied prior to the purging of three well volumes due to a slow recharge rate, then the well was sampled after it refilled with sufficient groundwater volume. This typically required the sample team to return to the well location on the next day to collect the groundwater sample. A minimum of three water quality parameter measurements was collected from wells that emptied during purging operations except at MW22S and TMW21, where only one or two sets of parameter readings were collected before the wells went dry.

Seven wells in the monitoring program are equipped with dedicated Bennett Sample Pumps. The wells equipped with Bennett Sample Pumps were purged dry and sampled using the installed pumps.

The 18 wells not equipped with dedicated pumps were purged dry either by bailing or with a non-dedicated, Grundfos Redi-Flo2 submersible electric pump. All samples from wells without dedicated pumps were collected using disposable bailers.

The Grundfos Redi-Flo2 submersible pump was decontaminated between sample locations by pumping Liqui-Nox soap solution through the pump and pumping through two rinse cycles with deionized water. The Grundfos pump discharge tubing was discarded at the end of each day that it was used for well purging. Disposable bailers used for well purging and sampling were also discarded and not reused at other sample locations. Two quality control (QC) equipment rinsate samples were collected from the decontaminated submersible pump, and the analytical results were evaluated as part of the data validation process. Thirteen monitoring wells were purged using the Grundfos Redi-Flo2 submersible pump. The two equipment rinsate samples comply with the 10 percent sample frequency requirement of the GWMP (Innovar, 2015). The equipment rinsate sample results indicate equipment decontamination was sufficient to prevent cross-contamination.

After well purging, groundwater samples were collected in laboratory-supplied bottles for the analyses listed in Table 2-1. The QC samples collected during the monitoring event are also listed in Table 2-1 and meet the requirements specified in the GWMP. Filled sample bottles were placed on ice in coolers for shipment to TestAmerica Laboratories. Sample coolers were shipped daily, under chain of custody, by FedEx overnight delivery. Copies of the chain of custody forms for the groundwater sampling event are provided in Appendix B.

Water was generated during well-purging activities as part of the sampling process. Decontamination fluids were generated during the decontamination of non-dedicated sampling equipment and reusable monitoring equipment. Purge water and decontamination fluids were contained in closable 5-gallon and 15-gallon containers during sampling activities and emptied into the FWDA evaporation tank daily. Solid waste such as disposable sampling equipment, personal protective equipment, and general refuse was placed in rented refuse containers.

2.3 Data Management and Validation

An electronic database was created to support the data management and tracking activities for the groundwater sampling event. The database was used to prepare sample labels in advance of the sampling event, as well as to

1 prepare electronic chain of custody forms daily at FWDA during the sampling event. Sample identifiers were
2 assigned based on the convention described in the GWMP. Groundwater sample identifiers consisted of the well
3 ID and sample date. The QC samples used the same ID number as the parent sample and followed by MS (matrix
4 spike) or MSD (matrix spike duplicate), as dictated by the work plan. Changes were made to the sample identifiers
5 for field duplicates so that these QC samples would be blind to the laboratory. The duplicates relating to normal
6 samples are presented in Table 2-1. Copies of the chain of custody forms were emailed to the project chemist
7 daily to facilitate sample tracking and laboratory interaction.

8 Sample analyses were performed by TestAmerica Laboratories in accordance with the *Department of Defense*
9 *Quality Systems Manual for Environmental Laboratories* (QSM) (U.S. Department of Defense [DoD], 2013).
10 Electronic data deliverables (EDDs) of the analytical results for each sample delivery group were provided by
11 TestAmerica Laboratories for validation. The sample result EDDs were loaded into the Automated Data Review
12 (ADR) software for data validation. Results were subjected to 100 percent Stage 2a validation using the ADR
13 software. An additional 10 percent of the sample results were subjected to Stage 3 data validation by the project
14 chemist. The validated data output files from the ADR software were exported to the FWDA Electronic Data
15 Management System (EDMS) database. The EDMS database was used to prepare the validated data table output
16 presented in this GPMR. The overall data validation assessment found that data were of sufficient quality for
17 evaluation of data quality objectives. Information on the data validation process and the results is provided in
18 Appendix C. Attachments to data validation reports are provided in electronic format.

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2.0 Scope of Services

TABLE 2-1
Spring 2016 Groundwater Sample Matrix (Page 1 of 3)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well ID	Sample ID	Purge Method	Pump Type	Total Explosives Method 8330B	TCL VOCs Method 8260B	TCL SVOCs Method 8270C	TCL Pesticides Method 8081A	TAL Total Metals Methods 6010C/6020A/7470A	TAL Dissolved Metals Methods 6010C/6020A/7470A	Total Nitrate/ Nitrite Method 9056	Perchlorate Method 6860	TPH DRO Method 8015C	TPH GRO Method 8015C
OB/OD Area Monitoring Wells - No Sampling due to No Safe Access													
Northern Area Monitoring Wells - Alluvial													
BGMW01	BGMW01042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
BGMW02	BGMW02042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
Matrix Spike ^a	BGMW02042016MS	Low-flow	BESST	X	X	X	X	X	X	X	X		
	BGMW02042016MSD	Low-flow	BESST	X	X	X	X	X	X	X	X		
BGMW03	BGMW03042016	Well volume	Grundfos	X	X	X	X	X	X	X	X		
FW31	FW31042016	Well volume	Bail	X	X	X	X	X	X	X			
FW35	FW35042016	Well volume	Grundfos										
Well Dry - Not Sampled													
MW01	MW01042016	Well volume	Bail	X	X		X	X	X	X	X	X	X
MW02	MW02042016	Well volume	Bail	X	X		X	X	X	X	X	X	X
MW03	MW03042016	Low-flow	BESST	X	X			X	X	X	X	X	X
MW18D	MW18D042016	Well volume	Grundfos	X	X			X	X	X	X	X	X
MW20	MW20042016	Low-flow	BESST	X	X	X	X	X	X	X	X	X	X
MW22D	MW22D042016	Low-flow	BESST	X	X	X	X	X	X	X	X	X	X
Matrix Spike ^a	MW22D042016MS	Low-flow	BESST	X	X	X	X	X	X	X	X	X	X
	MW22D042016MSD	Low-flow	BESST	X	X	X	X	X	X	X	X	X	X
MW22S	MW22S042016	Well volume	Bail	X	X	X	NC	X	X	X	X	X	X
MW23	MW23042016	Well volume	Bennett	X	X	X	X	X	X	X	X		
Duplicate ^b Matrix Spike ^a	DMW23042016	Well volume	Bennett	X	X	X	X	X	X	X	X		
	DMW23042016MS	Well volume	Bennett	X	X	X	X	X	X	X	X		
MW24 Duplicate ^b	DMW24042016	Well volume	Bennett	X	X	X	X	X	X	X	X		
	DMW24042016MS	Well volume	Bennett	X	X	X	X	X	X	X	X		
SMW01	SMW01042016	Low-flow	BESST	X	X	X		X	X	X	X		
TMW01	TMW01042016	Low-flow	BESST	X	X			X	X	X	X		
TMW03	TMW03042016	Low-flow	BESST	X	X	X		X	X	X	X		
TMW04	TMW04042016	Low-flow	BESST	X	X	X		X	X	X	X		
TMW06	TMW06042016	Low-flow	BESST	X	X	X		X	X	X			
TMW07	TMW07042016	Well volume	Grundfos	X	X	X		X	X	X			
TMW08	TMW08042016	Low-flow	BESST		X		X	X	X	X	X	X	X
TMW10	TMW10042016	Well volume	Bail	X	X			X	X	X	X		

TABLE 2-1

Spring 2016 Groundwater Sample Matrix (Page 2 of 3)*Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity*

Well ID	Sample ID	Purge Method	Pump Type	Total Explosives Method 8330B	TCL VOCs Method 8260B	TCL SVOCs Method 8270C	TCL Pesticides Method 8081A	TAL Total Metals Methods 6010C/6020A/7470A	TAL Dissolved Metals Methods 6010C/6020A/7470A	Total Nitrate/Nitrite Method 9056	Perchlorate Method 6860	TPH DRO Method 8015C	TPH GRO Method 8015C
OB/OD Area Monitoring Wells - No Sampling due to No Safe Access													
Northern Area Monitoring Wells - Alluvial													
TMW11	TMW11042016	Low-flow	BESST	X	X			X	X	X	X		
TMW13	TMW13042016	Low-flow	BESST		X			X	X	X	X		
TMW15	TMW15042016	Low-flow	BESST	X	X	X		X	X	X	X		
Duplicate ^b	DTW15042016	Low-flow	BESST	X	X	X		X	X	X	X		
TMW21	TMW21042016	Well volume	Bail	X	X			X	X	X	X		
TMW22	TMW22042016	Well volume	Grundfos	X	X	X		X	X	X	X		
TMW23	TMW23042016	Well volume	Grundfos	X	X		X	X	X	X	X		
TMW24	TMW24042016	Low-flow	BESST	X	X		X	X	X	X	X		
TMW25	TMW25042016	Low-flow	BESST	X	X			X	X	X			
TMW26	TMW26042016	Low-flow	BESST	X	X			X	X	X	X		
Duplicate ^b	DTW26042016	Low-flow	BESST	X	X			X	X	X	X		
TMW27	TMW27042016	Low-flow	BESST		X			X	X		X		
TMW28	TMW28042016	Low-flow	BESST		X			X	X				
TMW29	TMW29042016	Well volume	Bail	X	X			X	X	X	X		
TMW31S	TMW31S042016	Well volume	Grundfos	X	X	X	X	X	X	X	X		
TMW33	TMW33042016	Well volume	Grundfos		X	X		X	X	X		X	X
TMW34	TMW34042016	Low-flow	BESST		X			X	X	X	X	X	X
Duplicate ^b	DTW34042016	Low-flow	BESST		X			X	X	X	X	X	X
TMW35	TMW35042016	Well volume	Grundfos		X	X	X	X	X	X	X		
TMW39S	TMW39S042016	Well volume	Grundfos	X	X	X	X	X	X	X	X		
TMW40S	TMW40S042016	Well volume	Bail	X	X	X	X	X	X	X	X		
TMW41	TMW41042016	Well volume	Grundfos	X	X	X	X	X	X	X	X		
TMW43	TMW43042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
Duplicate ^b	DTW43042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
Matrix	TMW43042016MS	Low-flow	BESST	X	X	X	X	X	X	X	X		
Spike ^a	TMW43042016MSD	Low-flow	BESST	X	X	X	X	X	X	X	X		
TMW44	TMW44042016	Well volume	Grundfos	X	X	X	X	X	X	X	X		
TMW45	TMW45042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
TMW46	TMW46042016	Well volume	Grundfos	X	X	X	X	X	X	X	X		
TMW47	TMW47042016	Low-flow	BESST	X	X	X		X	X	X	X		

FWDA Groundwater Periodic

Monitoring Report, January-June 2016

Final

November 2017

2.0 Scope of Services

TABLE 2-1

Spring 2016 Groundwater Sample Matrix (Page 3 of 3)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well ID	Sample ID	Purge Method	Pump Type	Total Explosives Method 8330B	TCL VOCs Method 8260B	TCL SVOCs Method 8270C	TCL Pesticides Method 8081A	TAL Total Metals Methods 6010C/6020A/7470A	TAL Dissolved Metals Methods 6010C/6020A/7470A	Total Nitrate/Nitrite Method 9056	Perchlorate Method 6860	TPH DRO Method 8015C	TPH GRO Method 8015C
Northern Area Monitoring Wells - Bedrock													
TMW02	TMW02042016	Low-flow	BESST	X	X			X	X	X	X		
TMW14A	TMW14A042016	Low-flow	BESST	X	X	X		X	X	X			
TMW16	TMW16042016	Well volume	Bennett	X	X	X		X	X		X		
TMW17	TMW17042016	Low-flow	BESST		X			X	X	X	X		
TMW18	TMW18042016	Well volume	Bennett	X	X	X		X	X	X	X		
TMW19	TMW19042016	Well volume	Bennett	X	X	X		X	X		X		
TMW30	TMW30042016	Well volume	Grundfos	X	X	X	X	X	X	X	X		
TMW31D	TMW31D042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
Duplicate ^b	DMW31D042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
TMW32	TMW32042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
TMW36	TMW36042016	Well volume	Bennett	X	X	X	X	X	X	X	X		
TMW37	TMW37042016	Well volume	Bennett	X	X	X	X	X	X	X	X		
TMW38	TMW38042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
TMW39D	TMW39D042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
TMW40D	TMW40D042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
TMW48	TMW48042016	Low-flow	BESST	X	X	X	X	X	X	X	X		
TMW49	TMW49042016	Low-flow	BESST	X	X	X	X	X	X	X	X		

Notes:

^a Matrix spike (MS) and matrix spike duplicate (MSD) samples are quality control samples and associated with the normal sample above.

^b Duplicate samples are quality control samples that are collected to verify the consistency of the laboratory analysis.

Trip blank samples were collected daily and equipment blanks were collected twice a week (not shown above).

DRO = diesel range organics

GRO = gasoline range organics

ID = identification

NC = not collected

OB/OD = Open Burn/Open Detonation

SVOC = semivolatile organic compound

TAL = target analyte list

TCL = target compound list

TPH = total petroleum hydrocarbons

VOC = volatile organic compound

X = samples collected according to work plan (Innovar, 2016)

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3.0 Regulatory Criteria

On December 1, 2005, NMED issued a RCRA Permit (EPA ID No. NM6213820974) to the U.S. Department of the Army (Permittee), the owner and operator of FWDA. The Permit established the general and specific standards and requirements for these activities pursuant to the New Mexico Hazardous Waste Act (NMHWA), as amended; New Mexico State Rules Act (NMSA) 1978, §§ 74-4-1 et seq.; and the New Mexico Hazardous Waste Management Regulations (HWMR), 20 New Mexico Administrative Code (NMAC) Part 4.1 (NMED, 2005). Since the original permit issuance, the FWDA RCRA permit has been revised through NMED-issued modifications on June 27, 2011, April 4, 2014, and February 25, 2015 (NMED, 2011; NMED, 2014; NMED, 2015). The NMED-Hazardous Waste Bureau is in the process of preparing a renewal of the FWDA RCRA permit. Until the renewal process is completed, all environmental activities at the Facility will be conducted in accordance with the requirements of the 2015 revision of the RCRA Permit, which includes the original Permit and all subsequent modifications (NMED, 2015).

As required by Section V.A of the Permit, the U.S. Department of the Army developed and implemented a groundwater monitoring program. A GWMP was developed according to provisions of the Permit, Section VIII.B.1 (20 NMAC § 4.1.500, incorporating 40 *Code of Federal Regulations* [CFR] 264.101) (TPMC, 2008). NMED approved the initial GWMP in March 2008. The GWMP has been revised eight times, with the revisions submitted to NMED in 2009, 2010, 2011, 2012, 2014, 2015, and 2016. All groundwater monitoring, sampling, and reporting activities are conducted in compliance with the Permit, applicable Permit attachments, and the GWMP.

Attachment 7 of the Permit provides cleanup levels applicable to the FWDA groundwater monitoring program. Groundwater analytical results are evaluated and compared to these cleanup levels. The following documents and regulations are used to determine whether the concentration of a particular hazardous constituent exceeds the RCRA Permit cleanup level (NMED, 2005; NMED, 2011; NMED, 2014; NMED, 2015):

- o New Mexico Water Quality Control Commission (NM WQCC) standards in 20 NMAC § 6.2.4103.A and B
- o EPA drinking water maximum contaminant level (MCL) under 40 CFR Parts 141 and 142

If both an NM WQCC standard and an EPA MCL have been established for a contaminant, the lower of the two is used as the criterion. The Permit does not specify cleanup standards for compounds (other than perchlorate) that do not have either NM WQCC or MCL standards. The Permit specifies that risk-based cleanup standards should be developed for these compounds and must be approved by NMED. Pending the development and approval of cleanup criteria, the EPA Region 6 Regional Screening Levels (RSLs) based on a cancer risk of 10^{-5} and a non-cancer hazard index of 1.0 are used as temporary screening criteria in accordance with the risk criteria of the RCRA Permit. The RSLs have replaced EPA Human Health Medium-Specific Screening Levels as EPA guidance.

The GWMP requires the Permittee to submit periodic monitoring reports and the Permit Section V.A.2 requires the format to be consistent with NMED's *General Reporting Requirements for Routine Groundwater Monitoring at RCRA Sites* (NMED, 2003; Innovar, 2015).

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4.0 Groundwater Elevations

Groundwater elevation surveys in monitoring wells and piezometers at FWDA are currently performed on a quarterly basis. Two groundwater elevation surveys were performed during this monitoring period, the first on January 14 and 15, 2016, and the second on April 4, 2016. As discussed in Section 2, no groundwater elevation measurements were collected in the OB/OD Area during these events. The groundwater elevation data are used to calculate hydraulic gradients and determine groundwater flow directions in the Northern Area alluvium and Northern Area bedrock water-bearing units. Tables 4-1 and 4-2 present the DTW measurements in feet, the surveyed elevation of the top of casing, and calculated groundwater elevations in feet above the North American Vertical Datum of 1988 (NAVD88) for the January and April 2016 monitoring events. Figures 4-1 through 4-4 show the groundwater elevation maps for the two monitoring events.

4.1 Northern Area Groundwater Elevations

Shallow groundwater in the Northern Area is present in both unconsolidated alluvium and bedrock. The water quality and hydraulic properties differ between these two groundwater-bearing units. Therefore, the groundwater elevation data and chemistry are presented and discussed separately. Table 4-1 presents the groundwater elevation data for wells screened in alluvium. Table 4-2 presents the groundwater elevation data for wells screened in the bedrock. The Northern Area groundwater elevation contour maps are shown as Figures 4-1 through 4-4. The groundwater elevation contours presented as Figure 4-1 and Figure 4-2 were drafted using the mathematical interpolation algorithms in Surfer, Version 11, software. The Kriging geostatistical interpolation method was used to generate a 100-foot by 100-foot interpolated grid based on the groundwater elevations. An experienced hydrogeologist reviewed and digitally adjusted the contours based on known hydrogeologic conditions and professional judgment. Boundary conditions were used to crop the interpolation grids based on geologic constraints and data limitations. Groundwater elevation contours were interpreted by a hydrogeologist using site-specific information on bedrock structure from the site conceptual model and groundwater elevation data. The bedrock groundwater contours shown as Figures 4-3 and 4-4 were hand drawn.

4.1.1 Northern Area Alluvial Groundwater System

The groundwater flow direction in the alluvium is from potentiometric highs in the east, north, and south toward a potentiometric low west of the Administration Area (Figures 4-1 and 4-2). From the Administration Area, the groundwater flow direction is generally to the west. These groundwater flow directions are consistent with recent historical data. A small groundwater mound is present in the Administration Area near monitoring wells MW01, MW02, and MW03. This feature has been previously attributed to a leaking water storage cistern (USACE, 2012). The cistern is no longer in service, and the groundwater mound was expected to attenuate over time. However, the groundwater mound is still observed in the water level data for monitoring well MW02 and may be the result of leakage from the installation water supply well or borehole. Groundwater flow directions and elevations were similar between the January and April 2016 monitoring events and were also consistent with recent historical data. The recent historical data are also included in Table 4-1.

Hydraulic gradients ranged from 0.003 foot per foot (ft/ft) to 0.03 ft/ft in the alluvial groundwater unit. The steepest gradients were found in the southeast portions of the monitoring area and the flattest gradients were found in the western portions of the monitoring area. Hydraulic gradients did not vary significantly in direction or magnitude between the January and April 2016 monitoring events and were similar to those calculated in the winter and spring of 2015.

4.1.2 Northern Area Bedrock Groundwater System

Groundwater flow in the shallow bedrock is generally to the north and west in the Workshop Area (Figures 4-3 and 4-4). Steep horizontal gradients from east to west (in particular, between monitoring wells TMW38 and TMW40D and between monitoring wells TMW17 and TWM37) indicate that a geologic structural feature impedes groundwater flow. Vertical offset of the sandstone layers in the bedrock aquifer by a fault or fracture zones may be present in this area and impede groundwater flow. Contaminant transport of perchlorate to the north (instead of to the west) also provides evidence supporting the conceptual model of a structural impediment to westerly groundwater flow in bedrock beneath the Workshop Area.

Groundwater flow in the bedrock appears to flow radially to a potentiometric low south of TMW32 in the eastern portion of the Workshop Area and to the west in the western portion of the Workshop Area. Groundwater elevations were similar between the January and April 2016 monitoring events. Water-level elevation data from monitoring well TMW02 were not used in the generation of the groundwater elevation contour maps or the calculation of hydraulic gradients because the well is completed in a different water-bearing zone than the other bedrock monitoring wells. Two water-bearing sandstone layers or units of the Painted Desert Member of the Petrified Forest Formation are known to exist in the Workshop Area. The upper sandstone unit is monitored by monitoring well TMW02. The remaining bedrock monitoring wells are completed in the lower sandstone unit. Since January 2013, groundwater elevations in most of the bedrock monitoring wells have declined approximately one foot, with the exception of monitoring wells TMW02 and TMW30, which have relatively stable water levels. Groundwater elevation in the bedrock groundwater unit is slightly higher than in the alluvial groundwater unit and is under hydraulically confined conditions in most of the Northern Area. The confining unit for the bedrock groundwater unit is missing in the vicinity of monitoring wells TWM30 and TMW48.

Groundwater hydraulic gradients are moderate in the Workshop Area at approximately 0.005 ft/ft to 0.006 ft/ft to the north and west. The groundwater elevations were similar to recent historical data, but flow direction was reinterpreted in 2014. The current conceptual model includes a structural feature that impedes flow to the west in the Workshop Area (Figure 4-3).

It is believed that survey errors are affecting the interpretation of bedrock aquifer groundwater flow directions. Since the bedrock monitoring wells were installed and surveyed during several different field events, this may have introduced errors in the well survey data set. The bedrock aquifer groundwater flow directions shown on Figures 4-3 and 4-4 conflict with the observed distribution of the nitrate and perchlorate groundwater contamination in the aquifer. To determine whether the current interpretation of groundwater flow direction is correct, a re-survey of bedrock monitoring wells is recommended (see Section 6.2).

4.2 OB/OD Area Groundwater Elevations

No monitoring data were collected in this area during the January through June 2016 monitoring period. No groundwater elevation data are available for the last two years from this area; therefore, no historical data are presented in this GPMR. Monitoring of the OB/OD Area wells may resume when access to the area is not restricted due to munition safety concerns.

TABLE 4-1

Northern Area Groundwater Elevations (Wells Screened in Alluvial Sediments) (Page 1 of 2)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	TOC Elevation (feet)	15/16-July-14		20-Oct-14		20/21-Jan-15		30-Mar-15		21/22-July-15		26-Oct-15		14/15-Jan-16		4-Apr-16	
		Elevation (feet)		Elevation (feet)		Elevation (feet)		Elevation (feet)		Elevation (feet)		Elevation (feet)		DTW (feet BTOC)	Elevation (feet)	DTW (feet BTOC)	Elevation (feet)
BGMW01	6692.68	6673.46		6673.41		6673.66		6673.73		6673.26		6673.04		19.31	6673.37	19.35	6673.33
BGMW02	6691.99	6670.82		6670.58		6670.86		6671.03		6670.63		6670.18		21.47	6670.52	21.35	6670.64
BGMW03	6680.57	6663.52		6663.42		6664.20		6664.48		6663.60		6663.48		16.71	6663.86	16.49	6664.08
FW26	6674.40	Dry		Dry		Dry		Dry		Abandoned		Abandoned		Abandoned		Abandoned	
FW31	6832.49	6790.09		6790.00		6790.08		6790.10		6789.94		6789.83		42.59	6789.90	42.65	6789.84
FW35	6711.11	6682.16		6680.82		6681.26		6681.60		6680.12		Dry		Dry	Dry	Dry	Dry
MW01	6685.94	6643.38		6643.31		6643.40		6643.25		6643.31		6643.11		42.77	6643.17	42.95	6642.99
MW02	6685.22	6644.89		6644.71		6644.51		6644.46		6644.41		6644.27		40.97	6644.25	41.15	6644.07
MW03	6689.53	6643.17		6643.18		6643.23		6643.11		6643.10		6643.02		46.42	6643.11	46.65	6642.88
MW18D	6686.32	6642.84		6642.77		6642.91		6642.71		6642.82		6642.61		43.65	6642.67	43.88	6642.44
MW18S	6686.61	Dry		Dry		Dry		Dry		Dry		Dry		Dry	Dry	Dry	Dry
MW20	6687.67	6642.34		6642.22		6642.35		6642.25		6642.29		6642.11		45.52	6642.15	45.61	6642.06
MW22D	6684.55	6642.28		6642.14		6642.30		6642.24		6642.22		6641.98		42.52	6642.03	42.67	6641.88
MW22S	6684.69	6642.52		6642.42		6642.51		6642.32		6642.40		6642.16		42.47	6642.22	42.61	6642.08
MW23	6654.50	6639.30		6638.97		6639.24		6639.75		6639.82		6639.38		14.98	6639.52	15.36	6639.14
MW24	6657.08	6637.22		6636.77		6637.37		6637.78		6637.59		6635.55		19.62	6637.46	19.94	6637.14
SMW01	6669.94	6639.09		6638.85		6639.22		6639.14		6638.75		6638.49		31.20	6638.74	31.41	6638.53
TMW01	6711.84	6673.13		6672.83		6672.83		6672.61		6672.47		6672.22		39.63	6672.21	39.94	6671.90
TMW03	6702.43	6645.28		6645.19		6645.25		6645.11		6645.11		6645.04		57.32	6645.11	57.40	6645.03
TMW04	6700.86	6644.41		6644.35		6644.44		6644.34		6644.36		6644.32		56.50	6644.36	56.69	6644.17
TMW06	6690.63	6643.44		6643.36		6643.53		6643.32		6643.41		6643.30		47.14	6643.49	47.52	6643.11
TMW07	6690.47	6643.06		6643.41		6643.22		6643.37		6643.15		6643.43		46.88	6643.59	46.95	6643.52
TMW08	6680.31	6643.38		6643.24		6643.37		6643.14		6643.23		6643.11		37.04	6643.27	37.38	6642.93
TMW10	6680.04	6642.26		6642.14		6642.29		6642.10		6642.12		6641.97		37.91	6642.13	38.16	6641.88
TMW11	6718.28	6650.70		6650.55		6650.48		6650.47		6650.35		6650.18		68.19	6650.09	68.22	6650.06
TMW13	6707.49	6647.12		6647.02		6647.03		6646.99		6646.93		6646.83		60.69	6646.80	60.75	6646.74
TMW15	6713.89	6648.95		6648.84		6648.81		6648.78		6648.67		6648.54		65.38	6648.51	65.42	6648.47
TMW21	6695.14	6644.29		6644.24		6644.32		6644.23		6644.24		6644.26		50.88	6644.26	51.05	6644.09
TMW22	6691.74	6643.02		6643.06		6643.22		6643.03		6643.07		6643.03		48.46	6643.28	48.83	6642.91
TMW23	6687.66	6642.22		6642.17		6642.34		6642.18		6642.34		6642.23		45.20	6642.46	45.55	6642.11
TMW24	6680.42	6642.15		6642.11		6642.30		6642.22		6642.39		6642.27		37.82	6642.60	38.05	6642.37

4.0 Groundwater Elevations

TABLE 4-1
Northern Area Groundwater Elevations (Wells Screened in Alluvial Sediments) (Page 2 of 2)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	TOC Elevation (feet)	15/16-July-14	20-Oct-14	20/21-Jan-15	30-Mar-15	21/22-July-15	26-Oct-15	14/15-Jan-16		4-Apr-16	
		Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	DTW (feet BTOC)	Elevation (feet)	DTW (feet BTOC)	Elevation (feet)
TMW25	6672.88	6633.96	6633.83	6634.02	6633.95	6634.06	6633.88	38.99	6633.89	39.10	6633.78
TMW26	6677.71	6651.16	6650.65	6650.58	6650.56	6650.66	6650.23	27.58	6650.13	27.30	6650.41
TMW27	6668.13	6640.09	6639.82	6639.93	6640.06	6640.07	6639.69	28.32	6639.81	28.25	6639.88
TMW28	6689.17	6670.21	6669.81	6670.15	6670.48	6669.82	6669.34	19.43	6669.74	19.35	6669.82
TMW29	6702.88	6645.43	6645.32	6645.37	6645.31	6645.30	6645.26	57.66	6645.22	57.77	6645.11
TMW31S	6710.20	6672.34	6672.07	6672.09	6671.85	6671.70	6671.44	38.70	6671.50	39.11	6671.09
TMW33	6686.60	6642.62	6642.53	6642.65	6642.50	6642.55	6642.34	44.21	6642.39	44.43	6642.17
TMW34	6687.29	6641.37	6641.25	6641.37	6641.30	6641.34	6641.15	46.10	6641.19	46.14	6641.15
TMW35	6686.52	6642.44	6642.33	6642.39	6642.27	6642.32	6642.13	44.36	6642.16	44.52	6642.00
TMW39S	6708.61	6672.91	6672.73	6672.66	6672.54	6672.38	6672.24	36.40	6672.21	36.51	6672.10
TMW40S	6706.40	6646.07	6646.00	6646.02	6645.98	6645.96	6645.90	60.49	6645.91	60.58	6645.82
TMW41	6705.21	6664.22	6664.11	6664.21	6663.93	6663.86	6663.73	41.26	6663.95	41.74	6663.47
TMW43	6698.63	6645.12	6645.04	6645.13	6645.04	6645.05	6645.00	53.59	6645.04	53.79	6644.84
TMW44	6697.31	6644.59	6644.55	6644.69	6644.49	6644.53	6644.45	52.66	6644.65	53.03	6644.28
TMW45	6689.00	6641.57	6641.51	6641.69	6641.61	6641.77	6641.70	47.05	6641.95	47.30	6641.70
TMW46	6680.98	6636.81	6636.57	6636.88	6636.93	6636.88	6636.59	44.18	6636.80	44.24	6636.74
TMW47	6701.88	6655.48	6655.47	6655.55	6655.56	6655.29	6655.27	46.57	6655.31	46.69	6655.19
PZ01	6677.29	6650.17	6650.39	6650.65	6650.49	6650.49	6650.37	26.90	6650.39	27.24	6650.05
PZ02	6674.95	6651.73	6651.69	6651.64	6651.70	6651.67	6651.29	23.57	6651.38	23.70	6651.25
PZ03	6679.44	6653.02	6653.16	6653.24	6653.24	6653.31	6652.96	26.61	6652.83	26.44	6653.00
PZ04	6676.68	6648.28	6648.66	6648.53	6648.44	6648.42	6648.23	28.40	6648.28	28.70	6647.98
PZ05	6674.15	6653.10	6653.54	6653.73	6653.88	6653.39	6652.74	20.71	6653.44	20.70	6653.45
PZ06	6676.04	6655.34	6656.88	6657.28	6657.58	6656.02	6655.64	19.16	6656.88	18.95	6657.09
PZ07	6684.53	6668.37	6672.51	6669.53	6670.39	6669.08	6668.23	15.83	6668.70	15.71	6668.82
PZ08	6686.81	6666.95	6671.71	6668.56	6669.67	6667.93	6667.19	19.09	6667.72	19.06	6667.75
PZ09	6653.61	6637.24	6638.27	6638.22	6638.69	6637.99	6637.39	15.39	6638.22	15.35	6638.26
PZ10	6657.27	6637.04	6638.08	6638.06	6638.51	6637.78	6637.24	19.18	6638.09	19.14	6638.13

Notes:

Elevations are recorded in U.S. feet above North American Vertical Datum of 1988 (NAVD88).

BTOC = below top of casing

DTW = depth to water

TOC = top of casing

TABLE 4-2

Northern Area Groundwater Elevations (Wells Screened in Bedrock)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	TOC Elevation (feet)	15/16-July-14	20-Oct-14	20/21-Jan-15	30-Mar-15	21/22-July-15	26-Oct-15	14/15-Jan-16		4-Apr-16	
		Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	DTW (feet BTOC)	Elevation (feet)	DTW (feet BTOC)	Elevation (feet)
TMW02	6705.35	6649.67	6649.59	6649.66	6649.53	6649.50	6649.45	55.82	6649.53	56.04	6649.31
TMW14A	6723.54	6658.67	6658.60	6658.47	6658.54	6658.40	6658.37	65.19	6658.35	65.20	6658.34
TMW16	6714.15	6657.57	6657.49	6657.47	6657.41	6657.38	6657.12	57.04	6657.11	57.21	6656.94
TMW17	6719.89	6656.67	6656.56	6656.57	6656.46	6656.24	6656.19	63.69	6656.20	63.90	6655.99
TMW18	6713.49	6658.05	6657.96	6657.93	6657.94	6657.69	6657.64	55.87	6657.62	56.02	6657.47
TMW19	6700.52	6657.36	6657.32	6657.38	6657.32	6657.27	6656.98	43.46	6657.06	43.73	6656.79
TMW30	6714.59	6673.99	6674.04	6674.03	6674.64	6674.21	6674.21	40.43	6674.16	40.58	6674.01
TMW31D	6710.44	6672.30	6672.03	6671.99	6671.79	6671.63	6671.39	39.06	6671.38	39.37	6671.07
TMW32	6709.31	6669.02	6668.82	6668.78	6668.62	6668.39	6668.23	41.13	6668.18	41.35	6667.96
TMW36	6699.04	6670.86	6670.78	6670.64	6670.55	6670.34	6670.06	29.04	6670.00	29.26	6669.78
TMW37	6713.09	6666.68	6666.58	6666.48	6666.34	6666.44	6666.27	46.80	6666.29	47.12	6665.97
TMW38	6706.79	6659.35	6659.28	6659.33	6659.24	6658.93	6658.88	47.90	6658.89	48.12	6658.67
TMW39D	6708.61	6673.21	6672.93	6672.89	6672.69	6672.55	6672.30	36.31	6672.30	36.62	6671.99
TMW40D	6706.15	6673.06	6672.80	6672.76	6672.57	6672.39	6672.14	34.02	6672.13	34.31	6671.84
TMW48	6709.84	6673.23	6672.95	6672.87	6672.74	6672.56	6672.31	37.57	6672.27	37.81	6672.03
TMW49	6714.71	6670.02	6669.74	6669.66	6669.49	6669.37	6669.13	45.63	6669.08	45.93	6668.78

Notes:

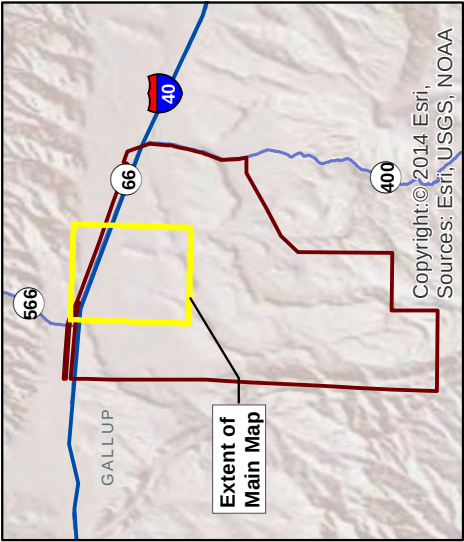
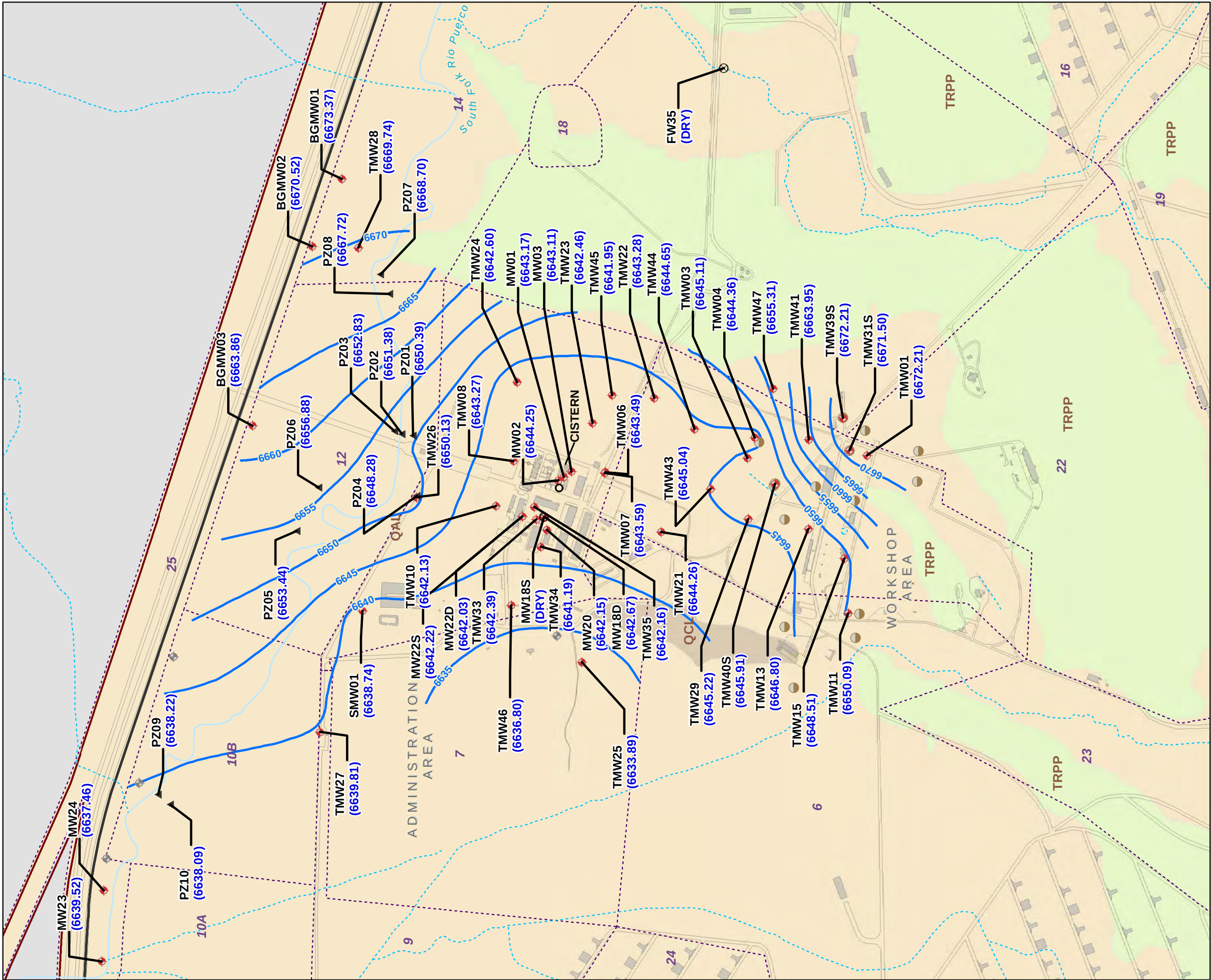
Elevations are recorded in U.S. feet above North American Vertical Datum of 1988 (NAVD88).

BTOC = below top of casing

DTW = depth to water

TOC = top of casing

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Legend

- Alluvial Monitoring Well
- Bedrock Monitoring Well
- Piezometer
- Dry Well
- Abandoned Well
- Water Supply Well 69
- Well Label = Well ID
- Well Label = Well ID (Groundwater Elevation in feet)
- Groundwater Contours, January 2016
- Building
- Property Transfer Parcel
- Fort Wingate Installation Boundary

TMW11 (6651.15)
Well Label = Well ID (Groundwater Elevation in feet)

Groundwater Contours, January 2016

Surface Geology

- QAL - Quaternary Alluvial Deposits
- QCL - Quaternary Colluvial and Gravel Deposits
- TRPP - Petrified Forest Formation, Painted Desert Member

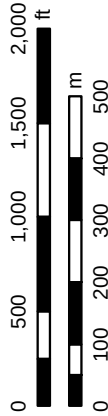
State Plane Coordinate System, New Mexico West,
North American Datum 1983, US Feet.
North American Vertical Datum 1988, US Feet.

Data Sources:
Roads, Railroad: Tele Atlas GDT-Dynamap, 2008;
Populated Places: ESRI, 2005;
Fort Wingate Environmental Restoration Detail: USACE.

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Sources: Esri, USGS, NOAA

FIGURE 4-1
January 2016 Northern Area Alluvial
Groundwater Contour Map

Groundwater Periodic Monitoring
Report for January to June 2016
Fort Wingate Depot Activity,
McKinley County, New Mexico



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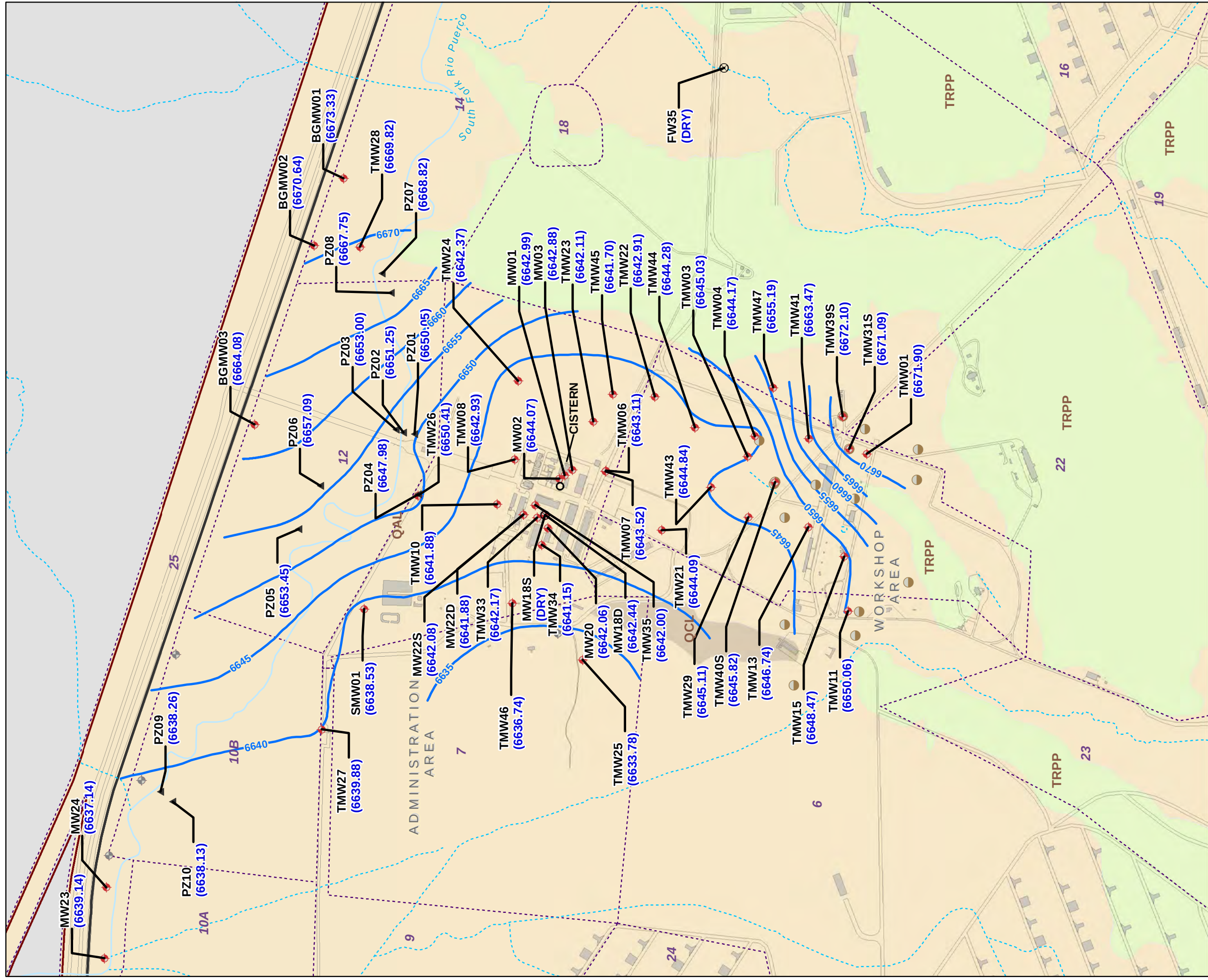
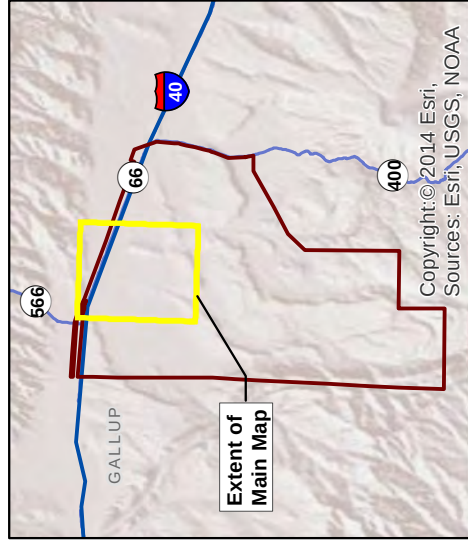


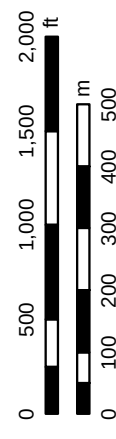
FIGURE 4-2
April 2016 Northern Area Alluvial
Groundwater Contour Map
Groundwater Periodic Monitoring
Report for January to June 2016
Fort Wingate Depot Activity,
McKinley County, New Mexico



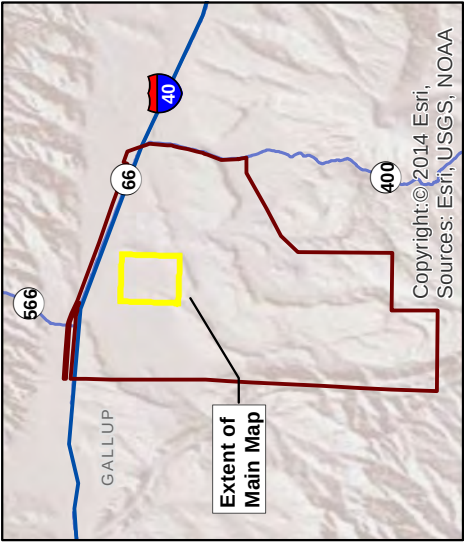
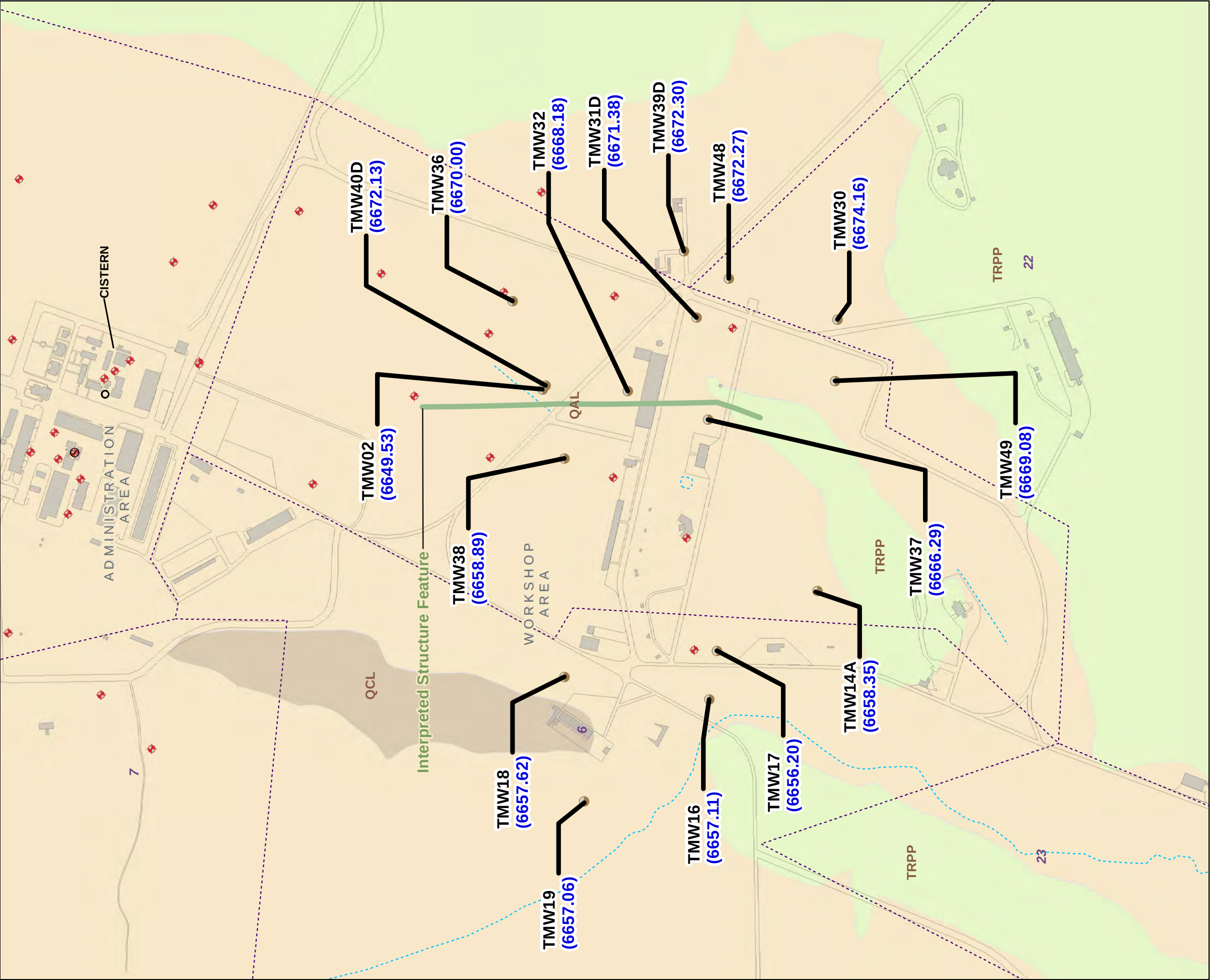
State Plane Coordinate System, New Mexico West,
North American Datum 1983, US Feet.
North American Vertical Datum 1988, US Feet.

Data Sources:
Roads, Railroad: Tele Atlas GDT-Dynamap, 2008;
Populated Places: ESRI 2005;
Fort Wingate Environmental Restoration Detail: USACE.

Q:\AV PROJ\FTWINGATE\662230FORTWINGATE\TETO4\MAPFILES\MAY 2016\FIGURE4-2 FINALREV1.MXD BMO\AYAD 9/19/2017 11:31:11 AM



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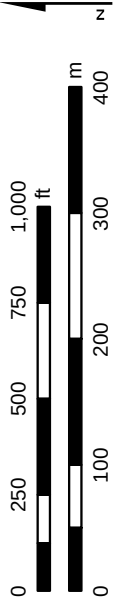


Legend

- Alluvial Monitoring Well
- Bedrock Monitoring Well
- Dry Well
- Water Supply Well 69
- Well Label = Well ID (6650.94) (Groundwater Elevation in feet)
- Building
- Property Transfer Parcel
- Fort Wingate Installation Boundary
- Surface Geology**
- QAL - Quaternary Alluvial Deposits
- QCL - Quaternary Colluvial and Gravel Deposits
- TRPP - Petrified Forest Formation, Painted Desert Member
- Arroyo
- Road

FIGURE 4-3
January 2016 Northern Area Bedrock
Groundwater Elevation Map
Groundwater Periodic Monitoring
Report for January to June 2016
Fort Wingate Depot Activity,
McKinley County, New Mexico

Note: Groundwater contours for the bedrock zone were removed per NMED request in disapproval letter dated August 7, 2017

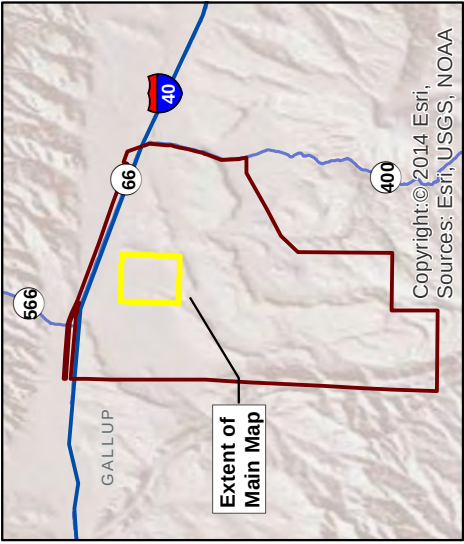
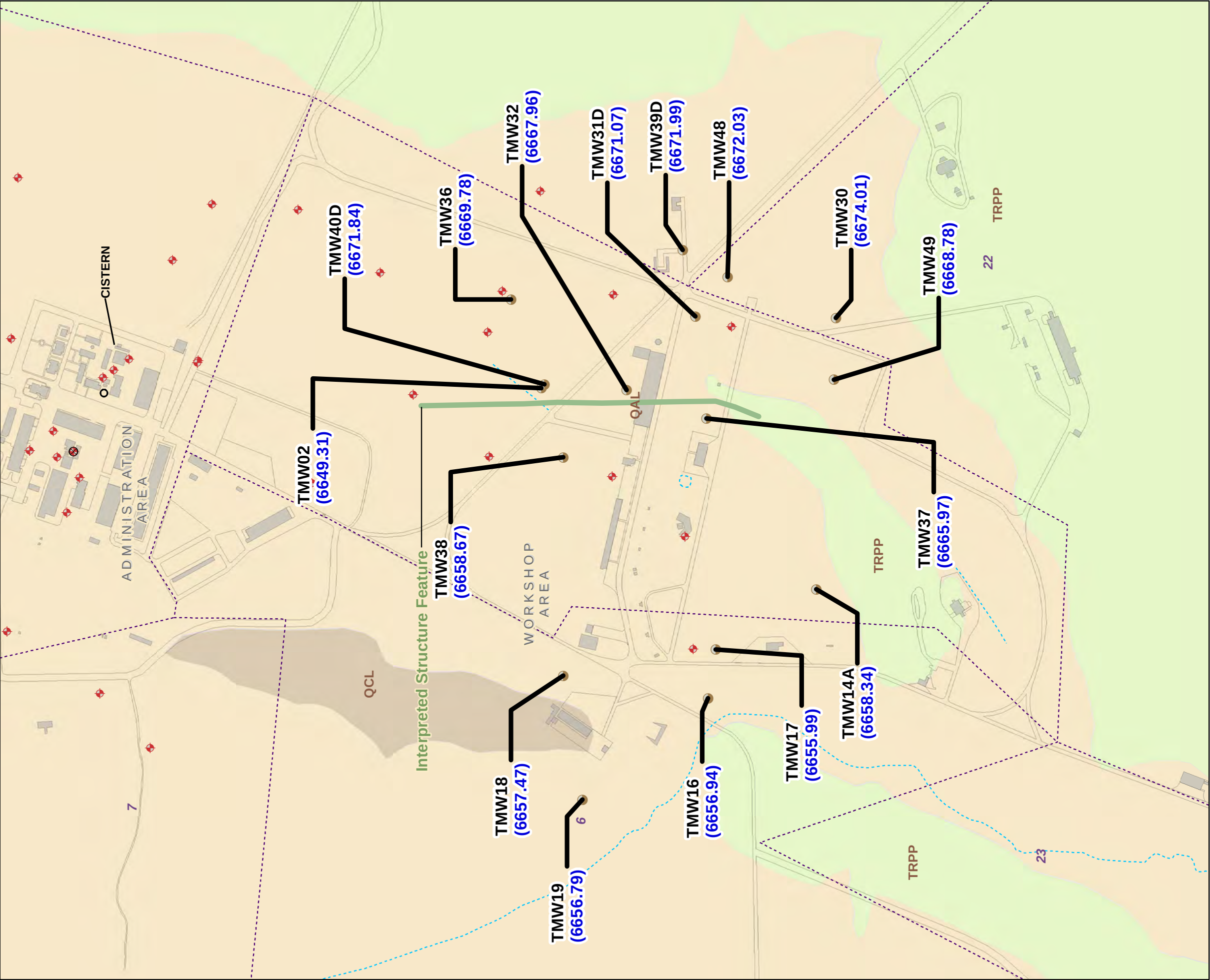


State Plane Coordinate System, New Mexico West,
North American Datum 1983, US Feet.
North American Vertical Datum 1988, US Feet.

Data Sources:
Roads, Railroad: Tele Atlas GDT-Dynamap, 2008;
Populated Places: ESRI 2005;
Fort Wingate Environmental Restoration Detail: USACE.

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Sources: Esri, USGS, NOAA

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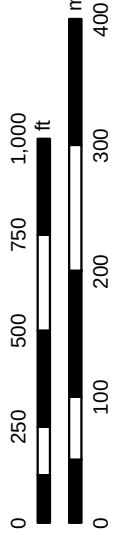


Legend

- Alluvial Monitoring Well
- Bedrock Monitoring Well
- Dry Well
- Water Supply Well 69
- Well Label = Well ID (Groundwater Elevation in feet)
- Building
- Property Transfer Parcel 10A
- Fort Wingate Installation Boundary
- Surface Geology
- QAL - Quaternary Alluvial
- QCL - Quaternary Colluvial and Gravel Deposits
- TRPP - Petified Forest Formation, Painted Desert
- Arroyo
- Road

FIGURE 4-4
April 2016 Northern Area Bedrock
Groundwater Elevation Map
Groundwater Periodic Monitoring
Report for January to June 2016
Fort Wingate Depot Activity,
McKinley County, New Mexico

Note: Groundwater contours for the bedrock zone were removed per NMED request in disapproval letter dated August 7, 2017



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5.0 Analytical Results

The groundwater quality parameters and laboratory analytical results for the Spring 2016 groundwater sampling event are presented in Tables 5-1 through 5-9. Figures 5-1 through 5-6 are maps for the various groundwater contaminants identified at FWDA. The laboratory data were reviewed and determined to be valid and suitable for the project objectives. The Data Quality Evaluation Report is provided in Appendix C. The historical groundwater monitoring data are provided in Appendix D.

5.1 Northern Area Analytical Results

5.1.1 Water Quality Parameters

The water quality parameters collected in the field provide useful data for assessing general water quality and evaluating contaminant fate and transport. The stable parameter readings and drawdown measurements collected during well purging activities are presented in Table 5-1. Some groundwater parameter measurements in the data set are skewed (biased high) due to well design and limiting aquifer conditions as well as differing sample collection methods. Therefore, the median value is presented for each parameter for discussion purposes.

The specific conductance of groundwater is considered a proxy for total dissolved solids (TDS) concentration. For most groundwater, multiplying the specific conductance value in microsiemens per centimeter ($\mu\text{S}/\text{cm}$) by a factor of 0.55 to 0.75 yields an approximate TDS concentration in milligrams per liter (mg/L) (Hem, 1989). Groundwater-specific conductance values ranged from 1.11 to 17.6 millisiemens per centimeter (mS/cm). Median values for groundwater from the Northern Area monitoring wells were 3.64 and 2.57 mS/cm in the alluvial and bedrock units, respectively. When converted to TDS concentrations using a conversion factor of 0.65, the median values for groundwater in the alluvial and bedrock units are 2,400 and 1,700 mg/L, respectively.

Groundwater pH measurements ranged from 6.51 to 10.21, with two data points above 9.0 in water from the Northern Area alluvial monitoring wells. Median pH values were 7.53 and 8.15 in the Northern Area alluvial and bedrock groundwater units, respectively.

DO is a measure of aerobic and anaerobic conditions in the water-bearing units. DO values ranged from 0.0 to 8.40 mg/L, with median values of 0.55 and 0.0 mg/L for the alluvial and bedrock groundwater units, respectively. Low median values indicate that anaerobic conditions (<1 mg/L) are likely present in some areas of FWDA. The DO measurements for samples collected using bailer techniques are considered to be somewhat elevated due to the introduction of a bailer into the water column.

The oxidation state for groundwater was measured as the ORP and subsequently calculated as the redox potential (Eh). These values are a measure of electrical potential in the aquifer that can be used to determine the stability of contaminants in groundwater. The Eh values were calculated from the instrument-specific ORP readings using a formula that accounts for the instrument calibration standard and location-specific water temperature (Horiba Instruments, Inc., 2014; Matsushita et al., 1974). The formula used for the calculation and the Eh values are presented in Table 5-1.

The Eh values ranged from -33 to 437 millivolts (mV) across the monitoring area. Median values of Eh were 236 mV in water from alluvial aquifer wells and 35 mV in water from bedrock wells, respectively.

5.1.2 Nitrate and Nitrite

Nitrate and nitrite were released at FWDA due to historical activities relating to munitions storage and disposal. Nitrate is also a naturally occurring compound commonly detected in natural surface water and groundwater systems. Nitrate and nitrite were analyzed by EPA Method 9056 and reported as nitrogen mass concentrations, nitrate-nitrogen, and nitrite-nitrogen. A summary of the nitrate and nitrite analytical results is presented in Table 5-2.

5.0 Analytical Results

Nitrate was detected in samples from 34 alluvial monitoring wells in the Northern Area. Concentrations of nitrate ranged from 0.065 J to 130 J mg/L, and exceeded the EPA MCL of 10 mg/L in samples from 13 alluvial monitoring wells in the Northern Area. Nitrite was detected in exceedance the EPA MCL of 1.0 mg/L in one sample from alluvial monitoring well MW20, in the Northern Area, at a concentration of 2.4 J mg/L. The highest nitrate concentrations in alluvial groundwater were found in the Workshop Area immediately downgradient of the TNT Leaching Beds (monitoring wells TMW40S and TMW03). Groundwater nitrate concentrations were also detected above the MCLs in multiple samples collected from wells in the Administration Area. The extent of nitrate contamination downgradient (to the west) of the Administration Area has not been defined. In addition, elevated nitrate concentrations are detected in samples from background alluvial monitoring well BGMW02. Well BGMW02 is located on the FWDA boundary and upgradient of any SWMUs or AOCs.

Nitrate was detected in samples from eight bedrock monitoring wells in the Northern Area. Groundwater nitrate concentrations in samples from bedrock monitoring wells ranged from 0.29 J to 92 J mg/L and exceeded the EPA MCL in samples from four wells. Nitrite was not detected at concentrations exceeding the MCL in the bedrock monitoring wells during this sampling event. The highest groundwater nitrate concentrations in the bedrock groundwater unit were found in the Workshop Area (samples from monitoring well TMW02) immediately downgradient of the TNT Leaching Beds (SWMU 1). However, samples from three monitoring wells upgradient of the TNT Leaching Beds also had nitrate concentrations that exceeded the EPA MCL. Figure 5-2 shows the groundwater nitrate and nitrite concentration data for the bedrock monitoring wells in the Northern Area.

5.1.3 Explosive Compounds

Explosive compounds were released into the environment at FWDA due to historical munitions storage, maintenance, and disposal activities. Groundwater samples were analyzed for explosives using EPA Method SW8330B. A summary of the explosive analytical results is presented in Table 5-3. To date, no groundwater regulatory cleanup standards have been established for explosive compounds at FWDA. The EPA Region 6 RSLs are presented in Table 5-3 as reference screening criteria.

The following explosive compounds were detected in groundwater samples from alluvial and bedrock monitoring wells collected during the Spring 2016 groundwater sampling event (the maximum concentrations are shown in parentheses):

- o 1,3-Dinitrobenzene (0.40 J µg/L at bedrock monitoring well TMW02)
- o 2,4,6-Trinitrotoluene (0.40 J µg/L at alluvial monitoring well TMW40S)
- o 2,4-Dinitrotoluene (0.24 J µg/L at alluvial monitoring well TMW03)
- o 2-Amino-4,6-dinitrotoluene (2.6 µg/L at alluvial monitoring well TMW04)
- o 4-Amino-2,6-dinitrotoluene (1.5 J µg/L at alluvial monitoring well TMW04)
- o Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) (980 µg/L at alluvial monitoring well TMW40S)
- o Methyl-2,4,6-trinitrophenylnitramine (tetryl) (0.35 J µg/L at alluvial monitoring well TMW44)
- o Nitrobenzene (1.8 J µg/L at alluvial monitoring well TMW23)
- o Octahydro-1.3.5.7-tetranitro-1.3.5.7-tetrazocine (HMX) (21 J µg/L at alluvial monitoring well TMW40S)

Explosive compounds nitrobenzene and RDX were detected above the screening levels in groundwater samples from the Spring 2016 sampling event. RDX is a recognized groundwater explosive compound of interest. The compound RDX was detected at concentrations several orders of magnitude greater than the screening level of 7.0 µg/L in two alluvial monitoring wells downgradient of the TNT Leaching Beds (SWMU 1). During this monitoring event, concentrations of RDX in monitoring wells TMW03 and TMW40S were 480 and 980 µg/L, respectively. RDX was detected above the screening level, but at a lower concentrations in alluvial monitoring well TMW23 (84 J µg/L). The RDX plume is well-defined in the alluvial aquifer and is shown with other explosives detections on Figures 5-3 and 5-4 for the alluvial and bedrock groundwater aquifers, respectively.

Other explosives analytes are occasionally detected in both the alluvial and bedrock aquifers. Detections occur most frequently and at higher concentrations in the alluvial aquifer downgradient of the TNT Leaching Beds (SWMU 1). During this monitoring event, nitrobenzene was detected above the screening level of 1.4 µg/L in one sample from alluvial monitoring well TMW23 at a concentration of 1.8 J µg/L. This nitrobenzene detection lies within the RDX plume.

5.1.4 Perchlorate

Groundwater samples were analyzed for perchlorate by EPA Method 6860. A summary of analytical results is presented in Table 5-4. Groundwater perchlorate-concentration data for the Northern Area are shown on Figures 5-3 and 5-4. The regulatory screening level for perchlorate is 14.0 µg/L, as defined in the FWDA RCRA Permit. The highest perchlorate concentrations were found in groundwater samples collected from the bedrock monitoring wells in the Workshop Area. The extent of perchlorate groundwater contamination has not been completely defined to date.

Perchlorate was detected in groundwater samples from 23 alluvial monitoring wells in the Northern Area, with concentrations ranging from 0.010 J to 640 µg/L. Perchlorate was detected in groundwater samples from eight bedrock wells, with concentrations ranging from 3.0 J to 1,100 µg/L. Overall, the regulatory screening level was exceeded in groundwater samples collected from three alluvial and six bedrock monitoring wells.

The higher perchlorate concentrations detected in groundwater samples collected from bedrock monitoring wells suggest that the source area of perchlorate contamination is located upgradient in a recharge area for the bedrock groundwater unit. Based on site history and analytical results from previous investigations, the source area for perchlorate contamination is believed to be SWMU 27, Building 528 Complex (USACE, 2011). The perchlorate contamination identified in the alluvial water-bearing unit is collocated with the bedrock groundwater plume and is believed to result from a common source.

5.1.5 Volatile Organic Compounds

Groundwater contamination from volatile organic compounds (VOCs) at concentrations above screening levels is limited to a small number of shallow alluvial monitoring wells in the Administration Area. The detected VOCs are primarily associated with chlorinated solvents, petroleum fuels, and their degradation products. Groundwater samples were analyzed for VOCs using EPA Method SW8260B. A summary of the VOC analytical results is presented in Table 5-5. Nine VOCs were detected in one or more groundwater samples collected during the Spring 2016 groundwater sampling event. Figures 5-5 and 5-6 show the VOC data for samples collected in the Northern Area alluvial wells and bedrock wells, respectively.

The following VOCs were detected in samples collected during the Spring 2016 groundwater sampling event in the Northern Area (the maximum detected concentrations are shown in parentheses):

- o 1,1,1-Trichloroethane (3.5 µg/L at alluvial monitoring well MW22S)
- o 1,1-Dichloroethane (0.49 J µg/L at alluvial monitoring well MW22S)
- o 1,2,3-Trichlorobenzene (0.24 J µg/L at alluvial monitoring well TMW35)
- o 1,2-Dichloroethane (97 J µg/L at alluvial monitoring well MW18D)
- o Acetone (4.5 J µg/L at alluvial monitoring well TMW34)
- o Carbon disulfide (1.3 J µg/L at bedrock monitoring well TMW38)
- o Chloroform (0.40 J µg/L at alluvial monitoring well TMW40S)
- o Chloromethane (0.36 J µg/L at bedrock monitoring well TMW17)
- o Methyl tert-butyl ether (0.29 J µg/L at alluvial monitoring well MW01)

5.0 Analytical Results

The only VOC detected in groundwater samples at concentrations above regulatory screening levels was the gasoline additive and chlorinated solvent 1,2-dichloroethane. Groundwater samples collected from two alluvial monitoring wells in the vicinity of a former fueling facility had concentrations above the EPA MCL of 5.0 µg/L. Samples collected from wells MW18D and TMW33 had 1,2-dichloroethane concentrations of 97 J and 38 µg/L, respectively. No other VOCs were detected in groundwater samples above screening levels.

Overall, VOCs were detected in samples from 11 alluvial wells and three bedrock wells in the Northern Area. The majority of VOC detections were sporadic and at concentrations below regulatory screening levels.

5.1.6 Other Organic Compounds

Detections of organic compounds other than VOCs in groundwater samples from FWDA are generally sporadic and at concentrations below screening levels. A summary of the detected organic compounds other than VOCs are presented in Tables 5-6 and 5-7. Petroleum hydrocarbons were detected in the diesel and gasoline range, as analyzed using EPA Method SW8015C, and semivolatile organic compounds (SVOCs) were analyzed using EPA Method SW8270D. One pesticide compound, as analyzed using EPA Method SW8081A, was detected in one groundwater sample.

Petroleum hydrocarbons and SVOCs detected in more than one sample are as follows (the maximum detected concentrations are shown in parentheses):

- o Diesel range organics (DRO) (48 J µg/L at alluvial monitoring well MW20)
- o Gasoline range organics (69 J µg/L at alluvial monitoring well MW18D)
- o 2,4-Dinitrophenol (48 J µg/L at alluvial monitoring well TMW03)
- o Benzoic acid (19 J µg/L at alluvial monitoring well SMW01)
- o Bis(2-ethylhexyl)phthalate (9.2 J µg/L at bedrock monitoring well TMW19)
- o Diethyl phthalate (0.46 J µg/L at alluvial monitoring well TMW35)
- o Isophorone (0.38 J µg/L at alluvial monitoring well TMW35)
- o Phenanthrene (0.57 J µg/L at alluvial monitoring well TMW35)

Petroleum hydrocarbons were detected in several samples collected from wells in the Administration Area of the Northern Area. Overall, petroleum hydrocarbons were detected in samples from four alluvial monitoring wells, with no detections in bedrock monitoring wells. The highest concentrations occurred in samples from shallow wells adjacent to the former fueling facility (69 J µg/L as GRO in monitoring well TMW18D). No screening levels were identified for petroleum hydrocarbons.

Detections of SVOCs are associated with historical releases of explosives compounds and with sampling and laboratory contaminants. The SVOC 2,4-dinitrophenol is possibly associated with explosives breakdown or combustion products that were detected at concentrations above RSLs during this monitoring period. The SVOC bis(2-ethylhexyl)phthalate was detected at concentrations above the EPA MCL of 6.0 µg/L in one sample from bedrock monitoring well TMW19 at a concentration of 9.2 J µg/L. The common plastic additive bis(2-ethylhexyl)phthalate may be present in a variety of laboratory and sampling equipment (including sample tubing, pump, replaced pump tube bundles, bailer, and laboratory equipment). The pump at TMW18 was removed and sent to the manufacturer for maintenance in April 2014, which also replaced the water discharge tubing. The refurbished pump was reinstalled in the well for the April 2014 monitoring event. The elevated concentrations of Bis(2-ethylhexyl)phthalate in the April 2014 and later groundwater samples from TMW18 are believed to result from the newly installed discharge tubing. Concentrations since then have reduced and are now below the EPA MCL of 6.0 µg/L at this location. The SVOCs 2,4-dinitrophenol, benzoic acid, and bis(2-ethylhexyl)phthalate were detected at multiple wells below screening levels. Detections of other SVOCs were sporadic (with each compound occurring in two or fewer samples).

Results from one sample from alluvial monitoring well TMW35 were anomalous with multiple SVOC detections at concentrations near the detection limits, and one detection of n-Nitroso-di-n-propylamine above the EPA RSL of 0.11 µg/L. Twenty-one SVOCs were detected in the sample from TMW35, 18 of which were not detected from any other samples from this monitoring event. These TMW35 results were incongruous with known groundwater impacts, but could not be clearly attributed to laboratory or field sampling contamination. The TWM35 results are not fully described above, but are presented in Table 5-6. No other SVOCs were detected at concentrations above screening levels.

One pesticide compound was detected in one sample from this monitoring period. The pesticide compound, delta-hexachlorocyclohexane (delta-bhc) was detected at a concentration of 0.018 J µg/L from alluvial monitoring well TMW38. This detection is not attributed to known groundwater impacts and is below the screening level of 0.25 µg/L. Previous pesticide detections are sporadic (Table 5-7). A total of three pesticide detections have been reported from all samples collected during the previous eight monitoring events. All detections have been at concentrations less than 0.1 µg/L and did not exceed screening levels, where established.

5.1.7 Metals

Samples were collected and analyzed as total and dissolved concentrations at FWDA. Groundwater samples were analyzed for metals by EPA Methods SW6010C, SW6020A, and SW7470A. Total metals analysis has been shown in studies to be affected by sediment and the method of well purging, and does not produce representative groundwater metals concentrations at many sites. A summary of detections for total metals is presented in Table 5-9, but the results are not discussed in this GPMR. A summary of detections for dissolved metals is presented in Table 5-8.

Dissolved aluminum, arsenic, iron, lead, manganese, and selenium were detected in multiple groundwater samples above regulatory screening levels. Because background groundwater concentrations have not yet been accepted by the regulators for FWDA, it cannot clearly be demonstrated whether the detected concentrations are a result of natural conditions or anthropogenic sources of contamination. Therefore, no contaminant plume maps were created for the metals data. A background evaluation of FWDA groundwater was submitted to the NMED in September 2014, and responses to NMED comments are currently in progress.

5.2 OB/OD Area Analytical Results

No monitoring was performed in the OB/OD Area during this period. No historical analytical results are available for monitoring events after April 2013.

5.3 Field Variances from the Work Plan

One field variance to the Work Plan occurred during the monitoring period. Alluvial monitoring well FW35 was dry and could not be sampled during this monitoring event. This well has been dry for the past two sampling events. Water levels will be monitored at this sample location to determine whether sampling can resume or whether the well should be plugged and abandoned.

A variance from the GWMP occurred during the laboratory analysis of samples for VOCs. The laboratory analyzed all samples for VOCs using EPA Method SW8260B rather than the newer EPA Method SW8260C. There are a number of differences between SW8260B and SW8260C; however, the overall impact from these differences to data quality is considered negligible. In part, the differences are negligible because the updates to remove dated practices would be superseded by the more conservative requirements of the QSM (DoD, 2013).

Overall, no changes to the EPA Method are of significant concern to data quality, especially when considering the requirement to comply with the DoD QSM. A request has been submitted to the laboratory to obtain DoD certification for Method SW8260C to enable compliance with the work plan.

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5.0 Analytical Results

TABLE 5-1

Spring 2016 Stable Groundwater Parameters (Page 1 of 3)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Location	Groundwater Zone	Screen Interval (feet bgs)	Date	Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Eh (mV)	pH (pH Units)	Temperature (°C)	Turbidity (NTU)	Drawdown (feet)
BGMW01	North Alluvial	12.5 - 32.5	04/15/16	3.39	0.00	-43	171	8.07	13.29	0.40	0.02
BGMW02	North Alluvial	13.5 - 33.5	04/14/16	5.06	0.00	106 ^a	319	7.42	14.43	0.80	0.15
BGMW03	North Alluvial	8.5 - 28.5	04/06/16	3.35	0.00	-248	-33	7.70	12.15	18.8	N/A
FW31	North Alluvial	10.0 - 50.0	04/05/16	2.24	5.79	129	344	7.82	12.24	8.3	N/A
FW35	North Alluvial	10.0 - 30.0									
Well was dry and was not purged and sampled											
MW01	North Alluvial	33.6 - 53.6	04/05/16	3.64	2.30	23.5	236	7.52	15.30	145	N/A
MW02	North Alluvial	37.0 - 47.0	04/05/16	2.28	3.85	151	363	7.29	15.75	197	N/A
MW03	North Alluvial	43.0 - 53.0	04/12/16	4.67	0.00	-37	176	7.86	14.65	0.0	0.25
MW18D	North Alluvial	47.0 - 57.0	04/12/16	8.71	2.33	-86	128	7.35	14.11	>800	N/A
MW20	North Alluvial	47.0 - 57.0	04/11/16	16.8	0.00	137 ^a	351	6.51	13.82	0.0	0.29
MW22D	North Alluvial	47.0 - 57.0	04/11/16	4.99	0.20	214 ^a	428	7.03	13.98	0.2	0.11
MW22S	North Alluvial	31.0 - 41.0	04/06/16	6.33	5.31	223	437	7.04	13.67	122.0	N/A
MW23	North Alluvial	63.5 - 133.5	04/07/16	1.81	0.90	-97	118	7.56	12.73	52.2	N/A
MW24	North Alluvial	16.0 - 66.0	04/06/16	1.11	0.00	-166	49	7.53	12.56	3.6	N/A
SMW01	North Alluvial	29.9 - 49.9	04/08/16	3.94	0.00	-97	118	8.07	12.31	0.0	0.53
TMW01	North Alluvial	44.0 - 59.0	04/08/16	2.90	0.00	84	300	7.17	11.14	0.0	0.10
TMW03	North Alluvial	49.8 - 69.8	04/08/16	4.20	0.00	83	299	7.50	11.28	0.0	0.03
TMW04	North Alluvial	50.0 - 70.0	04/13/16	3.83	0.99	76	288	8.15	16.70	0.0	0.11
TMW06	North Alluvial	45.0 - 55.0	04/12/16	3.53	0.83	86	298	7.60	16.40	0.0	0.06
TMW07	North Alluvial	65.0 - 75.0	04/05/16	4.72	5.64	-180	33	7.91	14.98	27.2	N/A
TMW08	North Alluvial	30.0 - 60.0	04/12/16	17.6	0.08	33	248	7.44	12.02	0.0	0.05
TMW10	North Alluvial	28.0 - 58.0	04/12/16	7.65	0.57	-63	150	7.90	14.37	0.0	0.14
TMW11	North Alluvial	55.0 - 80.0	04/11/16	2.47	0.00	-124	91	7.50	12.18	1.3	0.43
TMW13	North Alluvial	60.7 - 70.7	04/12/16	2.31	0.00	-139	75	7.45	12.88	0.0	0.14
TMW15	North Alluvial	56.0 - 71.0	04/13/16	2.31	0.55	-45	169	7.66	12.99	0.0	0.09
TMW21	North Alluvial	48.0 - 58.0	04/11/16	2.70	0.56	171	387	6.92	10.85	708	N/A
TMW22	North Alluvial	52.0 - 62.0	04/05/16	3.39	5.33	97	310	7.91	14.39	61.1	N/A
TMW23	North Alluvial	46.0 - 56.0	04/05/16	3.06	1.54	0	214	8.05	14.10	14.4	N/A
TMW24	North Alluvial	44.0 - 54.0	04/15/16	4.25	0.00	-139	76	7.45	12.81	0.0	0.06
TMW25	North Alluvial	42.5 - 52.5	04/13/16	3.70	0.00	-131	82	7.34	14.80	0.0	N/A
TMW26	North Alluvial	45.0 - 55.0	04/08/16	3.54	0.0	-14	201	7.82	12.13	3.3	0.11
TMW27	North Alluvial	60.0 - 70.0	04/08/16	1.46	0.00	-161	53	7.89	13.33	0.0	0.78
TMW28	North Alluvial	37.0 - 47.0	04/11/16	1.93	0.00	-155	60	7.34	11.45	0.0	0.88
TMW29	North Alluvial	49.0 - 59.0	04/05/16	2.27	1.39	14.2	228	7.58	14.44	132	N/A

5.0 Analytical Results

TABLE 5-1

Spring 2016 Stable Groundwater Parameters (Page 2 of 3)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Location	Groundwater Zone	Screen Interval (feet bgs)	Date	Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Eh (mV)	pH (pH Units)	Temperature (°C)	Turbidity (NTU)	Drawdown (feet)
TMW31S	North Alluvial	50.0 - 60.0	04/05/16	2.42	1.48	62	276	7.43	13.51	28.1	N/A
TMW33	North Alluvial	37.0 - 57.0	04/06/16	9.89	8.37	101	315	7.21	14.08	25.8	N/A
TMW34	North Alluvial	37.0 - 57.0	04/12/16	5.93	0.00	104	317	7.04	15.10	0.0	0.11
TMW35	North Alluvial	35.0 - 55.0	04/11/16	5.25	0.01	148 ^a	364	6.84	10.86	0.4	0.11
TMW39S	North Alluvial	32.5 - 52.5	04/05/16	3.92	1.55	74	287	7.73	14.63	28.8	N/A
TMW40S	North Alluvial	50.0 - 60.0	04/06/16	4.17	1.35	14.1	227	7.65	15.07	40.3	N/A
TMW41	North Alluvial	55.5 - 65.5	04/05/16	3.82	4.95	68	282	8.04	13.01	20.3	N/A
TMW43	North Alluvial	58.0 - 78.0	04/13/16	2.42	0.03	124	340	7.53	10.49	0.0	0.03
TMW44	North Alluvial	43.5 - 63.5	04/05/16	3.11	5.08	77	291	7.94	14.16	12.5	N/A
TMW45	North Alluvial	38.5 - 58.5	04/14/16	3.82	0.00	12	225	7.42	15.11	0.7	0.00
TMW46	North Alluvial	38.5 - 58.5	04/06/16	5.25	8.40	57	272	7.46	12.84	88.0	N/A
TMW47	North Alluvial	82.5 - 102.5	04/14/16	2.29	4.14	-117	94	9.13	17.40	0.0	0.26
TMW02	North Bedrock	67.9 - 81.9	04/13/16	4.58	0.08	72	285	7.90	15.17	0.0	0.64
TMW14A	North Bedrock	94.25 - 109.25	04/14/16	1.83	0.00	-204	8	8.49	16.78	0.0	0.35
TMW16	North Bedrock	123.0 - 138.0	04/04/16	1.66	0.00	-173	42	8.94	12.64	30.7	N/A
TMW17	North Bedrock	112.0 - 127.0	04/15/16	2.29	2.44	-179	36	8.60	11.88	0.0	0.00
TMW18	North Bedrock	150.0 - 160.0	04/04/16	2.43	0.31	-234	-19	10.21	12.61	1.3	N/A
TMW19	North Bedrock	169.0 - 184.0	04/05/16	2.51	0.00	-202	13	8.63	12.37	73.0	N/A
TMW30	North Bedrock	35.0 - 45.0	04/05/16	2.13	5.60	110	324	7.58	12.91	5.1	N/A
TMW31D	North Bedrock	77.0 - 107.0	04/13/16	2.63	0.00	22	237	7.27	11.71	0.0	0.33
TMW32	North Bedrock	117.0 - 137.0	04/13/16	3.31	0.00	-196	17	8.14	15.03	0.0	0.15
TMW36	North Bedrock	132.0 - 152.0	04/05/16	2.41	0.00	-229	-14	8.45	12.50	28.1	N/A
TMW37	North Bedrock	88.0 - 108.0	04/05/16	2.18	0.00	-185	30	8.87	12.46	12.4	N/A
TMW38	North Bedrock	118.9 - 158.9	04/14/16	2.81	0.42	-176	33	8.08	20.94	0.0	0.38
TMW39D	North Bedrock	70.0 - 100.0	04/12/16	3.41	0.00	-192	24	8.16	10.84	0.0	0.49
TMW40D	North Bedrock	135.0 - 155.0	04/12/16	3.15	0.00	-152	63	8.14	11.97	0.0	-0.01
TMW48	North Bedrock	71.0 - 91.0	04/12/16	2.71	0.00	31	245	7.52	13.58	0.0	-0.01
TMW49	North Bedrock	40.0 - 60.0	04/14/16	3.61	1.49	125	340	7.65	12.44	7.1	0.3

TABLE 5-1
Spring 2016 Stable Groundwater Parameters (Page 3 of 3)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Notes:

^a Anomalous field parameter readings occurred at some sample locations during purging but are not expected to affect sampling results. Drawdown is measured as the change in water level from initial measurement to final field reading on the day of well purging.

Eh is calculated from the ORP field reading and the water temperature using manufacturer specifications. The formula for conversion of ORP to Eh is as follows:

$$Eh = ORP_{\text{measured}} + Eh_{\text{reference}} = ORP_{\text{measured}} + 206 - 0.7 * (\text{Temperature} - 25)$$

bgs = below ground surface

°C = degrees Celsius

DO = dissolved oxygen

Eh = redox potential

mg/L = milligram(s) per liter

mS/cm = millisiemen(s) per centimeter

mV = millivolt(s)

N/A = not applicable; drawdown measurements are not applicable for casing volume purging method

NTU = nephelometric turbidity unit

ORP = oxygen-reduction potential

pH = hydrogen (ion) concentration

Sources: Horiba Instruments, 2014 and Matsushita et al., 1974

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TABLE 5-2

Summary of Nitrate-nitrogen and Nitrite-nitrogen Analytical Detections (Page 1 of 6)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity					Nitrate-N (mg/L) CAS 14797-55-8	Nitrite-N (mg/L) CAS 14797-65-0
Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 9056	EPA Method 9056
Regulatory Limits					10 ^a	1 ^b
BGMW01	BGMW01042016	Normal	North Alluvial	4/15/2016	0.10 U	0.10 U
	BGMW01102015	Normal	North Alluvial	11/5/2015	0.20 U	0.20 U
	BGMW01042015	Normal	North Alluvial	4/2/2015	0.10 U	0.10 U
	BGMW01102014	Normal	North Alluvial	10/24/2014	0.10 U	0.10 U
BGMW02	BGMW02042016	Normal	North Alluvial	4/14/2016	13	0.20 U
	BGMW02102015	Normal	North Alluvial	11/5/2015	13	0.20 U
	BGMW02042015	Normal	North Alluvial	4/2/2015	12 J	0.20 U
	BGMW02102014	Normal	North Alluvial	10/24/2014	13	0.20 U
BGMW03	BGMW03042016	Normal	North Alluvial	4/8/2016	0.97 J	0.10 U
	BGMW03102015	Normal	North Alluvial	10/30/2015	3.4	0.25 J
	BGMW03042015	Normal	North Alluvial	4/1/2015	5.0	0.10 U
	BGMW03102014	Normal	North Alluvial	10/22/2014	5.5	0.10 U
FW31	FW31042016	Normal	North Alluvial	4/7/2016	0.065 J	0.10 U
	FW31112015	Normal	North Alluvial	11/2/2015	0.077 J	0.10 U
	FW31042015	Normal	North Alluvial	4/1/2015	0.099 J	0.10 U
	FW31102014	Normal	North Alluvial	10/22/2014	0.060 J	0.10 U
FW35	FW35102015	Normal	North Alluvial	04/2016	Well dry this event	
	FW35102015	Normal	North Alluvial	10/2015	Well dry this event	
	FW35042015	Normal	North Alluvial	4/2/2015	0.099 J	0.10 U
	FW35102014	Normal	North Alluvial	10/24/2014	0.12 J	0.20 U
MW01	MW01042016	Normal	North Alluvial	4/6/2016	7.8	0.20 U
	MW01102015	Normal	North Alluvial	10/28/2015	7.9	0.20 U
	MW01042015	Normal	North Alluvial	4/1/2015	7.8	0.10 U
	MW01102014	Normal	North Alluvial	10/23/2014	7.0	0.10 U
MW02	MW02042016	Normal	North Alluvial	4/6/2016	5.1	0.10 U
	MW02102015	Normal	North Alluvial	10/28/2015	5.5	0.10 U
	MW02042015	Normal	North Alluvial	4/1/2015	4.7	0.10 U
	MW02102014	Normal	North Alluvial	10/24/2014	2.2	0.10 U
MW03	MW03042016	Normal	North Alluvial	4/12/2016	7.0	0.20 U
	MW03102015	Normal	North Alluvial	10/30/2015	7.0	0.20 U
	MW03042015	Normal	North Alluvial	4/3/2015	7.0	0.10 U
	MW03102014	Normal	North Alluvial	10/24/2014	7.7	0.10 U
MW18D	MW18D042016	Normal	North Alluvial	4/12/2016	0.50 U	0.50 U
	MW18D102015	Normal	North Alluvial	11/2/2015	0.50 U	0.50 U
	MW18D042015	Normal	North Alluvial	4/8/2015	0.11 U	0.20 U
	MW18D102014	Normal	North Alluvial	10/31/2014	0.12 J	0.20 U
MW20	MW20042016	Normal	North Alluvial	4/11/2016	6.7	2.4 J
	MW20102015	Normal	North Alluvial	11/2/2015	7.7	2.1 J
	DMW20102015	Duplicate	North Alluvial	11/2/2015	6.6	1.7 J
	MW20042015	Normal	North Alluvial	4/3/2015	6.9	0.50 U
	MW20102014	Normal	North Alluvial	10/28/2014	8.8	0.50 U
	DMW20102014	Duplicate	North Alluvial	10/28/2014	9.2	0.50 U
MW22D	MW22D042016	Normal	North Alluvial	4/11/2016	27	0.20 U
	MW22D102015	Normal	North Alluvial	11/2/2015	25	0.20 U
	MW22D042015	Normal	North Alluvial	4/6/2015	25	0.10 UJ
	MW22D102014	Normal	North Alluvial	10/29/2014	24	0.20 U
	MW22D042014	Normal	North Alluvial	4/14/2014	27 J	0.20 U

5.0 Analytical Results

TABLE 5-2

Summary of Nitrate-nitrogen and Nitrite-nitrogen Analytical Detections (Page 2 of 6)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Nitrate-N (mg/L)CAS 14797-55-8	Nitrite-N (mg/L) CAS 14797-65-0
					EPA Method 9056	EPA Method 9056
Regulatory Limits					10 ^a	1 ^b
MW22S	MW22S042016	Normal	North Alluvial	4/7/2016	17	0.10 U
	MW22S102015	Normal	North Alluvial	10/28/2015	16	0.20 U
	MW22S042015	Normal	North Alluvial	4/1/2015	17 J	0.10 U
	MW22S102014	Normal	North Alluvial	10/22/2014	16	0.10 U
MW23	MW23042016	Normal	North Alluvial	4/7/2016	0.10 U	0.12 J
	DMW23042016	Duplicate	North Alluvial	4/7/2016	0.10 U	0.13 J
	MW23102015	Normal	North Alluvial	11/6/2015	0.10 U	0.10 UJ
	DMW23102015	Duplicate	North Alluvial	11/6/2015	0.10 U	0.053 J
	MW23042015	Normal	North Alluvial	4/7/2015	0.10 U	0.10 U
	DMW23042015	Duplicate	North Alluvial	4/7/2015	0.10 U	0.10 UJ
	MW23102014	Normal	North Alluvial	10/28/2014	0.10 U	0.10 U
	DMW23102014	Duplicate	North Alluvial	10/28/2014	0.10 U	0.10 U
MW24	MW24042016	Normal	North Alluvial	4/6/2016	0.10 U	0.10 U
	DMW24042016	Duplicate	North Alluvial	4/6/2016	0.10 U	0.10 U
	MW24102015	Normal	North Alluvial	11/5/2015	0.10 U	0.10 U
	MW24042015	Normal	North Alluvial	4/6/2015	0.10 U	0.10 UJ
	DMW24042015	Duplicate	North Alluvial	4/6/2015	0.10 U	0.10 UJ
	MW24102014	Normal	North Alluvial	10/27/2014	0.10 U	0.10 U
	DMW24102014	Duplicate	North Alluvial	10/27/2014	0.10 U	0.10 U
SMW01	SMW01042016	Normal	North Alluvial	4/8/2016	0.20 UJ	0.20 U
	SMW011102015	Normal	North Alluvial	11/3/2015	0.20 U	0.20 U
	SMW01042015	Normal	North Alluvial	4/8/2015	0.10 U	0.10 U
	SMW01102014	Normal	North Alluvial	10/27/2014	0.10 U	0.10 U
TMW01	TMW01042016	Normal	North Alluvial	4/8/2016	9.3 J	0.10 U
	TMW01102015	Normal	North Alluvial	11/4/2015	9.3	0.10 U
	TMW01042015	Normal	North Alluvial	4/7/2015	9.2	0.10 U
	TMW01102014	Normal	North Alluvial	10/30/2014	9.3	0.10 U
TMW03	TMW03042016	Normal	North Alluvial	4/8/2016	130 J	0.43 J
	TMW03102015	Normal	North Alluvial	11/4/2015	130	0.24 J
	TMW03042015	Normal	North Alluvial	4/9/2015	130	0.10 U
	TMW03102014	Normal	North Alluvial	10/30/2014	140	0.43 J
TMW04	TMW04042016	Normal	North Alluvial	4/13/2016	52 J	0.20 UJ
	TMW04102015	Normal	North Alluvial	11/4/2015	43	0.20 U
	TMW04042015	Normal	North Alluvial	4/9/2015	43	0.10 U
	TMW04102014	Normal	North Alluvial	10/30/2014	47	0.20 U
TMW06	TMW06042016	Normal	North Alluvial	4/12/2016	13	0.10 U
	TMW06102015	Normal	North Alluvial	11/4/2015	13	0.20 U
	TMW06042015	Normal	North Alluvial	4/9/2015	13	0.10 U
	TMW06102014	Normal	North Alluvial	10/29/2014	15	0.20 U
TMW07	TMW07042016	Normal	North Alluvial	4/8/2016	0.34 J	0.20 U
	TMW07102015	Normal	North Alluvial	10/30/2015	0.097 J	0.20 U
	TMW07042015	Normal	North Alluvial	4/1/2015	0.19 J	0.20 U
	TMW07102014	Normal	North Alluvial	10/23/2014	0.13 J	0.20 U
TMW08	TMW08042016	Normal	North Alluvial	4/12/2016	3.9	0.35 J
	TMW08102015	Normal	North Alluvial	11/5/2015	4.4	0.63 J
	TMW08042015	Normal	North Alluvial	4/8/2015	4.2	0.50 U
	TMW08102014	Normal	North Alluvial	10/29/2014	1.5 J	0.50 U

TABLE 5-2

Summary of Nitrate-nitrogen and Nitrite-nitrogen Analytical Detections (Page 3 of 6)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity						
Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Nitrate-N (mg/L) CAS 14797-55-8	Nitrite-N (mg/L) CAS 14797-65-0
					EPA Method 9056	EPA Method 9056
Regulatory Limits					10 ^a	1 ^b
TMW10	TMW10042016	Normal	North Alluvial	4/12/2016	0.10 J	0.20 U
	TMW10102015	Normal	North Alluvial	11/4/2015	0.50 U	0.50 U
	TMW10042015	Normal	North Alluvial	4/7/2015	0.17 J	0.20 U
	TMW10102014	Normal	North Alluvial	10/28/2014	0.50 U	0.50 U
TMW11	TMW11042016	Normal	North Alluvial	4/11/2016	1.3	0.10 U
	TMW11102015	Normal	North Alluvial	11/5/2015	0.5	0.10 U
	TMW11042015	Normal	North Alluvial	4/8/2015	3.6	0.10 U
	TMW11102014	Normal	North Alluvial	10/29/2014	0.76	0.10 U
TMW13	TMW13042016	Normal	North Alluvial	4/12/2016	4.6	0.10 U
	TMW13102015	Normal	North Alluvial	11/4/2015	3.8	0.10 U
	TMW13042015	Normal	North Alluvial	4/9/2015	2.9	0.10 U
	TMW13102014	Normal	North Alluvial	10/27/2014	2.3	0.10 U
TMW15	TMW15042016	Normal	North Alluvial	4/13/2016	6.9 J	0.10 UJ
	DTW15042016	Duplicate	North Alluvial	4/13/2016	6.9 J	0.10 UJ
	TMW15102015	Normal	North Alluvial	11/6/2015	7.3	0.10 U
	DTW15102015	Duplicate	North Alluvial	11/6/2015	7.3	0.10 U
	TMW15042015	Normal	North Alluvial	4/8/2015	8.2 J	0.10 U
	DTW15042015	Duplicate	North Alluvial	4/8/2015	270 R	0.10 U
	TMW15102014	Normal	North Alluvial	10/29/2014	8.6	0.10 U
TMW21	TMW21042016	Normal	North Alluvial	4/11/2016	9.7	0.10 U
	TMW21102015	Normal	North Alluvial	10/29/2015	8.7	0.10 U
	TMW21042015	Normal	North Alluvial	4/3/2015	8.0	0.10 U
	TMW21102014	Normal	North Alluvial	10/31/2014	9.3	0.10 U
TMW22	TMW22042016	Normal	North Alluvial	4/8/2016	11 J	0.10 U
	TMW22102015	Normal	North Alluvial	10/30/2015	11	0.20 U
	TMW22042015	Normal	North Alluvial	4/1/2015	11 J	0.10 U
	TMW22102014	Normal	North Alluvial	10/23/2014	12	0.10 U
TMW23	TMW23042016	Normal	North Alluvial	4/8/2016	29 J	0.12 J
	TMW23102015	Normal	North Alluvial	10/30/2015	29 J	0.063 J
	TMW23042015	Normal	North Alluvial	4/1/2015	27 J	0.10 U
	TMW23102014	Normal	North Alluvial	10/22/2014	27	0.10 U
TMW24	TMW24042016	Normal	North Alluvial	4/15/2016	0.10 U	0.10 U
	TMW24102015	Normal	North Alluvial	11/6/2015	0.20 U	0.20 U
	TMW24042015	Normal	North Alluvial	4/8/2015	0.10 U	0.10 U
	TMW24102014	Normal	North Alluvial	10/31/2014	0.20 U	0.20 U
TMW25	TMW25042016	Normal	North Alluvial	4/13/2016	0.46 J	0.20 U
	TMW25102015	Normal	North Alluvial	11/4/2015	0.49 J	0.20 U
	TMW25042015	Normal	North Alluvial	4/7/2015	0.45 J	0.10 U
	TMW25102014	Normal	North Alluvial	10/31/2014	0.44 J	0.10 U
TMW26	TMW26042016	Normal	North Alluvial	4/8/2016	0.10 UJ	0.10 U
	TMW26102015	Normal	North Alluvial	10/30/2015	0.20 U	0.20 U
	DTW26102015	Duplicate	North Alluvial	10/30/2015	0.20 U	0.20 U
	TMW26042015	Normal	North Alluvial	4/7/2015	0.10 U	0.10 U
	DTW26042015	Duplicate	North Alluvial	4/7/2015	0.10 U	0.10 U
	TMW26102014	Normal	North Alluvial	10/27/2014	0.20 U	0.20 U
	DTW26102014	Duplicate	North Alluvial	10/27/2014	0.20 U	0.20 U

5.0 Analytical Results

TABLE 5-2

Summary of Nitrate-nitrogen and Nitrite-nitrogen Analytical Detections (Page 4 of 6)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Nitrate-N (mg/L) CAS 14797-55-8	Nitrite-N (mg/L) CAS 14797-65-0
					EPA Method 9056	EPA Method 9056
Regulatory Limits					10 ^a	1 ^b
TMW29	TMW29042016	Normal	North Alluvial	4/7/2016	2.6	0.069 J
	TMW29102015	Normal	North Alluvial	10/28/2015	2.6	0.10 U
	TMW29042015	Normal	North Alluvial	4/3/2015	2.7	0.10 U
	TMW29102014	Normal	North Alluvial	10/23/2014	2.5	0.10 U
TMW31S	TMW31S042016	Normal	North Alluvial	4/6/2016	7.9	0.10 U
	TMW31S102015	Normal	North Alluvial	10/29/2015	7.6	0.10 U
	TMW31S042015	Normal	North Alluvial	4/2/2015	7.0	0.10 U
	TMW31S102014	Normal	North Alluvial	10/22/2014	7.6	0.10 U
TMW33	TMW33042016	Normal	North Alluvial	4/7/2016	0.50 U	0.50 U
	TMW33102015	Normal	North Alluvial	10/30/2015	0.50 U	0.50 U
	TMW33042015	Normal	North Alluvial	4/2/2015	0.22 J	0.20 U
	TMW33102014	Normal	North Alluvial	10/22/2014	0.59 J	0.20 U
TMW34	TMW34042016	Normal	North Alluvial	4/12/2016	68	0.20 U
	DTW34042016	Duplicate	North Alluvial	4/12/2016	68	0.20 U
	TMW34102015	Normal	North Alluvial	11/3/2015	64	0.20 U
	DTW34102015	Duplicate	North Alluvial	11/3/2015	63	0.20 U
	TMW34042015	Normal	North Alluvial	4/3/2015	58	0.20 U
	DTW34042015	Duplicate	North Alluvial	4/3/2015	60	0.20 U
	TMW34102014	Normal	North Alluvial	10/28/2014	63	0.20 U
	DTW34102014	Duplicate	North Alluvial	10/28/2014	62	0.20 U
TMW35	TMW35042016	Normal	North Alluvial	4/11/2016	11	0.20 U
	TMW35102015	Normal	North Alluvial	11/2/2015	11	0.20 U
	TMW35042015	Normal	North Alluvial	4/3/2015	12	0.10 U
	TMW35102014	Normal	North Alluvial	10/31/2014	12	0.20 U
TMW39S	TMW39S042016	Normal	North Alluvial	4/6/2016	9.5	0.10 U
	TMW39S102015	Normal	North Alluvial	10/29/2015	8.8	0.20 U
	TMW39S042015	Normal	North Alluvial	4/1/2015	8.9	0.10 U
	TMW39S102014	Normal	North Alluvial	10/23/2014	8.8	0.10 U
TMW40S	TMW40S042016	Normal	North Alluvial	4/7/2016	120	0.77 J
	TMW40S102015	Normal	North Alluvial	10/28/2015	110	1.1
	TMW40S042015	Normal	North Alluvial	4/6/2015	110	2.2 J
	TMW40S102014	Normal	North Alluvial	10/22/2014	110	1.1
TMW41	TMW41042016	Normal	North Alluvial	4/7/2016	5.6	0.10 U
	TMW41102015	Normal	North Alluvial	10/29/2015	5.5	0.20 U
	TMW41042015	Normal	North Alluvial	4/1/2015	6.4	0.10 U
	TMW41102014	Normal	North Alluvial	10/23/2014	5.6	0.10 U
TMW43	TMW43042016	Normal	North Alluvial	4/13/2016	8.5 J	0.10 U
	DTW43042016	Duplicate	North Alluvial	4/13/2016	8.8 J	0.10 UJ
	TMW43102015	Normal	North Alluvial	11/3/2015	7.9	0.10 U
	DTW43102015	Duplicate	North Alluvial	11/3/2015	8.6	0.10 U
	TMW43042015	Normal	North Alluvial	4/10/2015	8.8	0.10 U
	DTW43042015	Duplicate	North Alluvial	4/10/2015	8.6	0.10 U
	TMW43102014	Normal	North Alluvial	10/31/2014	9.1	0.10 U
	DTW43102014	Duplicate	North Alluvial	10/31/2014	9.1	0.10 U

TABLE 5-2

Summary of Nitrate-nitrogen and Nitrite-nitrogen Analytical Detections (Page 5 of 6)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity						
Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Nitrate-N (mg/L) CAS 14797-55-8	Nitrite-N (mg/L) CAS 14797-65-0
					EPA Method 9056	EPA Method 9056
Regulatory Limits					10 ^a	1 ^b
TMW44	TMW44042016	Normal	North Alluvial	4/8/2016	52 J	0.10 U
	TMW44102015	Normal	North Alluvial	10/29/2015	51	0.20 U
	TMW44042015	Normal	North Alluvial	4/1/2015	48 J	0.10 U
	TMW44102014	Normal	North Alluvial	10/23/2014	52	0.10 U
TMW45	TMW45042016	Normal	North Alluvial	4/14/2016	0.74	0.10 U
	TMW45102015	Normal	North Alluvial	11/3/2015	0.66 J	0.20 U
	TMW45042015	Normal	North Alluvial	4/9/2015	0.5	0.10 U
	TMW45102014	Normal	North Alluvial	10/29/2014	0.52 J	0.20 U
TMW46	TMW46042016	Normal	North Alluvial	4/7/2016	82	0.20 U
	TMW46102015	Normal	North Alluvial	10/29/2015	81	0.20 U
	TMW46042015	Normal	North Alluvial	4/2/2015	75	0.20 U
	TMW46102014	Normal	North Alluvial	10/23/2014	84	0.20 U
TMW47	TMW47042016	Normal	North Alluvial	4/14/2016	0.10 U	0.10 U
	TMW47102015	Normal	North Alluvial	11/5/2015	0.10 U	0.10 U
	TMW47042015	Normal	North Alluvial	4/10/2015	0.10 U	0.10 U
	TMW47102014	Normal	North Alluvial	10/31/2014	0.10 U	0.10 U
TMW02	TMW02042016	Normal	North Bedrock	4/13/2016	92 J	0.20 UJ
	TMW02102015	Normal	North Bedrock	11/3/2015	88	0.20 U
	TMW02042015	Normal	North Bedrock	4/9/2015	88	0.10 U
	TMW02102014	Normal	North Bedrock	10/30/2014	95	0.20 U
TMW14A	TMW14A042016	Normal	North Bedrock	4/14/2016	0.10 U	0.10 U
	TMW14A102015	Normal	North Bedrock	11/3/2015	0.10 U	0.10 U
	TMW14A042015	Normal	North Bedrock	4/8/2015	0.10 U	0.10 U
	TMW14A102014	Normal	North Bedrock	10/29/2014	0.10 U	0.10 U
TMW17	TMW17042016	Normal	North Bedrock	4/15/2016	0.10 U	0.10 U
	TMW17102015	Normal	North Bedrock	11/3/2015	0.10 U	0.10 U
	TMW17042015	Normal	North Bedrock	4/7/2015	0.10 U	0.10 U
	TMW17102014	Normal	North Bedrock	10/29/2014	0.10 U	0.10 U
TMW18	TMW18042016	Normal	North Bedrock	4/7/2016	0.10 U	0.10 U
	TMW18102015	Normal	North Bedrock	10/29/2015	0.10 U	0.10 U
	TMW18042015	Normal	North Bedrock	4/1/2015	0.10 U	0.10 U
	TMW18102014	Normal	North Bedrock	10/24/2014	0.10 U	0.10 U
TMW30	TMW30042016	Normal	North Bedrock	4/7/2016	15	0.070 J
	TMW30102015	Normal	North Bedrock	10/29/2015	16	0.10 U
	TMW30042015	Normal	North Bedrock	4/1/2015	17	0.10 U
	TMW30102014	Normal	North Bedrock	10/22/2014	16	0.10 U
TMW31D	TMW31D042016	Normal	North Bedrock	4/13/2016	15 J	0.10 U
	DTW31D042016	Duplicate	North Bedrock	4/13/2016	14 J	0.10 UJ
	TMW31D102015	Normal	North Bedrock	11/5/2015	14	0.10 U
	DTW31D102015	Duplicate	North Bedrock	11/5/2015	14	0.10 U
	TMW31D042015	Normal	North Bedrock	4/6/2015	14	0.10 UJ
	TMW31D102014	Normal	North Bedrock	10/30/2014	15	0.10 U
	DTW31D102014	Duplicate	North Bedrock	10/30/2014	15	0.10 U
TMW32	TMW32042016	Normal	North Bedrock	4/13/2016	1.4 J	0.39 J
	TMW32102015	Normal	North Bedrock	11/5/2015	1.6	0.51 J
	TMW32042015	Normal	North Bedrock	4/9/2015	1.4	1.2
	TMW32102014	Normal	North Bedrock	10/30/2014	0.48 J	0.98

5.0 Analytical Results

TABLE 5-2

Summary of Nitrate-nitrogen and Nitrite-nitrogen Analytical Detections (Page 6 of 6)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Nitrate-N (mg/L) CAS 14797-55-8	Nitrite-N (mg/L) CAS 14797-65-0
					EPA Method 9056	EPA Method 9056
Regulatory Limits					10 ^a	1 ^b
TMW36	TMW36042016	Normal	North Bedrock	4/7/2016	0.10 U	0.10 U
	TMW36102015	Normal	North Bedrock	10/28/2015	0.10 U	0.10 U
	TMW36042015	Normal	North Bedrock	4/1/2015	0.10 U	0.10 U
	TMW36102014	Normal	North Bedrock	10/24/2014	0.10 U	0.10 U
TMW37	TMW37042016	Normal	North Bedrock	4/7/2016	0.10 U	0.10 U
	TMW37102015	Normal	North Bedrock	10/28/2015	0.10 U	0.10 U
	TMW37042015	Normal	North Bedrock	4/1/2015	0.10 U	0.10 U
	TMW37102014	Normal	North Bedrock	10/24/2014	0.10 U	0.10 U
TMW38	TMW38042016	Normal	North Bedrock	4/14/2016	0.10 U	0.10 U
	TMW38102015	Normal	North Bedrock	11/6/2015	0.16 J	0.20 U
	TMW38042015	Normal	North Bedrock	4/8/2015	0.10 U	0.10 U
	TMW38102014	Normal	North Bedrock	10/28/2014	0.10 U	0.10 U
TMW39D	TMW39D042016	Normal	North Bedrock	4/12/2016	0.29 J	0.10 U
	TMW39D102015	Normal	North Bedrock	11/4/2015	0.52 J	0.20 U
	TMW39D042015	Normal	North Bedrock	4/6/2015	0.86	0.10 UJ
	DTW39D042015	Duplicate	North Bedrock	4/6/2015	0.87	0.10 UJ
	TMW39D102014	Normal	North Bedrock	10/30/2014	0.10 U	0.10 U
TMW40D	TMW40D042016	Normal	North Bedrock	4/12/2016	2.2	0.15 J
	TMW40D102015	Normal	North Bedrock	11/3/2015	2.0	0.21 J
	TMW40D042015	Normal	North Bedrock	4/9/2015	1.8	0.10 U
	TMW40D102014	Normal	North Bedrock	10/31/2014	1.9	0.5
TMW48	TMW48042016	Normal	North Bedrock	4/12/2016	14	0.053 J
	TMW48102015	Normal	North Bedrock	11/4/2015	14	0.10 U
	TMW48042015	Normal	North Bedrock	4/6/2015	13	0.10 UJ
	TMW48102014	Normal	North Bedrock	10/30/2014	15	0.10 U
TMW49	TMW49042016	Normal	North Bedrock	4/14/2016	4.3	0.10 U
	TMW49102015	Normal	North Bedrock	11/5/2015	5.4	0.10 U
	TMW49042015	Normal	North Bedrock	4/9/2015	4.9	0.10 U
	TMW49102014	Normal	North Bedrock	10/30/2014	6.6 J	0.10 U

Notes:

^a New Mexico Water Quality Control Commission Standard - New Mexico Administrative Code Title 20, Chapter 6, Part 2, Section 3103.

^b EPA maximum contaminant level regulatory limit is 1.0 mg/L.

Bold indicates analyte was positively detected above regulatory limits.

If no detections occurred for nitrate or nitrite during the previous four monitoring events, no non-detect or historical data are presented.

CAS = Chemical Abstracts Service (registry number)

EPA = U.S. Environmental Protection Agency

J = analyte was positively identified; reported value is estimated.

mg/L = milligram(s) per liter

N = nitrogen

R = result is unusable for any purpose

U = non-detected result below the limit of detection

UJ = analyte was not detected; however, the result is estimated because of discrepancies in meeting certain analyte-specific quality control criteria.

TABLE 5-3

Summary of Total Explosives Analytical Detections (Page 1 of 5)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8330B (µg/L)													
					1,3,5-Trinitrobenzene CAS 99-35-4	1,3-Dinitrobenzene CAS 99-65-0	2,4,6-Trinitrotoluene CAS 118-96-7	2,4-Dinitrotoluene CAS 121-14-2	2,6-Dinitrotoluene CAS 606-20-2	2-Amino-4,6-Dinitrotoluene CAS 35572-78-2	2-Nitrotoluene CAS 88-72-2	3-Nitrotoluene CAS 99-08-1	4-Amino-2,6-Dinitrotoluene CAS 19406-51-0	4-Nitrotoluene CAS 99-99-0	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) CAS 121-82-4	Methyl-2,4,6-trinitrophenylamine CAS 479-45-8	Nitrobenzene CAS 98-95-3	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) CAS 2691-41-0
					Regulatory Limit (EPA Region 6 Regional Screening Levels) ^a													
					590	2.0	25	2.4	0.49	39	3.1	1.7	39	43	7	39	1.4	1000
BGMW01	BGMW01042016	Normal	North Alluvial	4/15/16	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	0.13 U	0.22 U	0.22 U	0.22 U
	BGMW01102015	Normal		11/5/15	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	0.13 U	0.22 U	0.22 U	0.22 U
	BGMW01042015	Normal		4/2/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
	BGMW01102014	Normal		10/24/14	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U
BGMW02	BGMW02042016	Normal	North Alluvial	4/14/16	0.45 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.45 U	0.14 U	0.23 U	0.23 U	0.23 U
	BGMW02102015	Normal		11/5/15	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U
	BGMW02042015	Normal		4/2/15	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U
	BGMW02102014	Normal		10/24/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
BGMW03	BGMW03042016	Normal	North Alluvial	4/8/16	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U
	BGMW03102015	Normal		10/30/15	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	0.13 U	0.22 U	0.22 U	0.22 U
	BGMW03042015	Normal		4/1/15	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
	BGMW03102014	Normal		10/22/14	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U
FW31	FW31042016	Normal	North Alluvial	4/7/16	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.18 J	0.21 U	0.21 U	0.21 U
	FW3112015	Normal		11/2/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U
	FW31042015	Normal		4/1/15	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
	FW31102014	Normal		10/22/14	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U
FW35	FW35102015	Normal	North Alluvial	4/2016	Well dry this event													
	FW35102015	Normal		10/2015	Well dry this event													
	FW35042015	Normal		4/1/15	0.49 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.49 U	0.19 U	0.19 U	0.19 U	0.19 U
	FW35102014	Normal		10/27/14	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.16 J	0.17 U	0.17 U	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U
MW01	MW01042016	Normal	North Alluvial	4/6/16	0.45 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.45 U	0.13 U	0.22 U	0.22 U	0.22 U
	MW01102015	Normal		10/28/15	0.41 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.20 U	0.20 U	0.12 U	0.41 U	0.12 U	0.20 U	0.20 U	0.20 U
	MW01042015	Normal		4/1/15	0.48 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.48 U	0.18 U	0.18 U	0.18 U	0.18 U
	MW01102014	Normal		10/23/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
MW02	MW02042016	Normal	North Alluvial	4/6/16	0.50 U	0.25 U	0.25 U	0.25 U	0.25 U	0.15 U	0.25 U	0.25 U	0.15 U	0.50 U	0.15 U	0.25 U	0.25 U	0.25 U
	MW02102015	Normal		10/28/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U
	MW02042015	Normal		4/1/15	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.33 J	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U
	MW02102014	Normal		10/24/14	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U
MW03	MW03042016	Normal	North Alluvial	4/12/16	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U
	MW03102015	Normal		10/30/15	0.49 U	0.24 U	0.24 U	0.24 U	0.24 U	0.15 U	0.24 U	0.24 U	0.15 U	0.49 U	0.15 U	0.24 U	0.24 U	0.24 U
	MW03042015	Normal		4/3/15	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
	MW03102014	Normal		10/24/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
MW18D	MW18D042016	Normal	North Alluvial	4/12/16	0.45 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.45 U	0.13 U	0.22 U	0.22 U	0.22 U
	MW18D102015	Normal		11/2/15	0.41 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.12 U	0.41 U	0.12 U	0.21 U	0.21 U	0.21 U
	MW18D042015	Normal		4/8/15	0.49 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.49 U	0.18 U	0.18 U	0.18 U	0.18 U
	MW18D102014	Normal		10/31/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
MW20	MW20042016	Normal	North Alluvial	4/11/16	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U
	MW20102015	Normal		11/2/15	0.47 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.47 U	0.14 U	0.23 U	0.23 U	0.23 U
	DMW20102015	Duplicate		11/2/15	0.47 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.47 U	0.14 U	0.23 U	0.23 U	0.23 U
	MW20042015	Normal		4/3/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
	MW20102014	Normal		10/28/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
	DMW20102014	Duplicate		10/28/14	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U
MW22S	MW22S042016	Normal	North Alluvial	4/11/16	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U
	MW22S102015	Normal		10/30/15	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	0.13 U	0.22 U	0.22 U	0.22 U
	MW22S042015	Normal		4/1/15	0.52 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.52 U	0.20 U	0.20 U	0.20 U	0.20 U
	MW22S102014	Normal		10/23/14	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.49	0.17 U	0.17 U	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U
MW22D	MW22D042016	Normal	North Alluvial	4/11/16	0.46 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.46 U	0.14 U	0.23 U	0.23 U	0.23 U
	MW22D102015	Normal		11/2/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U
	MW22D042015	Normal		4/6/15	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U
	MW22D102014	Normal		10/29/14	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U

5.0 Analytical Results

TABLE 5-3

Summary of Total Explosives Analytical Detections (Page 2 of 5)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8330B (µg/L)															
					1,3,5-Trinitrobenzene CAS 99-35-4	1,3-Dinitrobenzene CAS 99-65-0	2,4,6-Trinitrotoluene CAS 118-96-7	2,4-Dinitrotoluene CAS 121-14-2	2,6-Dinitrotoluene CAS 606-20-2	2-Amino-4,6-Dinitrotoluene CAS 35572-78-2	2-Nitrotoluene CAS 88-72-2	3-Nitrotoluene CAS 99-08-1	4-Amino-2,6-Dinitrotoluene CAS 19406-51-0	4-Nitrotoluene CAS 99-99-0	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) CAS 121-82-4	Methyl-2,4,6-trinitrophenylamine CAS 479-45-8	Nitrobenzene CAS 98-95-3	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) CAS 2691-41-0		
					Regulatory Limit (EPA Region 6 Regional Screening Levels) ^a															
					590	2.0	25	2.4	0.49	39	3.1	1.7	39	43	7	39	1.4	1000		
MW23	MW23042016	Normal	North Alluvial	4/7/16	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U		
	DMW23042016	Duplicate		4/7/16	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.39 J	0.21 U		
	MW23102015	Normal		11/6/15	0.43 R	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U		
	DMW23102015	Duplicate		11/6/15	0.43 R	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U		
	MW23042015	Normal		4/7/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U		
	DMW23042015	Duplicate		4/7/15	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.13 J	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U		
	MW23102014	Normal		10/28/14	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U		
DMW23102014	Duplicate	10/28/14	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U				
MW24	MW24042016	Normal	North Alluvial	4/6/16	0.41 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.20 U	0.20 U	0.12 U	0.41 U	0.12 U	0.20 U	0.20 U	0.20 U		
	DMW24042016	Duplicate		4/6/16	0.41 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.20 U	0.20 U	0.12 U	0.41 U	0.12 U	0.20 U	0.20 U	0.20 U		
	MW24102015	Normal		11/5/15	0.41 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.12 U	0.41 U	0.12 U	0.21 U	0.21 U	0.21 U		
	MW24042015	Normal		4/6/15	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U		
	DMW24042015	Duplicate		4/6/15	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U		
	MW24102014	Normal		10/27/14	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U		
	DMW24102014	Duplicate		10/27/14	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U		
SMW01	SMW01042016	Normal	North Alluvial	4/8/16	0.48 U	0.24 U	0.24 U	0.24 U	0.24 U	0.14 U	0.24 U	0.24 U	0.14 U	0.48 U	0.14 U	0.24 U	0.24 U	0.24 U		
	SMW01102015	Normal		11/3/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.12 U	0.42 U	0.12 U	0.21 U	0.21 U	0.21 U		
	SMW01042015	Normal		4/8/15	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U		
	SMW01102014	Normal		10/27/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U		
TMW01	TMW01042016	Normal	North Alluvial	4/8/16	0.41 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.12 U	0.41 U	0.12 U	0.21 U	0.21 U	0.21 U		
	TMW01102015	Normal		11/4/15	0.45 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.45 U	0.14 U	0.23 U	0.23 U	0.23 U		
	TMW01042015	Normal		4/7/15	0.49 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.49 U	0.18 U	0.18 U	0.18 U	0.18 U		
	TMW01102014	Normal		10/30/14	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U		
TMW03	TMW03042016	Normal	North Alluvial	4/8/16	0.43 U	0.21 U	0.21 U	0.24 J	0.21 U	0.86 J	0.21 U	0.21 U	0.95 J	0.43 U	480	0.21 U	0.21 U	11 J		
	TMW03102015	Normal		11/4/15	0.42 U	0.21 U	0.21 U	0.29 J	0.21 U	1.9	0.21 U	0.21 U	1.5 J	0.42 U	490	0.21 U	0.21 U	0.21 U		
	TMW03042015	Normal		4/9/15	0.41 U	0.15 U	0.15 U	0.44 J	0.15 U	2.4 J	0.15 U	0.15 U	2.2 J	0.41 U	420 J	0.15 U	0.15 U	4.0 J		
	TMW03102014	Normal		10/30/14	0.42 U	0.16 U	0.16 R	0.50 U	0.16 R	2.8 J	0.16 U	0.16 U	2.4 J	0.42 R	530 J	0.16 U	0.16 U	0.16 U		
TMW04	TMW04042016	Normal	North Alluvial	4/13/16	9.1 U	0.23 U	0.23 U	0.23 U	0.23 U	2.6	0.23 U	0.23 U	1.5 J	0.45 U	2.7 U	0.23 U	0.23 U	0.23 U		
	TMW04102015	Normal		11/4/15	0.46 U	0.23 U	0.23 U	0.23 U	0.23 U	2.7 J	0.23 U	0.23 U	1.5 J	1.9 J	2.8 U	0.23 U	0.23 U	0.23 U		
	TMW04042015	Normal		4/9/15	3.1 J	0.15 U	0.15 U	0.39 J	0.15 U	2.9 J	1.5 J	0.15 U	2.6 J	40 J	16 J	0.49 J	0.15 U	5.1 J		
	TMW04102014	Normal		10/30/14	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	3.2 J	0.17 U	0.17 U	3.4 J	0.45 U	4.2 U	0.17 U	0.17 U	0.17 U		
TMW06	TMW06042016	Normal	North Alluvial	4/12/16	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U		
	TMW06102015	Normal		11/4/15	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	0.13 U	0.22 U	0.22 U	0.22 U		
	TMW06042015	Normal		4/9/15	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U		
	TMW06102014	Normal		10/29/14	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U		
TMW07	TMW07042016	Normal	North Alluvial	4/8/16	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U		
	TMW07102015	Normal		10/30/15	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U		
	TMW07042015	Normal		4/1/15	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U		
	TMW07102014	Normal		10/23/14	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U		
TMW10	TMW10042016	Normal	North Alluvial	4/12/16	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	0.13 U	0.22 U	0.22 U	0.22 U		
	TMW10102015	Normal		11/4/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U		
	TMW10042015	Normal		4/7/15	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U		
	TMW10102014	Normal		10/28/14	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U		
TMW11	TMW11042016	Normal	North Alluvial	4/11/16	0.46 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.46 U	0.14 U	0.23 U	0.23 U	0.23 U		
	TMW11102015	Normal		11/5/15	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	0.13 U	0.22 U	0.22 U	0.22 U		
	TMW11042015	Normal		4/8/15	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U		
	TMW11102014	Normal		10/29/14	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U		

TABLE 5-3

Summary of Total Explosives Analytical Detections (Page 3 of 5)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8330B (µg/L)															
					1,3,5-Trinitrobenzene CAS 99-35-4	1,3-Dinitrobenzene CAS 99-65-0	2,4,6-Trinitrotoluene CAS 118-96-7	2,4-Dinitrotoluene CAS 121-14-2	2,6-Dinitrotoluene CAS 606-20-2	2-Amino-4,6-Dinitrotoluene CAS 35572-78-2	2-Nitrotoluene CAS 88-72-2	3-Nitrotoluene CAS 99-08-1	4-Amino-2,6-Dinitrotoluene CAS 19406-51-0	4-Nitrotoluene CAS 99-99-0	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) CAS 121-82-4	Methyl-2,4,6-trinitrophenylamine CAS 479-45-8	Nitrobenzene CAS 98-95-3	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) CAS 2691-41-0		
Regulatory Limit (EPA Region 6 Regional Screening Levels) ^a																				
590	2.0	25	2.4	0.49	39	3.1	1.7	39	43	7	39	1.4	1000							
TMW15	TMW15042016	Normal	North Alluvial	4/13/16	0.40 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.20 U	0.20 U	0.12 U	0.40 U	0.12 U	0.20 U	0.20 U			
	DTW15042016	Duplicate		4/13/16	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U			
	TMW15102015	Normal		11/6/15	0.45 R	0.23 UJ	0.23 UJ	0.23 UJ	0.23 UJ	0.14 UJ	0.23 UJ	0.23 UJ	0.14 UJ	0.45 UJ	0.14 UJ	0.23 UJ	0.23 UJ			
	DTW15102015	Duplicate		11/6/15	0.44 R	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.13 UJ	0.22 UJ	0.22 UJ	0.13 UJ	0.44 UJ	0.13 UJ	0.22 UJ	0.22 UJ			
	TMW15042015	Normal		4/8/15	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.46 U	0.17 U	0.17 U	0.17 U			
	DTW15042015	Duplicate		4/8/15	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U			
TMW21	TMW15102014	Normal	North Alluvial	10/29/14	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.44 U	0.16 U	0.16 U	0.16 U			
	TMW21042016	Normal		4/11/16	0.45 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.45 U	0.14 U	0.23 U	0.13 J	0.23 U		
	TMW21102015	Normal		10/29/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U		
	TMW21042015	Normal		4/3/15	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U		
	TMW22	TMW21102014		Normal	10/31/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	
		TMW22042016		Normal	4/8/16	0.46 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.46 U	0.14 U	0.16 J	0.23 U	0.23 U	
TMW23	TMW22102015	Normal	North Alluvial	10/29/15	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 J	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U		
	TMW22042015	Normal		4/1/15	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U		
	TMW22102014	Normal		10/23/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U		
	TMW24	TMW23042016		Normal	4/8/16	0.45 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.19 J	0.22 UJ	0.22 UJ	0.13 UJ	0.45 UJ	84 J	0.22 UJ	1.8 J	0.22 UJ	
		TMW23102015		Normal	10/30/15	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.83 J	0.22 U	0.22 U	0.41 J	1.3 J	56	0.22 U	0.22 U	0.22 UJ	
	TMW23042015	Normal		4/1/15	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	0.55 J	0.17 U	0.17 U	0.17 U	0.45 U	57	0.17 U	0.17 U	0.17 U		
TMW24	TMW23102014	Normal	North Alluvial	10/22/14	0.42 U	7.2	0.16 U	0.16 U	0.16 U	0.47 J	0.16 U	0.16 U	0.35	0.42 U	59 J	0.16 U	0.16 U	1.8 J		
	TMW24042016	Normal		4/15/16	0.45 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.45 U	0.13 U	0.22 U	0.22 U	0.22 U		
	TMW24102015	Normal		11/6/15	0.45 R	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.13 UJ	0.22 UJ	0.22 UJ	0.13 UJ	0.45 UJ	0.13 UJ	0.22 UJ	0.22 UJ	0.22 UJ		
	TMW24042015	Normal		4/8/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U		
	TMW25	TMW24102014		Normal	10/31/14	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U	
		TMW25042016		Normal	4/13/16	0.48 U	0.24 U	0.24 U	0.24 U	0.24 U	0.15 U	0.24 U	0.24 U	0.15 U	0.48 U	0.15 U	0.24 U	0.24 U	0.24 U	
TMW26	TMW25102015	Normal	North Alluvial	11/4/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U		
	TMW25042015	Normal		4/7/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U		
	TMW25102014	Normal		10/31/14	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U		
	TMW26	TMW26042016		Normal	4/8/16	0.48 U	0.24 U	0.24 U	0.24 U	0.24 U	0.14 U	0.24 U	0.24 U	0.14 U	0.48 U	0.14 U	0.24 U	0.24 U	0.24 U	
		TMW26102015		Normal	10/30/15	0.45 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.45 U	0.13 U	0.22 U	0.22 U	0.22 UJ	
	DTW26102015	Duplicate		10/30/15	0.45 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.45 U	0.14 U	0.23 U	0.23 U	0.23 UJ		
TMW29	TMW26042015	Normal	North Alluvial	4/7/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U		
	DTW26042015	Duplicate		4/7/15	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U		
	TMW26102014	Normal		10/27/14	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 UJ	0.44 U	0.17 U	0.17 U	0.17 U	0.17 UJ		
	DTW26102014	Duplicate		10/27/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 UJ	0.43 U	0.16 U	0.16 U	0.16 U	0.16 UJ		
	TMW31S	TMW29042016		Normal	North Alluvial	4/7/16	0.46 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.46 U	0.14 U	0.23 U	0.23 U	0.23 U
		TMW29102015		Normal		10/28/15	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U
TMW29042015	Normal	4/3/15	0.43 U	0.16 U		0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U			
TMW29102014	Normal	10/23/14	0.42 U	0.16 U		0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U			
TMW39S	TMW31S042016	Normal	North Alluvial	4/6/16		0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW31S102015	Normal		10/29/15		0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.16 J	0.21 U	
	TMW31S042015	Normal		4/2/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.23 J	0.16 U		
	TMW31S102014	Normal		10/22/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.28 UJ		
TMW40S	TMW39S042016	Normal		North Alluvial	4/6/16	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U	
	TMW39S102015	Normal			10/29/15	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW39S042015	Normal	4/1/15		0.46 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.19 J	0.17 U	0.17 U	0.29 J	0.17 U	0.17 U	0.17 U	0.17 U		
	TMW39S102014	Normal	10/23/14		0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U		
TMW40S	TMW40S042016	Normal	North Alluvial		4/7/16	46 U	0.23 U	0.40 J	0.23 U	0.23 U	0.78 J	0.23 U	0.23 U	0.14 U	0.46 U	980	0.23 U	0.23 U	21 J	
	TMW40S102015	Normal			10/29/15	2.2 J	0.21 R	0.081 J	0.21 R	0.21 R	0.13 R	0.21 R	0.21 R	0.13 R	0.43 R	1000	0.21 U	0.21 R	14 J	
	TMW40S042015	Normal		4/2/15	2.2 J	0.18 UJ	0.18 UJ	0.17 R	0.17 R	2.0 J	0.19 J	0.78 J	1.3 J	0.43 R	1200 J	0.17 R	2.6 J	22 J		
	TMW40S102014	Normal		10/22/14	0.45 U	1.6 J	0.17 U	0.17 U	0.17 U	1.6 J	0.17 U	0.17 U	1.0 J	0.45 U	1200	0.17 U	0.17 U	5.4 J		

5.0 Analytical Results

TABLE 5-3

Summary of Total Explosives Analytical Detections (Page 4 of 5)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8330B (µg/L)													
					1,3,5-Trinitrobenzene CAS 99-35-4	1,3-Dinitrobenzene CAS 99-65-0	2,4,6-Trinitrotoluene CAS 118-96-7	2,4-Dinitrotoluene CAS 121-14-2	2,6-Dinitrotoluene CAS 606-20-2	2-Amino-4,6-Dinitrotoluene CAS 35572-78-2	2-Nitrotoluene CAS 88-72-2	3-Nitrotoluene CAS 99-08-1	4-Amino-2,6-Dinitrotoluene CAS 19406-51-0	4-Nitrotoluene CAS 99-99-0	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) CAS 121-82-4	Methyl-2,4,6-trinitrophenylamine CAS 479-45-8	Nitrobenzene CAS 98-95-3	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) CAS 2691-41-0
					Regulatory Limit (EPA Region 6 Regional Screening Levels) ^a													
					590	2.0	25	2.4	0.49	39	3.1	1.7	39	43	7	39	1.4	1000
TMW41	TMW41042016	Normal	North Alluvial	4/7/16	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U
	TMW41102015	Normal		10/29/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U
	TMW41042015	Normal		4/1/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
	TMW41102014	Normal		10/23/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
TMW43	TMW43042016	Normal	North Alluvial	4/13/16	0.46 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.46 U	4.0	0.23 U	0.36 U	0.14 J
	DTW43042016	Duplicate		4/13/16	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	4.2	0.22 U	0.22 U	0.22 U
	TMW43102015	Normal		11/3/15	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	4.1	0.22 U	0.22 U	0.22 U
	DTW43102015	Duplicate		11/3/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	3.9	0.21 U	0.21 U	0.21 U
	TMW43042015	Normal		4/10/15	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	3.5	0.17 U	0.17 U	0.17 U
	DTW43042015	Duplicate		4/10/15	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	4.4	0.17 U	0.17 U	0.27 J
	TMW43102014	Normal		10/31/14	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	4.9	0.17 U	0.17 U	0.11 J
	DTW43102014	Duplicate		10/31/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	4.6	0.16 U	0.16 U	0.15 J
TMW44	TMW44042016	Normal	North Alluvial	4/8/16	0.49 U	0.24 U	0.24 U	0.24 U	0.24 U	0.15 U	0.24 U	0.24 U	0.15 U	0.49 U	0.15 U	0.35 J	0.24 U	4.6 J
	TMW44102015	Normal		10/29/15	0.47 U	0.23 U	0.23 U	0.23 U	0.23 U	0.98 J	0.23 U	0.23 U	0.49 J	0.47 U	0.14 U	0.23 U	0.23 U	2.5 J
	TMW44042015	Normal		4/1/15	0.47 U	0.18 U	0.18 U	0.18 U	0.18 U	0.86 J	0.18 U	0.18 U	0.59	0.47 U	0.18 U	0.18 U	0.18 U	0.18 U
	TMW44102014	Normal		10/23/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.80 J	0.16 U	0.16 U	0.60 J	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
TMW45	TMW45042016	Normal	North Alluvial	4/14/16	0.46 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.46 U	0.14 U	0.23 U	0.23 U	0.23 U
	TMW45102015	Normal		11/3/15	0.45 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.45 U	0.13 U	0.22 U	0.22 U	0.22 U
	TMW45042015	Normal		4/9/15	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U
	TMW45102014	Normal		10/29/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
TMW46	TMW46042016	Normal	North Alluvial	4/7/16	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	0.13 U	0.22 U	0.22 U	0.22 U
	TMW46102015	Normal		10/29/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U
	TMW46042015	Normal		4/2/15	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
	TMW46102014	Normal		10/23/14	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U
TMW47	TMW47042016	Normal	North Alluvial	4/14/16	0.45 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.45 U	0.14 U	0.23 U	0.23 U	0.23 U
	TMW47102015	Normal		11/5/15	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.37 J
	TMW47042015	Normal		4/10/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
	TMW47102014	Normal		10/31/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
TMW02	TMW02042016	Normal	North Bedrock	4/13/16	0.42 U	0.40 J	0.21 U	0.21 U	0.21 U	0.36 J	0.21 U	0.21 U	0.13 J	0.42 U	1.3	0.21 U	0.12 U	1.4 J
	TMW02102015	Normal		11/3/15	0.46 U	0.20 J	0.23 U	0.23 U	0.23 U	0.37 J	0.23 U	0.23 U	0.21 J	0.46 U	1.3	0.23 U	0.23 U	0.23 U
	TMW02042015	Normal		4/9/15	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U	0.42 J	0.17 U	0.17 U	0.41 J	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U
	TMW02102014	Normal		10/30/14	0.44 U	0.14 J	0.17 U	0.17 U	0.17 U	0.36 J	0.17 U	0.17 U	0.22 J	0.26 J	1.3 J	0.17 U	0.17 U	0.61 J
TMW14A	TMW14A042016	Normal	North Bedrock	4/14/16	0.46 U	0.23 U	0.23 U	0.23 U	0.23 U	0.14 U	0.23 U	0.23 U	0.14 U	0.46 U	0.14 U	0.23 U	0.23 U	0.23 U
	TMW14A102015	Normal		11/3/15	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U
	TMW14A042015	Normal		4/8/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
	TMW14A102014	Normal		10/29/14	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U
TMW16	TMW16042016	Normal	North Bedrock	4/7/16	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U
	TMW16102015	Normal		10/28/15	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U
	TMW16042015	Normal		4/1/15	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U
	TMW16102014	Normal		10/24/14	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U
TMW18	TMW18042016	Normal	North Bedrock	4/7/16	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U
	TMW18102015	Normal		10/29/15	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	0.13 U	0.22 U	0.22 U	0.22 U
	TMW18042015	Normal		4/1/15	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
	TMW18102014	Normal		10/24/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
TMW19	TMW19042016	Normal	North Bedrock	4/7/16	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U
	TMW19102015	Normal		10/28/15	0.40 U	0.20 U	0.20 U	0.20 U	0.20 U	0.12 U	0.20 U	0.20 U	0.12 U	0.40 U	0.12 U	0.20 U	0.20 U	0.20 U
	TMW19042015	Normal		4/1/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
	TMW19102014	Normal		10/24/14	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U
TMW30	TMW30042016	Normal	North Bedrock	4/7/16	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.11 J	0.22 U	0.22 U	0.22 U
	TMW30102015	Normal		10/29/15	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U
	TMW30042015	Normal		4/1/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.15 J	0.16 U
	TMW30102014	Normal		10/22/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U

TABLE 5-3

Summary of Total Explosives Analytical Detections (Page 5 of 5)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8330B (µg/L)														
					1,3,5-Trinitrobenzene CAS 99-35-4	1,3-Dinitrobenzene CAS 99-65-0	2,4,6-Trinitrotoluene CAS 118-96-7	2,4-Dinitrotoluene CAS 121-14-2	2,6-Dinitrotoluene CAS 606-20-2	2-Amino-4,6-Dinitrotoluene CAS 35572-78-2	2-Nitrotoluene CAS 88-72-2	3-Nitrotoluene CAS 99-08-1	4-Amino-2,6-Dinitrotoluene CAS 19406-51-0	4-Nitrotoluene CAS 99-99-0	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) CAS 121-82-4	Methyl-2,4,6-trinitrophenylamine CAS 479-45-8	Nitrobenzene CAS 98-95-3	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) CAS 2691-41-0	
Regulatory Limit (EPA Region 6 Regional Screening Levels) ^a																			
590	2.0	25	2.4	0.49	39	3.1	1.7	39	43	7	39	1.4	1000						
TMW31D	TMW31D042016	Normal	North Bedrock	4/13/16	0.42 U	0.21 U	0.21 U	2.4	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U	
	DTW31D042016	Duplicate		4/13/16	0.41 U	0.21 U	0.21 U	0.21 U	0.21 U	0.12 U	0.21 U	0.21 U	0.12 U	0.41 U	0.12 U	0.21 U	0.21 U	0.21 U	
	TMW31D102015	Normal		11/5/15	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U	
	DTW31D102015	Duplicate		11/5/15	0.45 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.45 U	0.13 U	0.22 U	0.22 U	0.22 U	
	TMW31D042015	Normal		4/6/15	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	
	TMW31D102014	Normal		10/30/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	
	DTW31D102014	Duplicate		10/30/14	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U	
TMW32	TMW32042016	Normal	North Bedrock	4/13/16	0.51 U	0.25 U	0.25 U	0.25 U	0.25 U	0.15 U	0.25 U	0.25 U	0.15 U	0.51 U	0.15 U	0.25 U	0.25 U	0.25 U	
	TMW32102015	Normal		11/5/15	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW32042015	Normal		4/9/15	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	
	TMW32102014	Normal		10/30/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	
TMW36	TMW36042016	Normal	North Bedrock	4/7/16	0.44 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.44 U	0.13 U	0.22 U	0.22 U	0.22 U	
	TMW36102015	Normal		10/28/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW36042015	Normal		4/1/15	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U	
	TMW36102014	Normal		10/24/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.11 J	0.16 U	0.16 U	
TMW37	TMW37042016	Normal	North Bedrock	4/7/16	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U	
	TMW37102015	Normal		10/28/15	0.48 U	0.24 U	0.24 U	0.24 U	0.24 U	0.14 U	0.24 U	0.24 U	0.14 U	0.48 U	0.14 U	0.24 U	0.24 U	0.24 U	
	TMW37042015	Normal		4/1/15	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.40 U	0.15 U	0.15 U	0.15 U	0.15 U	
	TMW37102014	Normal		10/24/14	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	
TMW38	TMW38042016	Normal	North Bedrock	4/14/16	0.45 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.45 U	0.13 U	0.22 U	0.22 U	0.22 U	
	TMW38102015	Normal		11/6/15	0.42 R	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW38042015	Normal		4/8/15	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	
	TMW38102014	Normal		10/28/14	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	
TMW39D	TMW39D042016	Normal	North Bedrock	4/12/16	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW39D102015	Normal		11/4/15	0.42 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.42 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW39D042015	Normal		4/6/15	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U	
	DTW39D042015	Duplicate		4/6/15	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	
	TMW39D102014	Normal		10/30/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	
TMW40D	TMW40D042016	Normal	North Bedrock	4/12/16	0.43 U	0.22 U	0.22 U	0.22 U	0.22 U	0.13 U	0.22 U	0.22 U	0.13 U	0.43 U	0.13 U	0.22 U	0.22 U	0.22 U	
	TMW40D102015	Normal		11/3/15	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW40D042015	Normal		4/9/15	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	
	TMW40D102014	Normal		10/31/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	
TMW48	TMW48042016	Normal	North Bedrock	4/12/16	0.49 U	0.24 U	0.24 U	0.24 U	0.24 U	0.15 U	0.24 U	0.24 U	0.15 U	0.49 U	0.15 U	0.24 U	0.31 J	0.24 U	
	TMW48102015	Normal		11/4/15	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW48042015	Normal		4/6/15	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	
	TMW48102014	Normal		10/30/14	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	
TMW49	TMW49042016	Normal	North Bedrock	4/14/16	0.48 U	0.24 U	0.24 U	0.24 U	0.24 U	0.14 U	0.24 U	0.24 U	0.14 U	0.48 U	0.14 U	0.24 U	0.24 U	0.24 U	
	TMW49102015	Normal		11/5/15	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 U	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW49042015	Normal		4/9/15	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	
	TMW49102014	Normal		10/30/14	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	

^a EPA Region 6, Regional Screening Levels, (Formerly Human Health Medium Specific Screening Levels) (EPA, 2016).**Bold indicates analyte was positively detected above regulatory limits.**

If no detections occurred for explosives compounds during the previous four events, no non-detect or historical data are presented.

µg/L = microgram(s) per liter

CAS = Chemical Abstracts Service (registry number)

EPA = U.S. Environmental Protection Agency

J = analyte was positively identified; reported value is estimated.

R = rejected during validation; result is unusable for any purpose.

U = non-detected result reported at the limit of detection.

UJ = analyte was not detected; however, the result is estimated because of discrepancies in meeting certain analyte-specific quality control criteria.

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TABLE 5-4

Summary of Perchlorate Analytical Detections (Page 1 of 6)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Perchlorate (µg/L) CAS 14797-73-0
					EPA Method 6860
Regulatory Limits					6 ^a
BGMW01	BGMW01042016	Normal	North Alluvial	4/15/2016	0.010 UJ
	BGMW01102015	Normal	North Alluvial	11/5/2015	0.010 U
	BGMW01042015	Normal	North Alluvial	4/2/2015	0.020 U
	BGMW01102014	Normal	North Alluvial	10/24/2014	0.020 U
BGMW02	BGMW02042016	Normal	North Alluvial	4/14/2016	0.39 J
	BGMW02102015	Normal	North Alluvial	11/5/2015	0.45
	BGMW02042015	Normal	North Alluvial	4/2/2015	0.51
	BGMW02102014	Normal	North Alluvial	10/24/2014	0.41
BGMW03	BGMW03042016	Normal	North Alluvial	4/8/2016	0.019 J
	BGMW03102015	Normal	North Alluvial	10/30/2015	0.055
	BGMW03042015	Normal	North Alluvial	4/1/2015	0.14
	BGMW03102014	Normal	North Alluvial	10/22/2014	0.16
MW01	MW01042016	Normal	North Alluvial	4/6/2016	0.010 U
	MW01102015	Normal	North Alluvial	10/28/2015	0.010 U
	MW01042015	Normal	North Alluvial	4/1/2015	0.020 U
	MW01102014	Normal	North Alluvial	10/23/2014	0.013 J
MW02	MW02042016	Normal	North Alluvial	4/6/2016	0.10
	MW02102015	Normal	North Alluvial	10/28/2015	0.11
	MW02042015	Normal	North Alluvial	4/2/2015	0.096
	MW02102014	Normal	North Alluvial	10/24/2014	0.023 J
MW03	MW03042016	Normal	North Alluvial	4/12/2016	0.010 U
	MW03102015	Normal	North Alluvial	10/30/2015	0.010 U
	MW03042015	Normal	North Alluvial	4/3/2015	0.0073 J
	MW03102014	Normal	North Alluvial	10/24/2014	0.020 U
MW18D	MW18D042016	Normal	North Alluvial	4/12/2016	0.010 U
	MW18D102015	Normal	North Alluvial	11/2/2015	0.010 UJ
	MW18D042015	Normal	North Alluvial	4/8/2015	0.0092 J
	MW18D102014	Normal	North Alluvial	10/31/2014	0.020 U
MW20	MW20042016	Normal	North Alluvial	4/11/2016	0.23
	MW20102015	Normal	North Alluvial	11/2/2015	0.27 J
	DMW20102015	Duplicate	North Alluvial	11/2/2015	0.26 J
	MW20042015	Normal	North Alluvial	4/3/2015	0.31 J
	MW20102014	Normal	North Alluvial	10/28/2014	0.31
	DMW20102014	Duplicate	North Alluvial	10/28/2014	0.30
MW22D	MW22D042016	Normal	North Alluvial	4/11/2016	0.53
	MW22D102015	Normal	North Alluvial	11/2/2015	0.45 J
	MW22D042015	Normal	North Alluvial	4/6/2015	0.45 J
	MW22D102014	Normal	North Alluvial	10/29/2014	0.47
MW22S	MW22S042016	Normal	North Alluvial	4/11/2016	0.058
	MW22S102015	Normal	North Alluvial	10/29/2015	0.053
	MW22S042015	Normal	North Alluvial	4/2/2015	0.068
	MW22S102014	Normal	North Alluvial	10/22/2014	0.07

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Summary of Perchlorate Analytical Detections (Page 2 of 6)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Perchlorate (µg/L) CAS 14797-73-0
					EPA Method 6860
Regulatory Limits					6 ^a
MW23	MW23042016	Normal	North Alluvial	4/7/2016	0.010 U
	DMW23042016	Duplicate	North Alluvial	4/7/2016	0.010 U
	MW23102015	Normal	North Alluvial	11/6/2015	0.010 U
	DMW23102015	Duplicate	North Alluvial	11/6/2015	0.010 U
	MW23042015	Normal	North Alluvial	4/7/2015	0.020 U
	DMW23042015	Duplicate	North Alluvial	4/7/2015	0.020 U
	MW23102014	Normal	North Alluvial	10/28/2014	0.020 U
	DMW23102014	Duplicate	North Alluvial	10/28/2014	0.020 U
MW24	MW24042016	Normal	North Alluvial	4/6/2016	0.010 U
	DMW24042016	Duplicate	North Alluvial	4/6/2016	0.010 U
	MW24102015	Normal	North Alluvial	11/5/2015	0.010 U
	MW24042015	Normal	North Alluvial	4/6/2015	0.020 U
	DMW24042015	Duplicate	North Alluvial	4/6/2015	0.020 U
	DMW24102014	Normal	North Alluvial	10/27/2014	0.020 U
	MW24102014	Duplicate	North Alluvial	10/27/2014	0.020 U
SMW01	SMW01042016	Normal	North Alluvial	4/8/2016	0.010 U
	SMW011102015	Normal	North Alluvial	11/3/2015	0.010 U
	SMW01042015	Normal	North Alluvial	4/8/2015	4.0 U
	SMW01102014	Normal	North Alluvial	10/27/2014	0.020 U
TMW01	TMW01042016	Normal	North Alluvial	4/8/2016	130 J
	TMW01102015	Normal	North Alluvial	11/4/2015	240
	TMW01042015	Normal	North Alluvial	4/7/2015	290
	TMW01102014	Normal	North Alluvial	10/30/2014	320
TMW03	TMW03042016	Normal	North Alluvial	4/8/2016	0.62 J
	TMW03102015	Normal	North Alluvial	11/4/2015	0.65
	TMW03042015	Normal	North Alluvial	4/9/2015	0.72
	TMW03102014	Normal	North Alluvial	10/30/2014	0.8
TMW04	TMW04042016	Normal	North Alluvial	4/13/2016	0.35
	TMW04102015	Normal	North Alluvial	11/4/2015	0.28
	TMW04042015	Normal	North Alluvial	4/9/2015	0.32
	TMW04102014	Normal	North Alluvial	10/30/2014	0.31
TMW08	TMW08042016	Normal	North Alluvial	4/12/2016	0.010 U
	TMW08102015	Normal	North Alluvial	11/5/2015	0.010 U
	TMW08042015	Normal	North Alluvial	4/8/2015	2.0 U
	TMW08102014	Normal	North Alluvial	10/29/2014	0.020 U
TMW10	TMW10042016	Normal	North Alluvial	4/12/2016	0.010 U
	TMW10102015	Normal	North Alluvial	11/4/2015	0.010 U
	TMW10042015	Normal	North Alluvial	4/7/2015	0.020 U
	TMW10102014	Normal	North Alluvial	10/28/2014	0.020 U
TMW11	TMW11042016	Normal	North Alluvial	4/11/2016	0.13
	TMW11102015	Normal	North Alluvial	11/4/2015	0.13
	TMW11042015	Normal	North Alluvial	4/8/2015	0.15
	TMW11102014	Normal	North Alluvial	10/29/2014	0.033 J
TMW13	TMW13042016	Normal	North Alluvial	4/12/2016	0.10
	TMW13102015	Normal	North Alluvial	11/4/2015	0.08
	TMW13042015	Normal	North Alluvial	4/9/2015	0.081
	TMW13102014	Normal	North Alluvial	10/27/2014	0.063

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Summary of Perchlorate Analytical Detections (Page 3 of 6)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Perchlorate (µg/L) CAS 14797-73-0
					EPA Method 6860
Regulatory Limits					6 ^a
TMW15	TMW15042016	Normal	North Alluvial	4/13/2016	0.12
	DTW15042016	Duplicate	North Alluvial	4/13/2016	0.13
	TMW15102015	Normal	North Alluvial	11/6/2015	0.11
	DTW15102015	Duplicate	North Alluvial	11/6/2015	0.12
	TMW15042015	Normal	North Alluvial	4/8/2015	0.14
	DTW15042015	Duplicate	North Alluvial	4/8/2015	0.14
	TMW15102014	Normal	North Alluvial	10/29/2014	0.16
TMW21	TMW21042016	Normal	North Alluvial	4/11/2016	0.010 U
	TMW21102015	Normal	North Alluvial	10/29/2015	0.010 U
	TMW21042015	Normal	North Alluvial	4/3/2015	0.0083 J
	TMW21102014	Normal	North Alluvial	10/31/2014	0.0051 J
TMW22	TMW22042016	Normal	North Alluvial	4/8/2016	0.010 J
	TMW22102015	Normal	North Alluvial	10/29/2015	0.018 J
	TMW22042015	Normal	North Alluvial	4/1/2015	0.021 J
	TMW22102014	Normal	North Alluvial	10/23/2014	0.020 U
TMW23	TMW23042016	Normal	North Alluvial	4/8/2016	0.015 J
	TMW23102015	Normal	North Alluvial	10/30/2015	0.036 J
	TMW23042015	Normal	North Alluvial	4/1/2015	0.076
	TMW23102014	Normal	North Alluvial	10/22/2014	0.046 J
TMW24	TMW24042016	Normal	North Alluvial	4/15/2016	0.010 UJ
	TMW24102015	Normal	North Alluvial	11/6/2015	0.010 U
	TMW24042015	Normal	North Alluvial	4/8/2015	4.0 U
	TMW24102014	Normal	North Alluvial	10/31/2014	0.020 U
TMW26	TMW26042016	Normal	North Alluvial	4/8/2016	0.010 U
	TMW26102015	Normal	North Alluvial	10/30/2015	0.010 U
	DTW26102015	Duplicate	North Alluvial	10/30/2015	0.010 U
	TMW26042015	Normal	North Alluvial	4/7/2015	0.020 U
	DTW26042015	Duplicate	North Alluvial	4/7/2015	0.020 U
	TMW26102014	Normal	North Alluvial	10/27/2014	0.020 U
	DTW26102014	Duplicate	North Alluvial	10/27/2014	0.020 U
TMW27	TMW27042016	Normal	North Alluvial	4/8/2016	0.010 U
	TMW27102015	Normal	North Alluvial	10/30/2015	0.010 U
	TMW27042015	Normal	North Alluvial	4/7/2015	0.020 U
	TMW27102014	Normal	North Alluvial	10/27/2014	0.020 U
TMW29	TMW29042016	Normal	North Alluvial	4/7/2016	0.078
	TMW29102015	Normal	North Alluvial	10/28/2015	0.061
	TMW29042015	Normal	North Alluvial	4/3/2015	0.092 J
	TMW29102014	Normal	North Alluvial	10/23/2014	0.14
TMW31S	TMW31S042016	Normal	North Alluvial	4/6/2016	490
	TMW31S102015	Normal	North Alluvial	10/29/2015	670
	TMW31S042015	Normal	North Alluvial	4/2/2015	480
	TMW31S102014	Normal	North Alluvial	10/22/2014	460
TMW34	TMW34042016	Normal	North Alluvial	4/12/2016	0.33
	DTW34042016	Duplicate	North Alluvial	4/12/2016	0.31
	TMW34102015	Normal	North Alluvial	11/3/2015	0.27
	DTW34102015	Duplicate	North Alluvial	11/3/2015	0.27
	TMW34042015	Normal	North Alluvial	4/3/2015	0.30 J
	DTW34042015	Duplicate	North Alluvial	4/3/2015	0.30 J
	TMW34102014	Normal	North Alluvial	10/28/2014	0.30 J
	DTW34102014	Duplicate	North Alluvial	10/28/2014	0.020 UJ

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Summary of Perchlorate Analytical Detections (Page 4 of 6)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Perchlorate (µg/L) CAS 14797-73-0
					EPA Method 6860
Regulatory Limits					6 ^a
TMW35	TMW35042016	Normal	North Alluvial	4/11/2016	0.034 J
	TMW35102015	Normal	North Alluvial	11/2/2015	0.054 J
	TMW35042015	Normal	North Alluvial	4/3/2015	0.061 J
	TMW35102014	Normal	North Alluvial	10/31/2014	0.094
TMW39S	TMW39S042016	Normal	North Alluvial	4/6/2016	640
	TMW39S102015	Normal	North Alluvial	10/29/2015	600
	TMW39S042015	Normal	North Alluvial	4/1/2015	670
	TMW39S102014	Normal	North Alluvial	10/23/2014	600
TMW40S	TMW40S042016	Normal	North Alluvial	4/11/2016	2.2
	TMW40S102015	Normal	North Alluvial	10/30/2015	2.3
	TMW40S042015	Normal	North Alluvial	4/2/2015	4
	TMW40S102014	Normal	North Alluvial	10/24/2014	3.4
TMW41	TMW41042016	Normal	North Alluvial	4/7/2016	6.1
	TMW41102015	Normal	North Alluvial	10/29/2015	4.2
	TMW41042015	Normal	North Alluvial	4/1/2015	4.3
	TMW41102014	Normal	North Alluvial	10/23/2014	3.6
TMW43	TMW43042016	Normal	North Alluvial	4/13/2016	0.010 U
	DTW43042016	Duplicate	North Alluvial	4/13/2016	0.010 U
	TMW43102015	Normal	North Alluvial	11/3/2015	0.010 U
	DTW43102015	Duplicate	North Alluvial	11/3/2015	0.010 U
	TMW43042015	Normal	North Alluvial	4/10/2015	0.020 U
	DTW43042015	Duplicate	North Alluvial	4/10/2015	0.020 U
	TMW43102014	Normal	North Alluvial	10/31/2014	0.020 U
	DTW43102014	Duplicate	North Alluvial	10/31/2014	0.020 U
TMW44	TMW44042016	Normal	North Alluvial	4/8/2016	0.038 J
	TMW44102015	Normal	North Alluvial	10/29/2015	0.012 J
	TMW44042015	Normal	North Alluvial	4/1/2015	0.037 U
	TMW44102014	Normal	North Alluvial	10/23/2014	0.022 J
TMW45	TMW45042016	Normal	North Alluvial	4/14/2016	0.010 U
	TMW45102015	Normal	North Alluvial	11/3/2015	0.010 U
	TMW45042015	Normal	North Alluvial	4/9/2015	0.020 U
	TMW45102014	Normal	North Alluvial	10/29/2014	0.0041 J
TMW46	TMW46042016	Normal	North Alluvial	4/7/2016	0.28
	TMW46102015	Normal	North Alluvial	10/29/2015	0.26
	TMW46042015	Normal	North Alluvial	4/2/2015	0.37
	TMW46102014	Normal	North Alluvial	10/23/2014	0.36
TMW47	TMW47042016	Normal	North Alluvial	4/14/2016	0.010 U
	TMW47102015	Normal	North Alluvial	11/5/2015	0.0086 J
	TMW47042015	Normal	North Alluvial	4/10/2015	0.020 U
	TMW47102014	Normal	North Alluvial	10/31/2014	0.020 U
TMW02	TMW02042016	Normal	North Bedrock	4/13/2016	3.0
	TMW02102015	Normal	North Bedrock	11/3/2015	2.8
	TMW02042015	Normal	North Bedrock	4/9/2015	3.3
	TMW02102014	Normal	North Bedrock	10/30/2014	3.5
TMW16	TMW16042016	Normal	North Bedrock	4/7/2016	0.010 U
	TMW16102015	Normal	North Bedrock	10/28/2015	0.0078 J
	TMW16042015	Normal	North Bedrock	4/1/2015	0.020 J
	TMW16102014	Normal	North Bedrock	10/24/2014	0.022 J

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Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Perchlorate (µg/L) CAS 14797-73-0
					EPA Method 6860
Regulatory Limits					6 ^a
TMW17	TMW17042016	Normal	North Bedrock	4/15/2016	0.010 UJ
	TMW17102015	Normal	North Bedrock	11/3/2015	0.010 U
	TMW17042015	Normal	North Bedrock	4/7/2015	0.020 U
	TMW17102014	Normal	North Bedrock	10/29/2014	0.0060 J
TMW18	TMW18042016	Normal	North Bedrock	4/7/2016	0.010 U
	TMW18102015	Normal	North Bedrock	10/29/2015	0.010 U
	TMW18042015	Normal	North Bedrock	4/1/2015	0.061
	TMW18102014	Normal	North Bedrock	10/24/2014	0.13
TMW19	TMW19042016	Normal	North Bedrock	4/7/2016	0.010 U
	TMW19102015	Normal	North Bedrock	10/28/2015	0.010 U
	TMW19042015	Normal	North Bedrock	4/1/2015	0.020 U
	TMW19102014	Normal	North Bedrock	10/24/2014	0.020 U
TMW30	TMW30042016	Normal	North Bedrock	4/7/2016	1100
	TMW30102015	Normal	North Bedrock	10/29/2015	930
	TMW30042015	Normal	North Bedrock	4/1/2015	1400
	TMW30102014	Normal	North Bedrock	10/22/2014	1300
TMW31D	TMW31D042016	Normal	North Bedrock	4/13/2016	980
	DTW31D042016	Duplicate	North Bedrock	4/13/2016	970
	TMW31D102015	Normal	North Bedrock	11/5/2015	1200
	DTW31D102015	Duplicate	North Bedrock	11/5/2015	1500
	TMW31D042015	Normal	North Bedrock	4/6/2015	1300 J
	TMW31D102014	Normal	North Bedrock	10/30/2014	1400
	DTW31D102014	Duplicate	North Bedrock	10/30/2014	1400
TMW32	TMW32042016	Normal	North Bedrock	4/13/2016	330
	TMW32102015	Normal	North Bedrock	11/5/2015	200
	TMW32042015	Normal	North Bedrock	4/9/2015	320
	TMW32102014	Normal	North Bedrock	10/30/2014	500
TMW36	TMW36042016	Normal	North Bedrock	4/7/2016	0.010 U
	TMW36102015	Normal	North Bedrock	10/28/2015	0.010 U
	TMW36042015	Normal	North Bedrock	4/1/2015	0.020 U
	TMW36102014	Normal	North Bedrock	10/24/2014	0.020 U
TMW37	TMW37042016	Normal	North Bedrock	4/7/2016	0.010 U
	TMW37102015	Normal	North Bedrock	10/28/2015	0.010 U
	TMW37042015	Normal	North Bedrock	4/1/2015	0.020 U
	TMW37102014	Normal	North Bedrock	10/24/2014	0.020 U
TMW38	TMW38042016	Normal	North Bedrock	4/14/2016	0.010 U
	TMW38102015	Normal	North Bedrock	11/6/2015	0.013 J
	TMW38042015	Normal	North Bedrock	4/8/2015	0.0060 J
	TMW38102014	Normal	North Bedrock	10/28/2014	0.020 U
TMW39D	TMW39D042016	Normal	North Bedrock	4/12/2016	6.1
	TMW39D102015	Normal	North Bedrock	11/4/2015	49
	TMW39D042015	Normal	North Bedrock	4/6/2015	34 J
	DTW39D042015	Duplicate	North Bedrock	4/6/2015	32 J
	TMW39D102014	Normal	North Bedrock	10/30/2014	1.6

5.0 Analytical Results

TABLE 5-4

Summary of Perchlorate Analytical Detections (Page 6 of 6)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Perchlorate (µg/L) CAS 14797-73-0
					EPA Method 6860
Regulatory Limits					6 ^a
TMW40D	TMW40D042016	Normal	North Bedrock	4/12/2016	250
	TMW40D102015	Normal	North Bedrock	11/3/2015	260
	TMW40D042015	Normal	North Bedrock	4/9/2015	260
	TMW40D102014	Normal	North Bedrock	10/31/2014	320
TMW48	TMW48042016	Normal	North Bedrock	4/12/2016	880
	TMW48102015	Normal	North Bedrock	11/4/2015	1000
	TMW48042015	Normal	North Bedrock	4/6/2015	1200 J
	TMW48102014	Normal	North Bedrock	10/30/2014	1500
TMW49	TMW49042016	Normal	North Bedrock	4/14/2016	730 J
	TMW49102015	Normal	North Bedrock	11/5/2015	1100
	TMW49042015	Normal	North Bedrock	4/9/2015	1100
	TMW49102014	Normal	North Bedrock	10/30/2014	1700

Notes:

^a Regulatory Limit is 6 µg/L (*Resource Conservation and Recovery Act* Permit Screening Levels; NMED, 2005).

Bold indicates analyte was positively detected above regulatory limits.

µg/L = microgram(s) per liter

CAS = Chemical Abstracts Service (registry number)

EPA = U.S. Environmental Protection Agency

J = analyte was positively identified; reported value is estimated.

U = non-detected result reported at the limit of detection.

UJ = analyte was not detected; however, the result is estimated because of discrepancies in meeting certain analyte-specific quality control criteria.

5.0 Analytical Results

TABLE 5-5

Summary of Volatile Organic Compound Analytical Detections (Page 1 of 5)

Groundwater Periodic Monitoring Report, January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8260B (µg/L)									
					1,1,1-Trichloroethane	CAS 71-55-6	1,1-Dichloroethane	CAS 75-34-3	1,2,3-Trichlorobenzene	CAS 87-61-6	1,2-Dichloroethane	CAS 107-06-2	Acetone	CAS 67-64-1
					60 ^a	25 ^a	7 ^c	5 ^b	14000 ^c	810 ^c	80 ^b	190 ^c	140 ^c	5 ^b
BGMW01	BGMW01042016	Normal	North Alluvial	4/15/2016	0.40 U	0.80 U	0.80 U	0.40 U	2.4 J	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U
	BGMW01102015	Normal	North Alluvial	11/5/2015	0.40 U	0.80 U	0.40 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.40 U
	BGMW01042015	Normal	North Alluvial	4/2/2015	0.20 U	0.40 U	0.80 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.40 U
	BGMW01102014	Normal	North Alluvial	10/24/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.20 U
BGMW02	BGMW02042016	Normal	North Alluvial	4/14/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.40 U
	BGMW02102015	Normal	North Alluvial	11/5/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.40 U
	BGMW02042015	Normal	North Alluvial	4/2/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.20 U
	BGMW02102014	Normal	North Alluvial	10/24/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.20 U
FW35	FW35102015	Normal	North Alluvial	4/2016	Well not sampled for VOCs this event ^d									
	FW35102015	Normal	North Alluvial	10/2015	Well not sampled for VOCs this event ^d									
	FW35042015	Normal	North Alluvial	4/1/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.20 U
	FW35102014	Normal	North Alluvial	10/24/2014	0.20 U	0.40 U	0.40 U	0.40 U	3.2 J	0.99 J	0.20 U	0.80 U	0.40 U	0.43 J
MW01	MW01042016	Normal	North Alluvial	4/6/2016	0.40 U	0.80 U	0.80 U	1.9	6.4 U	1.6 U	0.40 U	0.80 U	0.29 J	0.40 U
	MW01102015	Normal	North Alluvial	10/28/2015	0.40 U	0.80 U	0.80 U	1.6	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.40 U
	MW01042015	Normal	North Alluvial	4/1/2015	0.20 U	0.40 U	0.40 U	1.6	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.20 U
	MW01102014	Normal	North Alluvial	10/23/2014	0.20 U	0.40 U	0.40 U	1.4	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.20 U
MW18D	MW18D042016	Normal	North Alluvial	4/12/2016	0.40 UJ	0.80 UJ	0.80 UJ	97 J	6.4 UJ	1.6 UJ	0.40 UJ	0.80 UJ	0.80 UJ	0.40 UJ
	MW18D102015	Normal	North Alluvial	11/2/2015	0.40 UJ	0.80 UJ	0.80 UJ	95 J	5.4 UJ	1.6 UJ	0.40 UJ	0.80 UJ	0.80 UJ	0.40 UJ
	MW18D042015	Normal	North Alluvial	4/8/2015	0.20 U	0.40 U	0.40 U	100	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.20 U
	MW18D102014	Normal	North Alluvial	10/31/2014	0.20 U	0.40 U	0.40 U	90	6.4 U	0.59 J	0.20 U	0.80 U	0.40 U	0.20 U
MW20	MW20042016	Normal	North Alluvial	4/11/2016	0.40 U	0.80 U	0.80 U	4	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.40 U
	DMW20102015	Duplicate	North Alluvial	11/2/2015	0.40 U	0.80 U	0.80 U	7	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.40 U
	MW20102015	Normal	North Alluvial	11/2/2015	0.40 U	0.80 U	0.80 U	8.4	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.40 U
	MW20042015	Normal	North Alluvial	4/3/2015	0.20 U	0.40 U	0.40 U	5.3	1.9 J	0.80 U	0.20 U	0.80 U	0.40 U	0.20 U
	MW20102014	Normal	North Alluvial	10/28/2014	0.20 U	0.40 U	0.40 U	5.8 J	3.2 J	0.80 U	0.20 U	0.80 U	0.40 U	0.20 U

5.0 Analytical Results

TABLE 5-5

Summary of Volatile Organic Compound Analytical Detections (Page 2 of 5)

Groundwater Periodic Monitoring Report, January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8260B (µg/L)										Regulatory Limit				
					60 ^a	25 ^a	7 ^c	5 ^b	14000 ^c	810 ^c	80 ^b	190 ^c	140 ^c	5 ^b	750 ^a	5 ^b	750 ^a	5 ^b	5 ^b
MW22D	MW22D042016	Normal	North Alluvial	4/11/2016	0.40 U	0.80 U	0.80 U	0.78 J	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	MW22D102015	Normal	North Alluvial	11/2/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	MW22D042015	Normal	North Alluvial	4/6/2015	0.20 U	0.40 U	0.40 U	1.1	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
	MW22D102014	Normal	North Alluvial	10/29/2014	0.20 U	0.40 U	0.40 U	1.2	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
MW22S	MW22S042016	Normal	North Alluvial	4/6/2016	3.5	0.49 J	0.80 U	0.74 J	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	MW22S102015	Normal	North Alluvial	10/28/2015	2.4	0.46 J	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	MW22S042015	Normal	North Alluvial	4/2/2015	1.9	0.68 J	0.40 U	0.68 J	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
	MW22S102014	Normal	North Alluvial	10/22/2014	2.4	0.80 J	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
MW23	MW23042016	Normal	North Alluvial	4/7/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	DMW23042016	Duplicate	North Alluvial	4/7/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.35 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	MW23102015	Normal	North Alluvial	11/6/2015	0.40 U	0.80 U	0.23 J	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	DMW23102015	Duplicate	North Alluvial	11/6/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	MW23042015	Normal	North Alluvial	4/7/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
	DMW23042015	Duplicate	North Alluvial	4/7/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
	MW23102014	Normal	North Alluvial	10/28/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.43 J	0.20 J	0.40 U	0.20 U	0.20 U	0.20 U
	DMW23102014	Duplicate	North Alluvial	10/28/2014	0.20 U	0.40 U	0.40 U	0.40 U	2.0 J	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
TMW08	TMW08042016	Normal	North Alluvial	4/12/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	TMW08102015	Normal	North Alluvial	11/5/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	TMW08042015	Normal	North Alluvial	4/8/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
	TMW08102014	Normal	North Alluvial	10/29/2014	0.20 U	0.40 U	0.40 U	0.40 U	13	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
TMW10	TMW10042016	Normal	North Alluvial	4/12/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	TMW10102015	Normal	North Alluvial	11/4/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	TMW10042015	Normal	North Alluvial	4/7/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
	TMW10102014	Normal	North Alluvial	10/28/2014	0.20 U	0.40 U	0.40 U	0.40 U	1.9 J	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
TMW24	TMW24042016	Normal	North Alluvial	4/15/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	TMW24102015	Normal	North Alluvial	11/6/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.2 J	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.80 U	0.40 U	0.40 U	0.40 U
	TMW24042015	Normal	North Alluvial	4/8/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U
	TMW24102014	Normal	North Alluvial	10/31/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U	0.20 U

5.0 Analytical Results

TABLE 5-5

Summary of Volatile Organic Compound Analytical Detections (Page 3 of 5)*Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity*

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8260B (µg/L)											
					60 ^a	25 ^a	7 ^c	5 ^b	14000 ^c	CAS 67-64-1 Acetone	CAS 107-06-2 1,2-Dichloroethane	CAS 87-61-6 1,2,3-Trichlorobenzene	CAS 75-34-3 1,1-Dichloroethane	CAS 71-55-6 1,1,1-Trichloroethane	Regulatory Limit	CAS 79-01-6 Trichloroethene
TMW33	TMW33042016	Normal	North Alluvial	4/7/2016	0.40 U	0.80 U	0.80 U	38	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.36 U	0.40 U	0.40 U
	TMW33102015	Normal	North Alluvial	10/30/2015	0.40 U	0.80 U	0.80 U	39	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.61 U	0.40 U	0.40 U
	TMW33042015	Normal	North Alluvial	4/2/2015	0.20 U	0.40 U	0.40 U	35	3.0 J	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U
	TMW33102014	Normal	North Alluvial	10/22/2014	0.20 U	0.40 U	0.40 U	40	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U
TMW34	TMW34042016	Normal	North Alluvial	4/12/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U
	DTW34042016	Duplicate	North Alluvial	4/12/2016	0.40 U	0.80 U	0.80 U	0.40 U	4.5 J	1.6 U	0.40 U	0.80 U	0.80 U	0.44 U	0.40 U	0.40 U
	TMW34102015	Normal	North Alluvial	11/3/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U
	DTW34102015	Duplicate	North Alluvial	11/3/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U
	TMW34042015	Normal	North Alluvial	4/3/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U
	DTW34042015	Duplicate	North Alluvial	4/3/2015	0.20 U	0.40 U	0.40 U	0.40 U	1.9 J	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U
	TMW34102014	Normal	North Alluvial	10/28/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U
	DTW34102014	Duplicate	North Alluvial	10/28/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U
TMW35	TMW35042016	Normal	North Alluvial	4/11/2016	0.40 U	0.80 U	0.24 J	1.5	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U
	TMW35102015	Normal	North Alluvial	11/2/2015	0.40 U	0.80 U	0.80 U	1.7	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U
	TMW35042015	Normal	North Alluvial	4/3/2015	0.20 U	0.40 U	0.40 U	1.8	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U
	TMW35102014	Normal	North Alluvial	10/31/2014	0.20 U	0.40 U	0.40 U	2	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U
TMW40S	TMW40S042016	Normal	North Alluvial	4/7/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 J	0.80 U	0.80 U	1.4 U	0.40 U	0.40 U
	TMW40S102015	Normal	North Alluvial	10/28/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.41 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U
	TMW40S042015	Normal	North Alluvial	4/2/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.66 J	0.80 U	0.40 U	0.72 U	0.40 U	0.20 U
	TMW40S102014	Normal	North Alluvial	10/22/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.94 J	0.80 U	0.40 U	0.53 J	0.40 U	0.20 U
TMW47	TMW47042016	Normal	North Alluvial	4/14/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	0.89 J	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U
	TMW47102015	Normal	North Alluvial	11/5/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.7 J	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U
	TMW47042015	Normal	North Alluvial	4/10/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	0.65 J	0.40 U	0.80 U	0.40 U	0.45 U	0.40 U	0.40 U
	TMW47102014	Normal	North Alluvial	10/31/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	1.9 J	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U
TMW14A	TMW14A042016	Normal	North Bedrock	4/14/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	0.64 J	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U
	TMW14A102015	Normal	North Bedrock	11/3/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	0.83 J	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U
	TMW14A042015	Normal	North Bedrock	4/8/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U
	TMW14A102014	Normal	North Bedrock	10/29/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	1.0 J	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U

TABLE 5-5

Summary of Volatile Organic Compound Analytical Detections (Page 4 of 5)

EPA Method 8260B (µg/L)																		
Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Regulatory Limit													
					60 ^a	25 ^a	7 ^c	5 ^b	14000 ^c	CAS 67-64-1 Acetone	CAS 75-34-3 1,1-Dichloroethane	CAS 87-61-6 1,2,3-Trichlorobenzene	CAS 107-06-2 1,2-Dichloroethane	CAS 67-66-3 Chloroform	CAS 74-87-3 Chloromethane	Methyl tert-butyl ether CAS 1634-04-4	Methylene chloride CAS 75-09-2	Toluene CAS 108-88-3
TMW16	TMW16042016	Normal	North Bedrock	4/7/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	140 ^c	5 ^b	750 ^a	5 ^b		
	TMW16102015	Normal	North Bedrock	10/28/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U		
	TMW16042015	Normal	North Bedrock	4/1/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.20 U	0.20 U		
	TMW16102014	Normal	North Bedrock	10/24/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.22 U	0.20 U		
TMW17	TMW17042016	Normal	North Bedrock	4/15/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.1 U	0.40 U	0.36 U	0.80 U	0.80 U	0.40 U	0.40 U		
	TMW17102015	Normal	North Bedrock	11/3/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	3.9	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U		
	TMW17042015	Normal	North Bedrock	4/7/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	2.5	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U		
	TMW17102014	Normal	North Bedrock	10/29/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	4.7	0.20 U	0.38 U	0.40 U	0.80 U	0.40 U	0.20 U		
TMW18	TMW18042016	Normal	North Bedrock	4/7/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.45 U	0.40 U	0.40 U		
	TMW18102015	Normal	North Bedrock	10/29/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.18 U	0.40 U		
	TMW18042015	Normal	North Bedrock	4/1/2015	0.20 U	0.40 U	0.40 U	0.40 U	4.9 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	1.7	0.20 U		
	TMW18102014	Normal	North Bedrock	10/24/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.82 U	0.20 U		
TMW19	TMW19042016	Normal	North Bedrock	4/7/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.46 U	0.54 U	0.40 U		
	TMW19102015	Normal	North Bedrock	10/28/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.38 U	0.40 U		
	TMW19042015	Normal	North Bedrock	4/1/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.39 U	0.20 U		
	TMW19102014	Normal	North Bedrock	10/24/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.36 U	0.20 U		
TMW36	TMW36042016	Normal	North Bedrock	4/7/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.49 U	0.40 U		
	TMW36102015	Normal	North Bedrock	10/28/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U		
	TMW36042015	Normal	North Bedrock	4/1/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U		
	TMW36102014	Normal	North Bedrock	10/24/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U		
TMW37	TMW37042016	Normal	North Bedrock	4/7/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.44 U	0.38 U	0.40 U		
	TMW37102015	Normal	North Bedrock	10/28/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U		
	TMW37042015	Normal	North Bedrock	4/1/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.28 U	0.20 U		
	TMW37102014	Normal	North Bedrock	10/24/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.52 U	0.20 U		
TMW38	TMW38042016	Normal	North Bedrock	4/14/2016	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	1.3 U	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U		
	TMW38102015	Normal	North Bedrock	11/6/2015	0.40 U	0.80 U	0.80 U	0.40 U	6.4 U	2.6	0.40 U	0.80 U	0.80 U	0.80 U	0.40 U	0.40 U		
	TMW38042015	Normal	North Bedrock	4/8/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U		
	TMW38102014	Normal	North Bedrock	10/28/2014	0.20 U	0.40 U	0.40 U	0.40 U	2.5 U	21 U	0.20 U	0.80 U	0.40 U	0.80 U	0.40 U	0.20 U		

5.0 Analytical Results

TABLE 5-5

Summary of Volatile Organic Compound Analytical Detections (Page 5 of 5)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Notes:

^a New Mexico Water Quality Control Commission Standard - New Mexico Administrative Code Title 20, Chapter 6, Part 2, Section 3103.

^b EPA Maximum Contaminant Level - Code of Federal Regulations Title 40, Parts 141, 142, and 143.

^c EPA Region 6, Regional Screening Levels (formerly Human Health Medium Specific Screening Levels) (EPA, 2016).

^d Well was dry and was not sampled during this event.

UJ indicates analyte was positively detected above regulatory limits.

If no detection occurred for volatile organic compounds during the last four events, no non-detect or historical data are presented.

µg/L = microgram(s) per liter

CAS = Chemical Abstracts Service (registry number)

EPA = U.S. Environmental Protection Agency

J = analyte was positively identified; reported value is estimated

U = non-detected result reported at the limit of detection

UJ = analyte was not detected; however, the result is estimated because of discrepancies in meeting certain analyte-specific quality control criteria.

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Summary of Semivolatile Organic Compounds and Total Petroleum Hydrocarbons Analytical Results (Page 1 of 4)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well ID	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8015C (µg/L)		EPA Method 8270C (µg/L)																															
					Diesel Range Organics CAS DRO	Gasoline Range Organics CAS GRO	1,2,4-trichlorobenzene CAS 120-82-1	1,2-dichlorobenzene CAS 95-50-1	1,2-diphenylhydrazine CAS 122-66-7	1,3-dichlorobenzene CAS 541-73-1	1,4-dichlorobenzene CAS 106-46-7	2,4,6-trichlorophenol CAS 88-06-2	2,4-Dinitrophenol CAS 51-28-5	2-chloronaphthalene CAS 91-58-7	2-methylnaphthalene CAS 91-57-6	Acenaphthene CAS 83-32-9	Acetophenone CAS 98-86-2	Benzo(a)anthracene CAS 56-55-3	Benzo(g,h,i)perylene CAS 191-24-2	Benzoic acid CAS 65-85-0	Benzyl alcohol CAS 100-51-6	bis(2-chloroisopropyl) ether CAS 108-60-1	Bis(2-ethylhexyl) phthalate CAS 117-81-7	caprolactam CAS 105-60-2	carbazole CAS 86-74-8	Dibenzofuran CAS 132-64-9	Diethyl phthalate CAS 84-66-2	dimethyl phthalate CAS 131-11-3	Fluoranthene CAS 206-44-0	Fluorene CAS 86-73-7	isophorone CAS 78-59-1	m,p-Cresol CAS MEPH34	naphthalene CAS 91-20-3	n-nitrosodimethylamine CAS 62-75-9	n-nitroso-di-n-propylamine CAS 621-64-7	n-Nitrosodiphenylamine CAS 86-30-6	phenanthrene CAS 85-01-8	Pyrene CAS 129-00-0
Regulatory Limit																																						
NE	NE	70 ^b	600 ^b	0.78 ^c	NE	75 ^b	41 ^c	39 ^c	750 ^c	30 ^a	530 ^a	1900 ^c	30 ^a	30 ^a	75000 ^c	2000 ^c	710 ^c	6 ^b	9900 ^c	NE	7.9 ^c	15000 ^c	NE	30 ^a	30 ^a	780 ^c	NE	30 ^a	0.0011 ^c	0.11 ^c	120 ^c	30 ^a	30 ^a					
BGMW02	BGMW02042016	Normal	North Alluvial	4/14/2016	NA	NA	1.1 U	0.56 U	0.57 U	1.1 U	1.1 U	1.1 U	34 U	1.1 U	1.1 U	1.1 U	0.56 U	1.1 U	1.1 U	16 J	0.56 U	1.1 U	2.2 U	2.4 U	1.1 U	1.1 U	0.56 U	0.56 U	1.1 U	0.56 U	0.56 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U		
	BGMW02102015	Normal	North Alluvial	11/5/2015	NA	NA	0.98 U	0.49 U	0.49 U	0.98 U	3.9 U	0.98 U	29 U	0.98 U	0.98 U	4.9 U	0.98 U	29 U	0.49 U	0.98 U	2.0 U	2.4 U	0.98 U	0.98 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.98 U	0.49 U	0.98 U	0.98 U	0.98 U	0.98 U			
	BGMW02042015	Normal	North Alluvial	4/2/2015	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	21 U	1.0 U	1.0 U	1.0 U	5.2 U	1.0 U	1.0 U	52 UJ	1.0 U	1.0 U	1.0 U	2.6 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
	BGMW02102014	Normal	North Alluvial	10/24/2014	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	21 U	1.0 U	1.0 U	1.0 U	5.1 U	1.0 U	1.0 U	51 U	1.0 U	1.0 U	1.0 U	2.6 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
BGMW03	BGMW03042016	Normal	North Alluvial	4/8/2016	NA	NA	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U	30 U	1.0 U	1.0 U	1.0 U	0.50 U	1.0 U	1.0 U	30 U	0.50 U	1.0 U	2.0 U	2.4 U	1.0 U	1.0 U	1.0 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
	BGMW03102015	Normal	North Alluvial	10/30/2015	NA	NA	1.0 U	0.51 U	0.52 U	1.0 U	4.1 U	1.0 U	31 U	1.0 U	1.0 U	1.0 U	5.1 U	1.0 U	1.0 U	12 J	0.37 J	1.0 U	2.1 U	2.4 U	1.0 U	1.0 U	0.51 U	0.51 U	1.0 U	0.51 U	0.51 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
	BGMW03042015	Normal	North Alluvial	4/1/2015	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	1.0 U	1.0 U	1.0 U	5.1 U	1.0 U	1.0 U	51 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
	BGMW03102014	Normal	North Alluvial	10/22/2014	NA	NA	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	19 U	0.96 U	0.96 U	0.96 U	4.8 U	0.96 U	0.96 U	48 U	0.96 U	0.96 U	0.96 U	2.4 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U		
MW01	MW01042016	Normal	North Alluvial	4/6/2016	160 U	100 U	Not Analyzed																															
	MW01102015	Normal	North Alluvial	10/28/2015	120 U	25 U	Not Analyzed																															
	MW01042015	Normal	North Alluvial	4/1/2015	300	20 U	Not Analyzed																															
	MW01102014	Normal	North Alluvial	10/23/2014	200 J	20 UJ	Not Analyzed																															
MW02	MW02042016	Normal	North Alluvial	4/6/2016	87 U	100 U	Not Analyzed																															
	MW02102015	Normal	North Alluvial	10/28/2015	480 U	25 U	Not Analyzed																															
	MW02042015	Normal	North Alluvial	4/1/2015	810	71	Not Analyzed																															
	MW02102014	Normal	North Alluvial	10/24/2014	190 J	20 U	Not Analyzed																															
MW03	MW03042016	Normal	North Alluvial	4/12/2016	44 U	100 UJ	Not Analyzed																															
	MW03102015	Normal	North Alluvial	10/30/2015	140 U	25 U	Not Analyzed																															
	MW03042015	Normal	North Alluvial	4/3/2015	55 J	20 U	Not Analyzed																															
	MW03102014	Normal	North Alluvial	10/24/2014	110 R	20 U	Not Analyzed																															
MW18D	MW18D042016	Normal	North Alluvial	4/12/2016	64 U	69 J	Not Analyzed																															
	MW18D102015	Normal	North Alluvial	11/2/2015	510	39 J	Not Analyzed																															
	MW18D042015	Normal	North Alluvial	4/8/2015	1100	54 J	Not Analyzed																															
	MW18D102014	Normal	North Alluvial	10/31/2014	100 U	49 J	Not Analyzed																															
MW20	MW20042016	Normal	North Alluvial	4/11/2016	48 J	100 U	1.1 U	0.54 U	0.54 U	1.1 U	1.1 U	1.1 U	32 U	1.1 U	1.1 U	1.1 U	0.54 U	1.1 U	1.1 U	32 U	0.54 U	1.1 U	0.71 J	2.4 U	1.1 U	1.1 U	1.1 U	0.54 U	0.54 U	1.1 U	0.54 U	0.54 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
	MW20102015	Normal	North Alluvial	11/2/2015	130 U	25 U	1.0 U	0.51 U	0.52 UJ	1.0 U	4.1 U	1.0 U	31 U	1.0 U	1.0 U	1.0 U	5.1 UJ	1.0 U	1.0 U	31 U	0.51 UJ	1.0 U	2.0 UJ	2.4 U	1.0 U	1.0 U	1.0 U	0.51 UJ	0.51 UJ	1.0 U	0.51 UJ	0.51 U	1.0 U	1.0 U	1.0 U	1.0 U		
	DMW20102015	Duplicate	North Alluvial	11/2/2015	130 U	25 U	1.1 U	0.56 U	0.26 J	1.1 U	4.5 U	1.1 U	34 U	1.1 U	1.1 U	1.1 U	0.29 UJ	1.1 U	1.1 U	34 U	0.43 UJ	1.1 U	1.6 J	2.4 U	1.1 U	1.1 U	1.1 U	0.26 J	0.22 J	1.1 U	0.28 J	0.56 U	1.1 U	1.1 U	1.1 U	1.1 U		
	MW20042015	Normal	North Alluvial	4/3/2015	77 J	20 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	20 U	0.98 U	0.98 U	0.98 U	4.9 U	0.98 U	0.98 U	49 U	0.98 U	0.98 U	1.6 J	2.5 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U		
	MW20102014	Normal	North Alluvial	10/28/2014	100 U	20 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	21 U	1.0 U	1.0 U	1.0 UJ	5.2 U	1.0 UJ	1.0 UJ	52 U	1.0 U	1.0 U	1.0 UJ	2.6 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 UJ	1.0 UJ		
	DMW20102014	Duplicate	North Alluvial	10/28/2014	110 U	20 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	1.0 U	1.0 U	1.0 UJ	5.0 U	1.0 UJ	1.0 UJ	50 U	1.0 U	1.0 U	0.85 J	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 UJ	1.0 UJ	
MW22D	MW22D042016	Normal	North Alluvial	4/11/2016	41 J	100 U	1.1 U	0.57 U	0.58 U	1.1 U	1.1 U	1.1 U	34 U	1.1 U	1.1 U	1.1 U	0.57 U	1.1 U	1.1 U	34 U	0.57 U	1.1 U	2.3 U	2.4 U	1.1 U	1.1 U	1.1 U	0.57 U	0.57 U	1.1 U	0.57 U	0.57 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
	MW22D102015	Normal	North Alluvial	11/2/2015	72 J	25 U	1.0 U	0.52 U	0.52 U	1.0 U	4.2 U	1.0 U	31 U	1.0 U	1.0 U	1.0 U	5.2 U	1.0 U	1.0 U	31 U	0.52 U	1.0 U	2.1 U	2.4 U	1.0 U	1.0 U	1.0 U	0.52 U	0.52 U	1.0 U	0.52 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
	MW22D042015	Normal	North Alluvial	4/6/2015	44 J	20 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	1.0 U	1.0 U	1.0 U	5.1 U	1.0 U	1.0 U	51 U	1.0 U	1.0 U	1.0 U	2.6 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
	MW22D102014	Normal	North Alluvial	10/29/2014	110 U	20 UJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	21 U	1.0 U	1.0 U	1.0 U	5.2 U	1.0 U	1.0 U	52 U	1.0 U	1.0 U	1.0 U	2.6 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
MW22S	MW22S042016	Normal	North Alluvial	4/7/2016	110 U	100 U	1.1 U	0.53 U	0.54 U	1.1 U	1.1 U	1.1 U	32 U	1.1 U	1.1 U	1.1 U	0.53 U	1.1 U	1.1 U	32 U	0.53 U	1.1 U	1.7 J	2.4 U	1.1 U	1.1 U	1.1 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
	MW22S102015	Normal	North Alluvial	11/2/2015	160 J	25 U	1.1 U	0.54 U	0.54 U	1.1 U	4.3 U	1.1 U	32 U	1.1 U	1.1 U	1.1 U	5.4 U	1.1 U	1.1 U	32 U	0.54 U	1.1 U	1.6 J	2.4 U	1.1 U	1.1 U	1.1 U	0.54 U	0.54 U	1.1 U	0.54 U	0.54 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
	MW22S042015	Normal	North Alluvial	4/1/2015	250 J	20 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	50 UJ	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
	MW22S102014	Normal	North Alluvial	10/22/2014	330	20 UJ	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	21 U	1.1 U	1.1 U	1.1 UJ	5.4 U	1.1 UJ	1.1 UJ	54 U	1.1 U	1.1 U	1.1 U	2.7 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 UJ	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 UJ	1.1 UJ	
MW23	MW23042016	Normal	North Alluvial	4/7/2016	NA	NA	0.98 U	0.49 U	0.50 U	0.98 U	0.98 U	0.98 U	30 U	0.98 U	0.98 U	0.98 U	0.49 U	0.98 U	0.98 U	30 U	0.49 U	0.98 U	0.70 J	2.4 U	0.98 U	0.98 U	0.98 U	0.49 U	0.49 U	0.98 U	0.49 U	0.49 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	
	DMW23042016	Duplicate	North Alluvial	4/7/2016	NA	NA	1.0 U	0.51 U	0.51 U	1.0 U	1.0 U	1.0 U	31 U	1.0 U	1.0 U	1.0 U	0.51 U	1.0 U	1.0 U	31 U	0.51 U	1.0 U	2.0 U	2.4 U	1.0 U	1.0 U	1.0 U	0.51 U	0.51 U	1.0 U	0.51 U	0.51 U	1.0 U	1.0 U	1.0 U	1.0 U		
	MW23102015	Normal	North Alluvial	11/6/2015	NA	NA	1.0 U	0.51 U	0.51 U	1.0 U	4.0 U	1.0 U	30 U	1.0 U	1.0 U	1.0 U	5.1 U	1.0 U	1.0 U	11 J	0.48 J	1.0 U	0.63 J	2.4 U	1.0 U	1.0 U	1.0 U	0.51 U	0.51 U	1.0 U	0.51 U	0.51 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
	DMW23102015	Duplicate	North Alluvial	11/6/2015	NA	NA	1.0 U	0.51 U	0.52 U	1.0 U	4.1 U	1.0 U	31 U	1.0 U	1.0 U	1.0 U	5.1 U	1.0 U	1.0 U	11 J	0.32 J	1.0 U	2.1 UJ	2.4 U	1.0 U	1.0 U	1.0 U	0.51 U	0.51 U	1.0 U	0.51 U	0.51 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
	MW23042015	Normal	North Alluvial	4/7/2015	NA	NA	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	20 U	1.0 U	1.0 U	1.0 UJ	5.0 UJ	1.0 U	1.0 U	50 U	1.0 UJ	1.0 U	1.0 UJ	2.5 U	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 U		
	DMW23042015	Duplicate	North Alluvial	4/7/2015	NA	NA	0.97 U	0.28 J	1.0 R	0.30 J	0.37 J	0.97 U	20 R	0.97 U	0.97 U	1.0 R	5.1 R	1.0 R	1.0 R	1.0 R	1.0 R	1.0 R	0.97 U	1.0 R	2.4 U	0.97 U	1.0 R	1.0 R	1.0 R	1.0 R	0.97 U	0.33 J	0.97 U	1.0 R	1.0 R	1.0 R		
	MW23102014	Normal	North Alluvial	10/28/2014	NA	NA	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	20 U	0.9																								

TABLE 5-6
Summary of Semivolatile Organic Compounds and Total Petroleum Hydrocarbons Analytical Results (Page 2 of 4)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

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5.0 Analytical Results

TABLE 5-6

Summary of Semivolatile Organic Compounds and Total Petroleum Hydrocarbons Analytical Results (Page 3 of 4)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well ID	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8015C (µg/L)		EPA Method 8270C (µg/L)																															
					Diesel Range Organics CAS DR0	Gasoline Range Organics CAS GRO	1,2,4-trichlorobenzene CAS 120-82-1	1,2-dichlorobenzene CAS 95-50-1	1,2-diphenylhydrazine CAS 122-66-7	1,3-dichlorobenzene CAS 541-73-1	1,4-dichlorobenzene CAS 106-46-7	2,4,6-trichlorophenol CAS 88-06-2	2,4-Dinitrophenol CAS 51-28-5	2-chloronaphthalene CAS 91-58-7	2-methylnaphthalene CAS 91-57-6	Acenaphthene CAS 83-32-9	Acetophenone CAS 98-86-2	Benzof(a)anthracene CAS 56-55-3	Benzof(g,h,i)perylene CAS 191-24-2	Benzoic acid CAS 65-85-0	Benzyl alcohol CAS 100-51-6	bis(2-chloroisopropyl) ether CAS 108-60-1	Bis(2-ethylhexyl) phthalate CAS 117-81-7	caprolactam CAS 105-60-2	carbazole CAS 86-74-8	Dibenzofuran CAS 132-64-9	Diethyl phthalate CAS 84-66-2	dimethyl phthalate CAS 131-11-3	Fluoranthene CAS 206-44-0	Fluorene CAS 86-73-7	isophorone CAS 78-59-1	m,p-Cresol CAS MIEPH34	naphthalene CAS 91-20-3	n-nitrosodimethylamine CAS 62-75-9	n-nitroso-di-n-propylamine CAS 621-64-7	n-Nitrosodiphenylamine CAS 86-30-6	phenanthrene CAS 85-01-8	Pyrene CAS 129-00-0
Regulatory Limit																																						
NE	NE	70 ^b	600 ^b	0.78 ^c	NE	75 ^b	41 ^c	39 ^c	750 ^c	30 ^a	530 ^a	1900 ^c	30 ^a	30 ^a	75000 ^c	2000 ^c	710 ^c	6 ^b	9900 ^c	NE	7.9 ^c	15000 ^c	NE	30 ^a	30 ^a	780 ^c	NE	30 ^a	0.0011 ^c	0.11 ^c	120 ^c	30 ^a	30 ^a					
TMW40S	TMW40S042016	Normal	North Alluvial	4/11/2016	NA	NA	1.0 U	0.50 U	0.51 U	1.0 U	1.0 U	1.0 U	16 J	1.0 U	1.0 U	1.0 U	30 U	0.50 U	1.0 U	2.0 U	2.4 U	1.0 U	1.0 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U			
	TMW40S102015	Normal	North Alluvial	10/29/2015	NA	NA	1.0 U	0.52 U	0.53 U	1.0 U	4.2 U	1.0 U	19 J	1.0 U	1.0 U	1.0 U	31 U	0.52 U	1.0 U	2.1 U	2.4 U	1.0 U	1.0 U	0.52 U	0.52 U	1.0 U	0.52 U	0.52 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U			
	TMW40S042015	Normal	North Alluvial	4/1/2015	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	15 J	1.0 U	1.0 U	1.0 U	52 U	1.0 U	1.0 U	1.0 U	2.6 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U			
	TMW40S102014	Normal	North Alluvial	10/23/2014	NA	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	56 U	1.1 U	1.1 U	0.69 J	2.8 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U			
TMW41	TMW41042016	Normal	North Alluvial	4/7/2016	NA	NA	1.1 U	0.56 U	0.57 U	1.1 U	1.1 U	1.1 U	34 U	1.1 U	1.1 U	1.1 U	0.56 U	1.1 U	1.1 U	1.1 U	2.4 U	1.1 U	1.1 U	1.1 U	0.56 U	0.56 U	1.1 U	0.56 U	0.56 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U		
	TMW41102015	Normal	North Alluvial	10/29/2015	NA	NA	1.0 U	0.51 U	0.52 U	1.0 U	4.1 U	1.0 U	31 U	1.0 U	1.0 U	1.0 U	5.1 U	1.0 U	1.0 U	2.0 U	2.4 U	1.0 U	1.0 U	0.51 U	0.51 U	1.0 U	0.51 U	0.51 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U			
	TMW41042015	Normal	North Alluvial	4/1/2015	NA	NA	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	20 U	0.99 U	0.99 U	0.99 U	5.0 U	0.99 U	0.99 U	1.0 J	2.5 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U			
	TMW41102014	Normal	North Alluvial	10/23/2014	NA	NA	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	21 U	0.99 U	0.99 U	1.0 U	5.1 U	1.0 U	1.0 U	0.86 J	2.6 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.99 U	1.0 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U		
TMW43	TMW43042016	Normal	North Alluvial	4/13/2016	NA	NA	0.95 U	0.48 U	0.48 U	0.95 U	0.95 U	0.95 U	29 U	0.95 U	0.95 U	0.95 U	0.48 U	0.95 U	0.95 U	29 U	0.48 U	0.95 U	1.9 U	2.4 U	0.95 U	0.95 U	0.95 U	0.48 U	0.48 U	0.95 U	0.48 U	0.48 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	
	DTW43042016	Duplicate	North Alluvial	4/13/2016	NA	NA	1.0 U	0.50 U	0.51 U	1.0 U	1.0 U	1.0 U	30 U	1.0 U	1.0 U	1.0 U	0.50 U	1.0 U	1.0 U	30 U	0.50 U	1.0 U	2.0 U	2.4 U	1.0 U	1.0 U	0.50 U	0.50 U	1.0 U	0.21 J	0.50 U	1.0 U	1.0 U	1.0 U	0.26 J	1.0 U		
	TMW43102015	Normal	North Alluvial	11/3/2015	NA	NA	0.98 U	0.49 U	0.50 U	0.98 U	3.9 U	0.98 U	30 U	0.98 U	0.98 U	0.98 U	4.9 U	0.98 U	0.98 U	30 U	0.30 J	0.98 U	2.0 U	2.4 U	0.98 U	0.98 U	0.98 U	0.49 U J	0.49 U J	0.98 U	0.49 U J	0.49 U	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	
	DTW43102015	Duplicate	North Alluvial	11/3/2015	NA	NA	1.0 U	0.50 U	0.51 U	1.0 U	4.0 U	1.0 U	30 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	30 U	0.50 U J	1.0 U	2.0 U	2.4 U	1.0 U	1.0 U	1.0 U	0.23 J	0.21 J	0.50 U	0.49 U J	0.49 U	1.0 U	1.0 U	1.0 U	0.26 J	1.0 U	
	TMW43042015	Normal	North Alluvial	4/10/2015	NA	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	22 U	1.1 U	1.1 U	1.1 U	5.4 U	1.1 U	1.1 U	54 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U		
	DTW43042015	Duplicate	North Alluvial	4/10/2015	NA	NA	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	19 U	0.97 U	0.97 U	0.97 U	4.9 U	0.97 U	0.97 U	49 U	0.97 U	0.97 U	0.97 U	2.4 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U		
	TMW43102014	Normal	North Alluvial	10/31/2014	NA	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	22 U	1.1 U	1.1 U	1.1 U	5.4 U	1.1 U	1.1 U	54 U	1.1 U	1.1 U	1.1 U	2.7 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
TMW44	TMW43102014	Normal	North Alluvial	10/31/2014	NA	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	21 U	1.1 U	1.1 U	1.1 U	5.3 U	1.1 U	1.1 U	53 U	1.1 U	1.1 U	1.1 U	2.6 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
	TMW44042016	Normal	North Alluvial	4/8/2016	NA	NA	1.1 U	0.54 U	0.54 U	1.1 U	1.1 U	1.1 U	32 U	1.1 U	1.1 U	1.1 U	0.54 U	1.1 U	1.1 U	32 U	0.54 U	1.1 U	2.2 U	2.4 U	1.1 U	1.1 U	0.54 U	0.54 U	1.1 U	0.54 U	0.54 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
	TMW44102015	Normal	North Alluvial	10/29/2015	NA	NA	0.95 U	0.48 U	0.48 U	0.95 U	3.8 U	0.95 U	29 U	0.95 U	0.95 U	0.95 U	4.8 U	0.95 U	0.95 U	11 J	0.48 U	0.95 U	1.9 U	2.4 U	0.95 U	0.95 U	0.95 U	0.48 U	0.48 U	0.95 U	0.48 U	0.48 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	
	TMW44042015	Normal	North Alluvial	4/1/2015	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 J	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	50 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
TMW44102014	Normal	North Alluvial	10/23/2014	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	1.0 U	1.0 U	1.0 U	5.1 U	1.0 U	1.0 U	51 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
TMW45	TMW45042016	Normal	North Alluvial	4/14/2016	NA	NA	1.2 U	0.58 U	0.58 U	1.2 U	1.2 U	1.2 U	35 U	1.2 U	1.2 U	1.2 U	0.58 U	1.2 U	1.2 U	1.2 U	0.58 U	1.2 U	2.3 U	2.4 U	1.2 U	1.2 U	1.2 U	0.58 U	0.58 U	1.2 U	0.58 U	0.58 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	
	TMW45102015	Normal	North Alluvial	11/3/2015	NA	NA	1.1 U	0.53 U	0.53 U	1.1 U	4.2 U	1.1 U	32 U	1.1 U	1.1 U	1.1 U	5.3 U	1.1 U	1.1 U	32 U	0.53 U	1.1 U	2.1 U	2.4 U	1.1 U	1.1 U	1.1 U	0.53 U	0.53 U	1.1 U	0.53 U	0.53 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
	TMW45042015	Normal	North Alluvial	4/9/2015	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	21 U	1.0 U	1.0 U	1.0 U	5.2 U	1.0 U	1.0 U	10 J	1.0 U	1.0 U	1.0 U	2.6 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
	TMW45102014	Normal	North Alluvial	10/29/2014	NA	NA	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	22 U	1.1 U	1.1 U	1.1 U	5.5 U	1.1 U	1.1 U	55 U	1.1 U	1.1 U	1.1 U	2.7 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
TMW46	TMW46042016	Normal	North Alluvial	4/7/2016	NA	NA	1.2 U	0.59 U	0.60 U	1.2 U	1.2 U	1.2 U	35 U	1.2 U	1.2 U	1.2 U	0.59 U	1.2 U	1.2 U	35 U	0.59 U	1.2 U	0.84 J	2.4 U	1.2 U	1.2 U	1.2 U	0.59 U	0.59 U	1.2 U	0.59 U	0.59 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	
	TMW46102015	Normal	North Alluvial	10/29/2015	NA	NA	1.0 U	0.51 U	0.52 U	1.0 U	4.1 U	1.0 U	31 U	1.0 U	1.0 U	1.0 U	5.1 U	1.0 U	1.0 U	31 U	0.51 U	1.0 U	2.0 U	2.4 U	1.0 U	1.0 U	1.0 U	0.51 U	0.51 U	1.0 U	0.51 U	0.51 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
	TMW46042015	Normal	North Alluvial	4/2/2015	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	50 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
	TMW46102014	Normal	North Alluvial	10/23/2014	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	20 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	50 U	1.0 U	1.0 U	1.0 U	2.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
TMW14A	TMW14A042016	Normal	North Bedrock	4/14/2016	NA	NA	1.1 U	0.54 U	0.55 U	1.1 U	1.1 U	1.1 U	33 U	1.1 U	1.1 U	1.1 U	0.54 U	1.1 U	1.1 U	33 U	0.54 U	1.1 U	2.2 U	2.4 U	1.1 U	1.1 U	0.44 J	0.54 U	0.54 U	1.1 U	0.54 U	0.54 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	
	TMW14A102015	Normal	North Bedrock	11/3/2015	NA	NA	1.0 U	0.51 U	0.51 U	1.0 U	4.1 U	1.0 U	31 U	1.0 U	1.0 U	1.0 U	5.1 U	1.0 U	1.0 U	31 U	0.51 U	1.0 U	2.0 U	2.4 U	1.0 U	1.0 U	1.0 U	0.51 U	0.51 U	1.0 U	0.51 U	0.51 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
	TMW14A042015	Normal	North Bedrock	4/8/2015	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	21 U	1.0 U	1.0 U	1.0 U	5.2 U	1.0 U	1.0 U	52 U	1.0 U	1.0 U	1.0 U	2.6 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
	TMW14A102014	Normal	North Bedrock	10/29/2014	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	21 U	1.0 U	1.0 U	1.0 U	5.2 U	1.0 U	1.0 U	52 U	1.0 U	1.0 U	1.0 U	2.6 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
TMW16	TMW16042016	Normal	North Bedrock	4/7/2016	NA	NA	0.95 U	0.48 U																														

TABLE 5-6
Summary of Semivolatile Organic Compounds and Total Petroleum Hydrocarbons Analytical Results (Page 4 of 4)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Notes:

^a New Mexico Water Quality Control Commission Standard - New Mexico Administrative Code Title 20, Chapter 6, Part 2, Section 3103.

^b EPA Maximum Contaminant Level - *Code of Federal Regulations* Title 40, Parts 141, 142, and 143.

^c EPA Region 6, Regional Screening Levels, (formerly Human Health Medium Specific Screening Levels) (EPA, 2016).

^d Well was dry and was not sampled this event.

Bold indicates analyte was positively detected above regulatory limits.

If no detection occurred for total petroleum hydrocarbons or semivolatile organic compounds in the past four events, no non-detect or historical data are presented.

µg/L = microgram(s) per liter

CAS = Chemical Abstracts Service (registry number)

DRO = diesel range organic compounds

EPA = U.S. Environmental Protection Agency

GRO = gasoline range organic compounds

NA = not analyzed

NE = not established

J = analyte was positively identified; reported value is estimated.

R = rejected during validation; result is unusable for any purpose.

U = non-detected result reported at the limit of detection.

UJ = analyte was not detected; however, the result is estimated because of discrepancies.

TABLE 5-7

Summary of Pesticides Analytical Results*Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity*

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8081 (µg/L)		
					Beta-hexachlorocyclohexane (beta-bhc) CAS 319-85-7	Delta-hexachlorocyclohexane (delta-bhc) CAS 319-86-8	Endosulfan CAS 959-98-8
					Regulatory Limit		
					0.25 ^a	NE	NE
TMW40S	TMW40S042016	Normal	North Alluvial	4/7/2016	0.021 U	0.018 J	0.021 U
	TMW40S102015	Normal	North Alluvial	10/28/2015	0.019 U	0.019 U	0.019 U
	TMW40S042015	Normal	North Alluvial	4/2/2015	0.023 U	0.023 U	0.023 U
	TMW40S102014	Normal	North Alluvial	10/22/2014	0.022 U	0.022 U	0.083
TMW38	TMW38042016	Normal	North Bedrock	4/14/2016	0.023 U	0.023 U	0.023 U
	TMW38102015	Normal	North Bedrock	11/6/2015	0.021 UJ	0.021 UJ	0.021 UJ
	TMW38042015	Normal	North Bedrock	4/8/2015	0.023 UJ	0.023 UJ	0.023 UJ
	TMW38102014	Normal	North Bedrock	10/28/2014	0.017 J	0.021 UJ	0.021 UJ

Notes:

^a EPA Region 6, Regional Screening Levels (formerly Human Health Medium Specific Screening Levels) (EPA, 2016)

If no detection occurred for pesticide compounds during the last four events, no non-detect or historical data are presented.

µg/L = microgram(s) per liter

CAS = Chemical Abstracts Service (registry number)

EPA = U.S. Environmental Protection Agency

J = analyte was positively identified; reported value is estimated

NE = not established

U = non-detected result reported at the limit of detection

UJ = analyte was not detected; however, the result is estimated because of discrepancies in meeting certain analyte-specific quality control criteria.

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TABLE 5-8
Summary of Dissolved Metals Analytical Detections (Page 1 of 7)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																								EPA Method 7470 (µg/L)
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6		
					Regulatory Limits																								
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c		
BGMW01	BGMW01042016	Normal	North Alluvial	4/15/2016	70 U	1.0 U	0.80 J	16	0.30 U	1.0 U	42000	1.8 U	0.29 J	1.3 J	85 U	0.70 U	23000	170	1.6 J	1500 U	2.0 U	0.10 U	520000	0.20 U	1.7 J	3.4 U	0.080 U		
	BGMW01102015	Normal	North Alluvial	11/5/2015	150 U	1.0 U	0.74 J	14	0.30 U	1.0 U	38000	1.8 U	0.30 J	1.8 U	25 J	0.70 U	23000	160	1.7 J	670 J	2.0 U	0.055 J	750000	0.20 U	1.4 J	8.0 U	0.080 U		
	BGMW01042015	Normal	North Alluvial	4/2/2015	31 U	0.60 U	0.73 J	16	0.24 U	0.40 U	51000 J	1.5 U	0.29 J	1.5 U	30 U	0.50 U	24000	150	2.1 J	540 J	2.0 U	0.10 U	790000	0.20 U	2.8 J	6.0 U	0.080 U		
	BGMW01102014	Normal	North Alluvial	10/24/2014	31 U	0.60 U	0.95 J	16 J	0.24 U	0.12 U	40000	1.5 U	0.33 J	0.58 J	22 J	0.50 U	24000	190	1.5 J	620 J	2.0 U	0.10 U	920000	0.20 U	1.7 J	6.6 J	0.080 U		
BGMW02	BGMW02042016	Normal	North Alluvial	4/14/2016	70 U	1.0 U	0.87 J	16	0.30 U	1.0 U	83000	1.8 U	0.066 J	0.90 J	85 U	0.70 U	110000	75	0.57 J	1600 U	67	0.10 U	980000	0.20 U	6.6	8.0 U	0.080 U		
	BGMW02102015	Normal	North Alluvial	11/5/2015	150 U	1.0 U	0.92 J	17	0.30 U	1.0 U	89000	1.8 U	0.20 U	1.4 J	50 U	0.70 U	120000	71	1.2 J	930 J	66	0.10 U	980000	0.20 U	6.6	2.0 J	0.080 U		
	BGMW02042015	Normal	North Alluvial	4/2/2015	31 U	0.60 U	0.79 J	16	0.24 U	0.40 U	91000 J	1.5 U	0.071 J	0.79 J	55 J	0.50 U	120000	72	0.90 U	670 J	67	0.10 U	1000000	0.20 U	6.3	6.0 U	0.080 U		
	BGMW02102014	Normal	North Alluvial	10/24/2014	31 UJ	0.70 J	1.1 J	19 J	0.24 U	0.12 U	84000 J	1.5 U	0.86 J	1.0 J	30 UJ	0.50 U	120000	78	0.72 J	770 J	110 J	0.10 U	1000000	0.20 U	7.7 J	6.0 U	0.080 U		
BGMW03	BGMW03042016	Normal	North Alluvial	4/8/2016	230 J	1.0 U	1.1 J	36	0.30 U	1.0 U	97000	0.73 J	0.34 J	1.3 J	150	0.19 J	19000	58	0.86 J	3300	23	0.10 UJ	710000	0.20 U	6.9	2.3 J	0.080 U		
	BGMW03102015	Normal	North Alluvial	10/30/2015	70 U	1.0 U	2.3 J	23	0.30 U	1.0 U	55000	0.61 J	0.18 J	3.3	85 U	0.70 U	13000	11 J	1.4 J	1900 J	38	0.10 U	760000	0.20 U	12	8.0 U	0.027 J		
	BGMW03042015	Normal	North Alluvial	4/1/2015	31 U	0.60 U	2.1 J	28 J	0.24 U	0.40 U	63000	1.5 U	0.19 J	3.5	30 UJ	0.50 U	14000	24	0.89 J	1700 J	38	0.10 U	690000	0.20 U	12	2.3 J	0.080 U		
	BGMW03102014	Normal	North Alluvial	10/22/2014	31 U	0.60 U	1.7 J	28	0.24 U	0.12 U	69000	1.5 U	0.17 J	2.6	30 U	0.50 U	14000	24	0.55 U	1800 J	34	0.10 U	810000	0.20 U	11	6.0 U	0.080 U		
FW31	FW31042016	Normal	North Alluvial	4/7/2016	70 U	0.74 U	6.8	13 J	0.16 J	1.0 U	6600	0.72 J	0.20 U	1.4 J	85 U	0.70 U	2300	1.2 U	0.46 J	1500 J	2.0 U	0.10 U	540000	0.17 U	11	2.6 U	0.080 U		
	FW3112015	Normal	North Alluvial	11/2/2015	51 J	1.0 U	6.5	15	0.30 U	1.0 U	7100	0.59 J	0.20 U	0.73 J	37 J	0.37 J	2400	4	0.55 U	1600 J	2.0 U	0.10 U	480000	0.20 U	11	3.1 J	0.080 U		
	FW31042015	Normal	North Alluvial	4/1/2015	31 U	0.51 J	8.3	11 J	0.17 J	0.40 U	6700	0.77 J	0.058 J	1.0 J	30 U	0.50 U	2400	0.43 U	0.90 U	1700 J	2.0 U	0.61 J	500000	0.22 J	12	6.0 U	0.080 U		
	FW31102014	Normal	North Alluvial	10/22/2014	86 J	0.60 U	6.5	14	0.24 U	0.12 U	6900	0.79 J	0.10 U	1.5 U	45 J	0.50 U	2300	3.7	0.31 U	1700 J	2.0 U	0.10 U	550000	0.20 U	12	6.0 U	0.080 U		
FW35	FW35102016	Normal	North Alluvial	4/2016	Well was dry and not sampled this event																								
	FW35102015	Normal	North Alluvial	10/2015	Well was dry and not sampled this event																								
	FW35042015	Normal	North Alluvial	4/2/2015	31 U	0.60 U	1.0 U	18	0.24 U	0.40 U	330000 J	1.5 U	0.70 J	3.7	260	0.50 U	120000	450	1.4 J	720 J	2.0 U	0.10 U	59000	0.20 U	1.9 J	4.6 J	0.080 U		
	FW35102014	Normal	North Alluvial	10/2014	Not sampled for this event ^d																								
MW01	MW01042016	Normal	North Alluvial	4/6/2016	1800	1.0 U	0.61 J	29	0.083 J	1.0 U	38000	1.1 J	0.44 J	2	990	0.55 J	8500	29 J	1.5 J	1300 J	18	0.10 U	1100000	0.20 U	3.0 J	12 J	0.080 U		
	MW01102015	Normal	North Alluvial	10/28/2015	5400	1.0 U	1.2 J	59	0.36 J	1.0 U	37000	3.4 J	1.4	3.3	3200	2.0 J	9900	110	3.7	1900 J	17	0.10 U	940000	0.20 U	7.9	24	0.080 U		
	MW01042015	Normal	North Alluvial	4/1/2015	510	0.60 U	0.58 J	21 J	0.24 U	0.40 U	34000	0.76 J	0.19 J	2.1	330	0.27 J	8000	26	0.92 J	690 J	19	0.10 U	880000	0.20 U	2.6 J	13 J	0.080 U		
	MW01102014	Normal	North Alluvial	10/23/2014	500	0.60 U	0.73 J	23	0.24 U	0.12 U	32000	0.83 J	0.20 J	1.9 J	310	0.25 J	7800	30	1.1 J	770 J	21 J	0.10 U	770000 J	0.20 U	2.8 J	11 J	0.080 U		
MW02	MW02042016	Normal	North Alluvial	4/6/2016	130 J	1.0 U	1.0 U	32	0.30 U	1.0 U	130000	1.8 U	0.087 J	0.81 J	75 J	0.70 U	31000	4.9 J	1.0 U	910 J	15	0.10 U	450000	0.20 U	0.95 J	20	0.080 U		
	MW02102015	Normal	North Alluvial	10/28/2015	70 U	1.0 U	1.0 U	35	0.30 U	1.0 U	130000	1.8 U	0.20 U	2	85 U	0.70 U	32000	4.4	0.56 J	930 J	15	0.10 U	410000	0.20 U	0.76 J	23	0.080 U		
	MW02042015	Normal	North Alluvial	4/1/2015	36 J	0.60 U	1.0 U	29 J	0.24 U	0.40 U	130000	0.50 J	0.11 J	1.2 J	34 J	0.50 U	30000	30	0.83 J	910 J	17	0.10 U	380000	0.066 J	1.3 J	38	0.080 U		
	MW02102014	Normal	North Alluvial	10/24/2014	31 U	0.60 U	1.0 U	26 J	0.24 U	0.12 U	140000	1.5 U	1.1	1.2 J	32 J	0.50 U	35000	15	0.75 J	640 J	12 J	0.10 U	450000	0.20 U	1.0 J	8.1 J	0.080 U		
MW03	MW03042016	Normal	North Alluvial	4/12/2016	70 U	1.0 U	1.0 U	8.7	0.30 U	1.0 U	58000	1.8 U	0.092 J	0.92 J	85 U	0.70 U	11000	46	0.85 J	450 J	23	0.10 U	1100000	0.20 U	1.5 J	2.7 J	0.080 U		
	MW03102015	Normal	North Alluvial	10/30/2015	70 U	1.0 U	0.38 J	7.8	0.30 U	1.0 U	56000	1.8 U	0.086 J	1.2 J	85 U	0.70 U	11000	47 J	0.43 J	500 J	22	0.10 U	1100000	0.20 U	1.1 J	4.5 J	0.080 U		
	MW03042015	Normal	North Alluvial	4/3/2015	31 U	0.60 U	0.38 J	8.5	0.24 U	0.40 U	54000	1.5 U	0.11 J	0.91 J	30 U	0.50 U	11000	43	0.72 J	780 J	24	0.10 U	1200000	0.20 U	0.92 J	4.7 J	0.080 U		
	MW03102014	Normal	North Alluvial	10/24/2014	31 U	0.60 U	0.46 J	9.2 J	0.24 U	0.12 U	57000	1.5 U	0.10 J	1.3 J	30 U	0.50 U	11000	46	0.60 J	680 J	31 J	0.10 U	1100000	0.20 U	1.3 J	6.4 J	0.080 U		
MW18D	MW18D042016	Normal	North Alluvial	4/12/2016	100 J	0.67 J	1.4 J	18	0.30 U	1.0 U	66000	1.8 U	1.1	4.3	65 J	1.2 J	17000	670	2.7 J	870 J	2.0 U	0.10 U	1900000	0.20 U	22	51	0.080 U		
	MW18D102015	Normal	North Alluvial	11/2/2015	70 U	0.92 J	1.7 J	17	0.30 U	1.0 U	72000	1.8 U	0.78 J	1.8 J	23 J	0.70 U	19000	580	3.2 U	1700 J	0.82 J	0.039 U	2000000	0.20 U	36	110 J	0.080 U		
	MW18D042015	Normal	North Alluvial	4/8/2015	49 J	0.51 J	0.78																						

5.0 Analytical Results

TABLE 5-8

Summary of Dissolved Metals Analytical Detections (Page 2 of 7)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																								EPA Method 7470 (µg/L)
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6		
					Regulatory Limits																								
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c		
MW22D	MW22D042016	Normal	North Alluvial	4/11/2016	70 U	1.0 U	0.33 J	11	0.30 U	1.0 U	83000	1.8 U	0.17 J	0.85 J	85 U	0.70 U	17000	130	0.53 J	490 J	40	0.10 U	1000000	0.20 U	1.4 U	30	0.080 U		
	MW22D102015	Normal	North Alluvial	11/2/2015	70 U	1.0 U	1.0 U	10	0.30 U	1.0 U	89000	1.8 U	0.18 J	1.0 J	22 J	0.70 U	17000	130	0.98 U	720 J	38	0.10 U	1200000	0.20 U	1.2 J	7.4 J	0.080 U		
	MW22D042015	Normal	North Alluvial	4/6/2015	31 U	0.60 U	0.45 J	10	0.24 U	0.40 U	73000	1.5 U	0.19 J	1.5 U	30 U	0.50 U	16000	120	0.91 J	460 J	38	0.10 U	1100000	0.20 U	1.2 J	120 J	0.080 U		
	MW22D102014	Normal	North Alluvial	10/29/2014	31 U	0.60 U	0.40 J	12	0.24 U	0.12 U	89000	1.5 U	0.19 J	1.0 J	30 U	0.50 U	16000	130	0.94 J	860 J	38	0.10 U	1300000	0.20 U	1.4 J	9.2 J	0.080 U		
MW22S	MW22S042016	Normal	North Alluvial	4/13/2016	370	1.0 U	1.0 J	16	0.30 U	1.0 U	85000	0.66 J	0.18 J	3.7	290 J	0.95 J	20000	21 J	1.5 J	910 J	28	0.10 U	980000	0.20 U	2.1 J	13 J	0.080 U		
	MW22S102015	Normal	North Alluvial	10/29/2015	120 J	0.76 J	0.59 J	11	0.30 U	1.0 U	86000	1.8 U	0.36 J	3	77 J	1.7 J	19000	61	1.8 J	1300 J	26	0.10 J	960000	0.084 J	2.1 J	8.3 J	0.080 U		
	MW22S042015	Normal	North Alluvial	4/8/2015	2700	0.60 U	0.95 J	39	0.085 J	0.40 U	99000	1.3 J	0.66 J	3.6	1300	1.7 J	22000	44	1.8 J	1300 J	24	0.10 U	900000	0.087 U	3.7 J	7.5 J	0.080 U		
	MW22S102014	Normal	North Alluvial	10/24/2014	640	0.60 U	0.89 J	9.8 J	0.24 U	0.12 U	89000	1.5 U	0.26 J	3.1	310	0.58 U	20000	52	1.3 J	950 J	31 J	0.10 U	920000	0.20 U	2.8 J	4.7 J	0.080 U		
MW23	MW23042016	Normal	North Alluvial	4/7/2016	210 J	1.0 U	0.95 J	200 J	0.30 U	1.0 U	12000	1.8 U	0.60 J	1.8 U	220	0.70 U	5600	65	1.5 J	1300 J	2.0 U	0.10 U	530000	0.20 U	3.4 J	2.0 U	0.080 U		
	DMW23042016	Duplicate	North Alluvial	4/7/2016	460	1.0 U	1.2 J	210 J	0.30 U	1.0 U	12000	1.8 U	0.75 J	0.71 J	300	0.22 J	5400	69	1.6 J	1300 J	0.75 J	0.10 U	470000	0.20 U	4.2 J	2.1 U	0.080 U		
	MW23102015	Normal	North Alluvial	11/6/2015	79 J	1.0 U	1.2 J	140 J	0.30 U	1.0 U	10000	1.8 U	1.2	1.7 J	57 J	0.24 J	4200	83	2.2 J	1400	2.0 U	0.10 U	490000	0.20 U	13	8.0 U	0.080 U		
	DMW23102015	Duplicate	North Alluvial	11/6/2015	150 UJ	1.0 U	1.2 J	140 J	0.10 J	1.0 U	10000	1.8 U	1.1	2.1	29 J	0.70 U	4400	79	2.9 J	1600	2.0 U	0.10 U	490000	0.20 U	8.5	2.0 J	0.080 U		
	MW23042015	Normal	North Alluvial	4/7/2015	31 UJ	0.60 U	0.94 J	130	0.24 U	0.40 U	11000	1.5 U	1.1	1.3 J	30 UJ	0.50 U	4700	82	3.1	1500 J	1.4 UJ	0.10 UJ	470000 J	0.20 UJ	6.7	3.9 J	0.080 U		
	DMW23042015	Duplicate	North Alluvial	4/7/2015	68 J	0.60 U	1.1 J	130	0.24 U	0.40 U	10000	1.5 U	0.99 J	1.2 J	47 J	0.50 U	4500	78	2.2 J	1600 J	2.0 UJ	0.033 J	460000 J	0.059 J	7.5	6.0 UJ	0.080 U		
	MW23102014	Normal	North Alluvial	10/28/2014	31 U	0.60 U	1.1 J	140	0.24 U	0.12 U	10000	1.5 U	0.99 J	0.95 J	30 U	0.50 U	4500	86	2.1 J	1300 J	2.0 UJ	0.10 U	480000	0.20 UJ	5.6 J	6.0 UJ	0.080 UJ		
	DMW23102014	Duplicate	North Alluvial	10/28/2014	31 U	0.60 U	1.1 J	140	0.24 U	0.12 U	10000	1.5 U	1	0.83 J	30 U	0.50 U	4600	89	1.9 J	1300 J	1.0 J	0.10 U	470000	0.059 J	5.7 J	3.9 J	0.080 UJ		
MW24	MW24042016	Normal	North Alluvial	4/6/2016	70 U	1.0 U	0.72 J	270	0.30 U	1.0 U	35000	1.8 U	0.067 J	1.8 U	1800	0.70 U	11000	440 J	1.0 U	1100 J	2.0 U	0.10 U	270000	0.20 U	0.65 J	8.0 U	0.080 U		
	DMW24042016	Duplicate	North Alluvial	4/6/2016	21 J	1.0 U	0.72 J	280	0.30 U	1.0 U	32000	1.8 U	0.070 J	1.8 U	1600	0.70 U	11000	420 J	0.60 J	1100 J	2.0 U	0.10 U	270000	0.20 U	0.62 J	8.0 U	0.080 U		
	MW24102015	Normal	North Alluvial	11/5/2015	150 U	1.0 U	0.78 J	300	0.30 U	1.0 U	33000	1.8 U	0.20 U	1.8 U	1800	0.70 U	11000	450	1.0 U	1200	2.0 U	0.10 U	260000	0.20 U	2.0 U	8.0 U	0.080 U		
	MW24042015	Normal	North Alluvial	4/6/2015	31 U	0.60 U	0.65 J	290	0.24 U	0.40 U	32000	1.5 U	0.056 J	1.5 U	1900	0.50 U	11000	450	0.90 U	790 J	2.0 U	0.10 U	260000	0.20 U	0.56 J	4.3 J	0.080 U		
	DMW24042015	Duplicate	North Alluvial	4/6/2015	31 U	0.60 U	0.60 J	290	0.24 U	0.40 U	30000	1.5 U	0.065 J	1.5 U	1900	0.50 U	11000	440	0.90 U	790 J	2.0 U	0.10 U	270000	0.20 U	1.0 UJ	6.0 UJ	0.080 U		
	MW24102014	Normal	North Alluvial	10/27/2014	160 U	0.60 UJ	0.53 J	240 J	0.24 U	0.12 UJ	35000	1.5 U	0.086 J	1.5 UJ	2000	0.50 UJ	11000	370 J	0.90 UJ	1100 J	2.0 U	0.10 UJ	280000	0.20 UJ	1.0 UJ	2.8 J	0.080 UJ		
	DMW24102014	Duplicate	North Alluvial	10/27/2014	160 U	0.60 UJ	0.76 J	250 J	0.24 U	0.12 UJ	34000	1.5 U	0.060 J	1.5 UJ	2000	0.50 UJ	11000	390 J	0.90 UJ	1100 J	2.0 U	0.10 UJ	280000	0.20 UJ	1.0 UJ	6.0 UJ	0.080 UJ		
SMW01	SMW01042016	Normal	North Alluvial	4/8/2016	70 U	1.0 U	1.0 J	32	0.30 U	1.0 U	34000	1.8 U	0.17 J	1.8 U	91 J	0.70 U	11000	92	1.8 J	830 J	2.0 U	0.10 UJ	950000	0.20 U	2.1 J	8.0 U	0.080 U		
	SMW011102015	Normal	North Alluvial	11/3/2015	150 U	0.44 J	1.1 J	36	0.30 U	1.0 U	35000	1.8 U	0.10 J	1.3 J	50 U	0.70 U	11000	67	1.6 J	860 J	2.0 U	0.10 U	890000	0.20 U	2.3 J	3.7 J	0.080 U		
	SMW01042015	Normal	North Alluvial	4/8/2015	87 J	0.52 J	0.89 J	30	0.24 U	0.40 U	30000	1.5 U	0.28 J	1.5 U	64 J	0.50 U	9900	130	1.7 J	630 J	2.0 U	0.10 U	790000	0.20 U	2.0 J	2.9 J	0.080 U		
	SMW01102014	Normal	North Alluvial	10/27/2014	31 U	0.60 UJ	0.61 J	23 J	0.24 U	0.12 UJ	31000	1.5 U	0.11 J	0.56 J	30 U	0.50 UJ	10000	74 J	1.2 J	820 J	2.0 U	0.10 UJ	850000	0.20 UJ	1.6 J	6.0 U	0.080 UJ		
TMW01	TMW01042016	Normal	North Alluvial	4/8/2016	70 U	1.0 U	0.71 J	11	0.30 U	1.0 U	110000	1.8 U	0.20 U	5.8	85 U	0.70 U	19000	8.7	0.44 J	620 J	5.6	0.10 UJ	590000	0.20 U	12	8.0 U	0.080 U		
	TMW01102015	Normal	North Alluvial	11/4/2015	150 U	0.62 J	0.76 J	11	0.27 J	1.0 U	120000	0.64 J	0.12 J	6.8	50 U	0.70 U	20000	9.9	1.1 J	630 J	5.4	0.040 J	560000	0.10 J	13	2.5 J	0.080 U		
	TMW01042015	Normal	North Alluvial	4/7/2015	31 U	0.60 U	0.88 J	12	0.24 U	0.40 U	110000	0.52 J	0.10 U	8.4	30 U	0.50 U	19000	11	0.36 J</										

5.0 Analytical Results

TABLE 5-8

Summary of Dissolved Metals Analytical Detections (Page 3 of 7)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																									EPA Method 7470 (µg/L)
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6			
					Regulatory Limits																									
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c			
TMW07	TMW07042016	Normal	North Alluvial	4/8/2016	70 U	1.0 U	1.6 J	20	0.30 U	1.0 U	44000	1.8 U	0.30 J	1.8 U	85 U	0.70 U	8000	270	1.3 J	12000	2.0 U	0.10 UJ	1300000	0.20 U	1.0 J	8.0 U	0.080 U			
	TMW07102015	Normal	North Alluvial	10/30/2015	70 U	1.0 U	2.1 J	24	0.30 U	1.0 U	38000	1.8 U	0.37 J	0.64 J	85 U	0.70 U	7800	200 J	2.4 J	12000	2.0 U	0.10 U	1200000	0.20 U	1.5 J	3.2 J	0.080 U			
	TMW07042015	Normal	North Alluvial	4/1/2015	31 U	0.60 U	1.1 J	21 J	0.24 U	0.40 U	56000	1.5 U	0.65 J	0.64 J	39 J	0.50 U	9800	380	2.3 J	5700	2.0 U	0.10 U	1200000	0.20 U	4.2 J	4.1 J	0.080 U			
	TMW07102014	Normal	North Alluvial	10/23/2014	31 U	0.44 J	0.97 J	27	0.24 U	0.12 U	860000	1.5 U	1.4	1.5 U	24 J	0.50 U	300000	380	1.9 J	20000	2.0 U	0.10 UJ	1800000 J	0.20 U	5.0 J	4.5 J	0.080 U			
TMW08	TMW08042016	Normal	North Alluvial	4/12/2016	70 U	1.0 U	0.42 J	11	0.30 U	1.0 U	240000	1.8 U	0.54 J	3.4	320	0.70 U	69000	370	1.5 J	2300 J	41	0.10 U	4100000	0.20 U	1.4 J	5.2 J	0.080 U			
	TMW08102015	Normal	North Alluvial	11/5/2015	150 U	1.0 U	0.47 J	10	0.30 U	1.0 U	250000	1.8 U	0.46 J	2.4	140	0.70 U	73000	330	2.1 J	3800	35	0.041 J	4200000	0.20 U	1.3 J	6.3 J	0.080 U			
	TMW08042015	Normal	North Alluvial	4/8/2015	31 U	0.60 U	0.37 J	11	0.24 U	0.40 U	220000	1.5 U	0.48 J	1.4 J	57 J	0.50 U	66000	300	1.5 J	3600	36	0.10 U	3900000	0.20 U	1.0 U	6.5 J	0.080 U			
	TMW08102014	Normal	North Alluvial	10/29/2014	31 U	0.60 U	0.36 J	7.6	0.24 U	0.12 U	330000	1.5 U	0.24 J	1.5 J	36 J	0.50 U	77000	290	1.1 J	4700	18	0.10 U	4400000	0.20 U	0.57 J	4.1 J	0.080 U			
TMW10	TMW10042016	Normal	North Alluvial	4/12/2016	70 U	1.0 U	0.58 J	16	0.30 U	1.0 U	73000	1.8 U	0.20 U	4.6	85 U	0.70 U	17000	13	1.1 J	720 J	2.0 U	0.10 U	1800000	0.20 U	3.0 J	2.6 J	0.080 U			
	TMW10102015	Normal	North Alluvial	11/4/2015	150 U	1.0 U	0.55 J	16	0.30 U	1.0 U	74000	1.8 U	0.20 U	17	50 U	0.70 U	17000	9.3	1.3 J	1500	2.0 U	0.10 U	1800000	0.20 U	3.1 J	2.2 J	0.080 U			
	TMW10042015	Normal	North Alluvial	4/7/2015	31 U	0.60 U	0.75 J	18	0.24 U	0.40 U	75000	1.5 U	0.10 U	15	30 U	0.50 U	18000	13	1.0 J	1300 J	2.0 U	0.10 U	1800000 J	0.20 U	2.6 J	6.0 U	0.080 U			
	TMW10102014	Normal	North Alluvial	10/28/2014	31 U	0.60 U	0.57 J	20	0.24 U	0.12 U	74000	1.5 U	0.10 U	0.96 J	30 U	0.50 U	18000	61	0.94 J	860 J	1.3 J	0.10 U	1800000	0.20 U	3.3 J	6.0 U	0.080 UJ			
TMW11	TMW11042016	Normal	North Alluvial	4/11/2016	1200	1.0 U	0.45 J	26	0.30 U	1.0 U	18000	2.1 J	0.24 J	1.8 U	580	0.26 J	3400	12	0.98 J	720 J	15	0.10 U	560000	0.20 U	3.4 U	4.6 J	0.080 U			
	TMW11102015	Normal	North Alluvial	11/5/2015	150 U	1.0 U	0.48 J	30	0.30 U	1.0 U	23000	1.6 J	0.20 U	0.85 J	50 U	0.70 U	3900	4.8	1.6 J	670 J	14	0.10 U	660000	0.20 U	3.7 J	2.9 J	0.080 U			
	TMW11042015	Normal	North Alluvial	4/8/2015	83 J	0.60 U	1.0 U	21	0.24 U	0.40 U	16000	1.4 J	0.10 U	1.5 U	43 J	0.50 U	3000	7.1	0.90 U	770 J	13	0.10 U	510000	0.051 U	1.6 J	3.1 J	0.080 U			
	TMW11102014	Normal	North Alluvial	10/29/2014	31 U	0.60 U	0.45 J	26	0.24 U	0.12 U	19000	1.0 J	0.10 U	1.5 U	30 U	0.50 U	3100	7.8	0.77 J	460 J	15	0.10 U	620000	0.20 U	2.9 J	4.0 J	0.080 U			
TMW13	TMW13042016	Normal	North Alluvial	4/12/2016	70 U	1.0 U	1.0 U	18	0.30 U	1.0 U	27000	0.59 J	0.20 U	1.8 U	85 U	0.70 U	4900	0.95 U	1.0 U	490 J	11	0.10 U	560000	0.20 U	2.4 J	8.0 U	0.080 U			
	TMW13102015	Normal	North Alluvial	11/4/2015	150 U	1.2 J	1.0 U	17	0.30 U	1.0 U	27000	0.69 J	0.20 U	1.8 U	50 U	0.70 U	4900	0.95 U	0.40 J	810 J	11	0.10 U	550000	0.20 U	3.3 J	2.2 J	0.080 U			
	TMW13042015	Normal	North Alluvial	4/9/2015	31 U	0.60 U	1.0 U	17	0.24 U	0.40 U	26000	1.5 U	0.10 U	1.5 U	30 U	0.50 U	5100	0.90 U	0.90 U	810 J	9.9	0.10 U	520000	0.20 U	2.7 J	6.0 U	0.080 U			
	TMW13102014	Normal	North Alluvial	10/27/2014	310 U	0.60 UJ	1.0 U	15 J	0.24 U	0.12 UJ	27000	0.64 J	0.10 U	1.5 UJ	30 U	0.50 UJ	5300	0.90 UJ	0.90 UJ	860 J	9.5	0.10 UJ	600000	0.20 UJ	2.7 J	6.0 U	0.080 UJ			
TMW15	TMW15042016	Normal	North Alluvial	4/13/2016	70 U	1.0 U	1.0 U	22	0.30 U	1.0 U	20000	1.6 J	0.20 U	0.56 J	85 U	0.70 U	3900	0.95 U	0.41 J	630 J	13	0.10 U	600000	0.20 U	1.8 J	6.2 J	0.080 U			
	DTW15042016	Duplicate	North Alluvial	4/13/2016	70 U	1.0 U	1.0 U	22	0.30 U	1.0 U	20000	1.1 J	0.20 U	1.8 U	85 U	0.70 U	3900	0.95 U	1.0 U	580 J	13	0.10 U	590000	0.20 U	1.9 J	7.1 J	0.080 U			
	TMW15102015	Normal	North Alluvial	11/6/2015	150 U	1.0 U	1.0 U	24 J	0.30 U	1.0 U	21000	0.99 J	0.25 J	1.8 U	50 U	0.70 U	3900	0.95 U	1.0 U	720 J	13	0.10 U	580000	0.20 U	1.9 J	6.6 J	0.080 U			
	DTW15102015	Duplicate	North Alluvial	11/6/2015	150 U	1.0 U	0.35 J	24 J	0.30 U	1.0 U	21000	0.89 J	0.20 U	0.80 J	50 U	0.70 U	3900	0.95 U	0.46 J	720 J	13	0.10 U	570000	0.20 U	1.5 J	7.7 J	0.080 U			
	TMW15042015	Normal	North Alluvial	4/8/2015	31 U	0.60 U	1.0 U	24	0.24 U	0.40 U	19000	0.91 J	0.10 U	1.5 U	30 UJ	0.50 U	3600	0.90 U	0.90 U	810 J	14	0.10 U	550000	0.20 U	1.2 J	6.2 J	0.080 U			
	DTW15042015	Duplicate	North Alluvial	4/8/2015	31 U	0.60 U	1.0 U	26	0.24 U	0.40 U	19000	0.93 J	0.10 U	1.5 U	46 J	0.50 U	3600	0.90 U	0.90 U	730 J	14	0.10 U	550000	0.20 U	1.1 J	7.8 J	0.080 U			
	TMW15102014	Normal	North Alluvial	10/29/2014	31 U	0.60 U	1.0 U	23	0.24 U	0.12 U	20000	1.1 J	0.10 U	1.5 U	30 U	0.50 U	3600	0.90 U	0.56 J	520 J	14	0.10 U	610000	0.20 U	2.3 J	7.8 J	0.080 U			
TMW21	TMW21042016	Normal	North Alluvial	4/11/2016	3900	0.93 J	1.6 J	38	0.26 J	1.0 U	36000	3.8 J	1.1	7.7	2300	1.3 J	7700	56	2.5 J	1500 J	4.4 J	0.051 J	630000	0.085 J	7.1 U	7.4 J	0.080 U			
	TMW21102015	Normal	North Alluvial	10/29/2015	1300	1.0 U	8.9	480	2.9	0.36 J	33000	24	13	52	890	17	7500	900	26	1200 J	2.7 J	0.36 J	660000	0.31 J	50	87	0.080 U			
	TMW21042015	Normal	North Alluvial	4/3/2015	17000 J	1.6 J	4.0 J	190	0.92 J	0.40 U	35000	9.4 J	4.9	23	13000 J	6.7	11000	360	10	4200	3.0 J	0.18 J	680000	0.22 J	22					

5.0 Analytical Results

TABLE 5-8

Summary of Dissolved Metals Analytical Detections (Page 4 of 7)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																							EPA Method 7470 (µg/L)
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6	
					Regulatory Limits																							
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
TMW25	TMW25042016	Normal	North Alluvial	4/13/2016	20 J	1.0 U	0.59 J	11	0.30 U	1.0 U	52000	1.8 U	0.092 J	1.0 J	30 J	0.70 U	11000	98 J	1.4 J	580 J	2.0 U	0.077 J	930000	0.20 U	3.6 J	4.3 J	0.080 U	
	TMW25102015	Normal	North Alluvial	11/4/2015	150 U	1.0 U	0.52 J	10	0.30 U	1.0 U	55000	1.8 U	0.10 J	1.2 J	50 U	0.70 U	11000	83	1.1 J	910 J	2.0 U	0.10 U	880000	0.20 U	3.8 J	4.1 J	0.080 U	
	TMW25042015	Normal	North Alluvial	4/7/2015	31 U	0.60 U	0.70 J	12	0.24 U	0.40 U	51000	1.5 U	0.060 J	0.84 J	30 U	0.50 U	11000	90	0.90 J	590 J	1.8 U	0.10 U	830000 J	0.20 U	3.7 J	6.0 U	0.080 U	
	TMW25102014	Normal	North Alluvial	10/31/2014	31 U	0.60 U	0.52 J	11	0.24 U	0.12 U	55000	1.5 U	0.084 J	0.86 J	30 UJ	0.50 U	11000	110	0.92 J	260 J	2.0 U	0.10 U	910000	0.20 U	3.7 J	6.0 U	0.080 U	
TMW26	TMW26042016	Normal	North Alluvial	4/8/2016	29 J	1.0 U	1.1 J	17	0.30 U	1.0 U	19000	1.8 U	0.22 J	1.8 J	85 U	0.41 J	6700	110	2.0 J	920 J	2.0 U	0.10 UJ	850000	0.20 U	3.2 J	8.0 U	0.080 U	
	TMW26102015	Normal	North Alluvial	10/30/2015	70 U	1.0 U	1.2 J	19	0.30 UJ	1.0 U	18000	1.8 U	0.27 J	2.2	85 UJ	0.70 U	7300	120 J	1.8 J	390 J	2.0 U	0.10 UJ	870000	0.20 U	3.5 J	8.0 U	0.032 J	
	DTW26102015	Duplicate	North Alluvial	10/30/2015	70 U	1.0 U	1.3 J	18	0.083 J	1.0 U	18000	1.8 U	0.32 J	2.2	24 J	0.70 U	7400	120 J	4.1 J	690 J	2.0 U	0.037 UJ	890000	0.20 U	3.5 J	8.0 U	0.032 J	
	TMW26042015	Normal	North Alluvial	4/7/2015	31 U	0.60 U	1.4 J	18	0.24 U	0.40 U	19000	1.5 U	0.28 J	1.8 J	30 U	0.50 U	7500	120	2.2 J	750 J	2.0 U	0.10 U	870000 J	0.20 U	3.4 J	6.0 UJ	0.080 U	
	DTW26042015	Duplicate	North Alluvial	4/7/2015	31 U	0.60 U	1.3 J	18	0.24 U	0.40 U	18000	1.5 U	0.24 J	1.7 J	30 U	0.50 U	7100	110	1.8 J	680 J	2.0 U	0.10 U	810000 J	0.20 U	3.5 J	2.4 J	0.080 U	
	TMW26102014	Normal	North Alluvial	10/27/2014	31 U	0.60 UJ	1.0 J	15 J	0.24 U	0.12 UJ	20000	1.5 U	0.25 J	1.6 J	32 J	0.50 UJ	7500	100 J	1.7 J	1100 J	2.0 U	0.10 UJ	900000	0.20 UJ	3.2 J	6.0 U	0.080 UJ	
	DTW26102014	Duplicate	North Alluvial	10/27/2014	310 U	0.60 UJ	0.79 J	15 J	0.24 U	0.12 UJ	20000	1.5 U	0.22 J	1.3 J	30 UJ	0.50 UJ	7900	86 J	1.7 J	910 J	2.0 U	0.10 UJ	940000	0.054 J	2.7 J	6.0 U	0.080 UJ	
TMW27	TMW27042016	Normal	North Alluvial	4/8/2016	70 U	1.0 U	20	120	0.30 U	1.0 U	24000	1.8 U	0.15 J	1.8 U	560	0.70 U	6100	540	0.42 J	790 J	2.0 U	0.10 UJ	350000	0.20 U	0.53 J	8.0 U	0.080 U	
	TMW27102015	Normal	North Alluvial	10/30/2015	70 U	1.0 U	20	110	0.30 U	1.0 U	24000	1.8 U	0.16 J	1.8 U	540	0.70 U	6700	560 J	0.50 J	630 J	2.0 U	0.10 U	370000	0.20 U	0.51 J	8.0 U	0.080 U	
	TMW27042015	Normal	North Alluvial	4/7/2015	31 U	0.40 J	20	130	0.24 U	0.40 U	25000	1.5 U	0.17 J	1.5 U	550	0.50 U	6500	560	0.62 J	650 J	1.2 U	0.073 J	340000 J	0.20 U	1.0 U	6.0 U	0.080 U	
	TMW27102014	Normal	North Alluvial	10/27/2014	31 U	0.49 J	18	110 J	0.24 U	0.12 UJ	26000	1.5 U	0.12 J	1.5 UJ	540	0.50 UJ	6600	480 J	0.52 J	600 J	2.0 U	0.033 J	350000	0.12 J	1.0 UJ	2.2 J	0.080 UJ	
TMW28	TMW28042016	Normal	North Alluvial	4/11/2016	70 U	1.0 U	1.0 U	53	0.30 U	1.0 U	110000	1.8 U	0.12 J	1.8 U	130	0.70 U	34000	410	0.77 J	1300 J	2.0 U	0.10 U	340000	0.20 U	0.98 U	4.2 J	0.080 U	
	TMW28102015	Normal	North Alluvial	11/3/2015	150 U	1.0 U	1.0 U	53	0.30 U	1.0 U	100000	1.8 U	0.090 J	1.8 U	370	0.70 U	31000	380	0.46 J	1200	2.0 U	0.10 U	330000	0.20 U	1.4 J	8.0 U	0.080 U	
	TMW28042015	Normal	North Alluvial	4/7/2015	31 U	1.2 J	1.0 U	79	0.24 U	0.40 U	130000	1.5 U	0.15 J	1.5 U	510	0.50 U	41000	550	0.53 J	1500 J	1.6 U	0.058 J	340000 J	0.14 J	0.51 J	6.0 U	0.080 U	
	TMW28102014	Normal	North Alluvial	10/29/2014	31 U	0.60 U	1.0 U	59	0.24 U	0.12 U	100000	1.5 U	0.065 J	1.5 U	370	0.50 U	29000	390	0.34 J	1300 J	2.0 U	0.10 U	350000	0.20 U	1.2 J	6.3 J	0.080 U	
TMW29	TMW29042016	Normal	North Alluvial	4/7/2016	4400	0.47 U	1.7 J	62 J	0.27 J	1.0 U	41000	3.8 J	1.3	2.2	3000	1.6 J	8000	53	3.2	1900 J	23	0.10 U	610000	0.20 U	9.9	9.3 U	0.080 U	
	TMW29102015	Normal	North Alluvial	10/28/2015	4400	1.0 U	1.7 J	54	0.39 J	1.0 U	42000	3.7 J	1.4	2.6	2500	1.8 J	9000	92	3.8	2200 J	19	0.10 U	600000	0.20 U	9.6	8.8 J	0.080 U	
	TMW29042015	Normal	North Alluvial	4/3/2015	180 J	0.62 J	1.4 J	7.9	0.24 U	0.40 U	37000	0.85 J	0.090 J	0.79 J	110 J	0.50 U	7500	21	1.0 J	1300 J	21	0.10 U	620000	0.20 U	5.4 J	2.8 J	0.080 U	
	TMW29102014	Normal	North Alluvial	10/23/2014	940	0.60 U	1.7 J	19	0.24 U	0.12 U	39000	1.6 J	0.43 J	0.97 J	550	0.41 J	8000	60	3.4	1600 J	20 J	0.10 U	650000 J	0.20 U	8.2	4.7 J	0.080 U	
TMW31S	TMW31S042016	Normal	North Alluvial	4/6/2016	160 J	0.95 U	1.0 U	16	0.30 U	1.0 U	120000	1.4 J	0.085 J	0.74 J	72 J	0.70 U	20000	20 J	0.52 J	760 J	10	0.10 U	540000	0.20 U	2.2 J	3.1 J	0.080 U	
	TMW31S102015	Normal	North Alluvial	10/29/2015	70 U	1.0 U	1.0 U	15	0.30 U	1.0 U	120000	1.5 J	0.20 U	1.6 J	27 J	0.70 U	22000	31	0.36 J	800 J	8.8	0.10 U	590000	0.20 U	2.1 J	8.0 U	0.080 U	
	TMW31S042015	Normal	North Alluvial	4/2/2015	15000	0.60 U	0.67 J	120	0.51 J	0.40 U	120000 J	6.9 J	3.1	2.7	6200	3.2	23000	450	6.8	2200 J	7.5	0.10 U	520000	0.069 J	12	18 J	0.080 U	
	TMW31S102014	Normal	North Alluvial	10/22/2014	31 U	0.60 U	0.37 J	18	0.24 U	0.12 U	120000	0.63 J	0.10 U	1.5 U	30 U	0.50 U	21000	8.6	0.32 U	530 J	9.6	0.10 U	590000	0.20 U	2.3 J	5.3 J	0.080 U	
TMW33	TMW33042016	Normal	North Alluvial	4/7/2016	340	1.0 U	0.74 J	21 J	0.12 J	1.0 U	110000	0.77 J	0.29 J	3.4	230	0.18 J	27000	200	2.2 J	1600 J	2.0 U	0.10 U	2200000	0.20 U	4.3 J	4.6 U	0.080 U	
	TMW33102015	Normal	North Alluvial	10/30/2015	81 J	1.0 U	0.99 J	31	0.30 U	1.0 U	100000	1.5 J	0.67 J	3.3	77 J	1.2 J	31000	510 J	2.6 J	2000 J	2.0 U	0.085 U	2500000	0.20 U	5.0 J	7.6 J	0.052 J	
	TMW33042015	Normal	North Alluvial	4/2/2015	31 U	0.46 J	0.93 J	19	0.28 J	0.40 U	110000 J	1.5 U	0.18 J	1.5 J	30 U	0.81 J	28000	110										

5.0 Analytical Results

TABLE 5-8

Summary of Dissolved Metals Analytical Detections (Page 5 of 7)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																							EPA Method 7470 (µg/L)
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6	
					Regulatory Limits																							
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
TMW39S	TMW39S042016	Normal	North Alluvial	4/6/2016	14000	1.0 U	1.1 J	120	0.33 J	1.0 U	87000	8.8 J	2.7	4.3	7200	3.2	20000	210 J	6.5	3400	12	0.072 J	1000000	0.061 J	14	15 J	0.080 U	
	TMW39S102015	Normal	North Alluvial	10/29/2015	70 U	1.0 U	0.36 J	13	0.30 U	1.0 U	75000	1.8 J	0.20 U	1.2 J	85 U	0.70 U	17000	2.1 J	0.34 J	1200 J	11	0.10 U	940000	0.20 U	3.4 J	8.0 U	0.080 U	
	TMW39S042015	Normal	North Alluvial	4/1/2015	30 J	0.60 U	0.53 J	15 J	0.24 U	0.40 U	75000	2.3 J	0.10 U	1.0 J	24 J	0.50 U	16000	2.7 J	0.90 U	940 J	11	0.10 U	840000	0.062 J	3.5 J	6.0 U	0.080 U	
	TMW39S102014	Normal	North Alluvial	10/23/2014	170 J	0.60 U	0.53 J	17	0.24 U	0.12 U	71000	2.1 J	0.075 J	1.5 J	86 J	0.50 U	17000	5.2	0.71 J	1000 J	12 J	0.10 U	980000 J	0.20 U	4.0 J	4.2 J	0.080 U	
TMW40S	TMW40S042016	Normal	North Alluvial	4/11/2016	2900	0.42 J	11	55	0.28 J	1.0 U	64000	1.6 J	0.52 J	1.0 J	1300	2.8 J	11000	57	1.6 J	850 J	68	0.10 U	990000	0.20 U	41	19 J	0.080 U	
	TMW40S102015	Normal	North Alluvial	10/28/2015	25000	1.0 U	15	330	3.4	1.0 U	83000	10	4.4	8.5	12000	25	18000	500	11	3000	54	0.048 J	1000000	0.089 J	50	170	0.027 J	
	TMW40S042015	Normal	North Alluvial	4/2/2015	17000	0.60 U	14	270	2.1	0.40 U	80000 J	7.1 J	3.2	5.7	8100	19	15000	330	7.7	1800 J	50	0.10 U	1000000	0.066 J	42	130	0.080 U	
	TMW40S102014	Normal	North Alluvial	10/24/2014	30 J	0.60 U	16 J	24 J	0.24 U	0.12 U	67000	0.55 J	1.4	1.5 J	30 U	0.50 U	10000	28	0.74 J	970 J	70 J	0.10 U	1100000	0.20 U	39 J	2.0 J	0.080 U	
TMW41	TMW41042016	Normal	North Alluvial	4/7/2016	350	1.0 U	0.50 J	14 J	0.11 J	1.0 U	15000	1.7 J	0.093 J	0.68 J	210	0.70 U	3500	4.2	0.70 J	840 J	1.1 J	0.10 U	780000	0.20 U	6.5	3.2 U	0.080 U	
	TMW41102015	Normal	North Alluvial	10/29/2015	70 U	1.0 U	0.73 J	11	0.30 U	1.0 U	16000	1.4 J	0.20 U	0.74 J	85 U	0.70 U	3900	0.34 J	1.0 U	1100 J	1.3 J	0.054 J	930000	0.20 U	6.3	8.0 U	0.080 U	
	TMW41042015	Normal	North Alluvial	4/1/2015	22 J	1.3 J	0.54 J	11 J	0.24 U	0.40 U	16000	2.2 J	0.10 U	0.83 J	30 U	0.18 J	3800	0.48 J	0.90 U	860 J	1.6 J	0.064 J	810000	0.15 J	7.1	6.0 U	0.080 U	
	TMW41102014	Normal	North Alluvial	10/23/2014	31 U	0.60 U	0.49 J	11	0.24 U	0.12 U	15000	1.5 J	0.10 U	0.99 J	30 U	0.50 U	3600	0.39 J	0.30 J	960 J	1.9 J	0.10 U	880000 J	0.20 U	7.1	4.2 J	0.080 U	
TMW43	TMW43042016	Normal	North Alluvial	4/13/2016	70 U	1.0 U	1.0 U	18	0.30 U	1.0 U	34000	1.8 U	0.077 J	1.8 U	85 U	0.70 U	6600	47 J	1.0 U	940 J	6.6	0.10 U	600000	0.20 U	2.2 J	8.0 U	0.080 U	
	DTW43042016	Duplicate	North Alluvial	4/13/2016	70 U	0.53 J	1.0 U	18	0.13 J	1.0 U	35000	1.8 U	0.12 J	1.8 U	85 U	0.70 U	6900	49 J	1.0 U	970 J	6.3	0.10 U	620000	0.13 J	2.0 J	8.0 U	0.080 U	
	TMW43102015	Normal	North Alluvial	11/3/2015	150 U	0.60 J	1.0 U	20	0.30 U	1.0 U	38000	1.8 U	0.086 J	1.3 J	50 U	0.70 U	6600	50	0.99 J	1000	6.3	0.087 J	600000	0.069 J	3.8 J	3.2 J	0.080 U	
	DTW43102015	Duplicate	North Alluvial	11/3/2015	150 U	1.0 UJ	1.0 U	20	0.30 U	1.0 U	38000	1.8 U	0.095 J	1.3 J	50 U	0.70 U	6700	51	1.3 J	1400	6	0.12 J	600000	0.099 J	4.2 J	2.3 J	0.080 U	
	TMW43042015	Normal	North Alluvial	4/10/2015	31 U	0.60 U	1.0 U	20	0.24 UJ	0.40 U	35000	1.5 U	0.096 J	1.5 U	30 U	0.50 U	6900	49	0.38 J	1000 J	5.8	0.10 UJ	570000	0.057 J	4.4 J	6.0 U	0.080 U	
	DTW43042015	Duplicate	North Alluvial	4/10/2015	31 U	0.60 U	1.0 U	21	0.11 J	0.40 U	37000	1.5 U	0.094 J	1.5 U	30 U	0.50 U	7200	49	0.32 J	1100 J	6.2	0.14 J	580000	0.13 J	4.2 J	6.0 U	0.080 U	
	TMW43102014	Normal	North Alluvial	10/31/2014	31 U	0.60 U	1.0 UJ	19	0.24 U	0.12 U	36000	1.5 U	0.060 J	1.5 U	30 UJ	0.50 U	6400	49	0.33 J	690 J	6	0.10 U	600000	0.20 UJ	1.6 J	6.0 U	0.080 U	
DTW43102014	Duplicate	North Alluvial	10/31/2014	31 U	0.60 U	0.39 J	19	0.24 U	0.12 U	37000	1.5 U	0.096 J	1.5 U	30 UJ	0.50 U	6500	50	0.38 J	730 J	6.4	0.10 U	670000	0.062 J	1.6 J	6.0 U	0.080 U		
TMW44	TMW44042016	Normal	North Alluvial	4/8/2016	130 J	1.0 U	1.1 J	21	0.098 J	1.0 U	18000	0.73 J	0.096 J	1.1 J	72 J	0.70 U	4500	5.2	0.89 J	1100 J	2.0 U	0.10 UJ	810000	0.20 U	2.8 J	8.0 U	0.080 U	
	TMW44102015	Normal	North Alluvial	10/29/2015	70 U	1.0 U	1.1 J	13	0.30 U	1.0 U	36000	1.8 U	0.20 U	1.3 J	85 U	0.70 U	12000	7.7	1.0 U	800 J	2.0 J	0.10 U	820000	0.20 U	3.8 J	8.0 U	0.080 U	
	TMW44042015	Normal	North Alluvial	4/1/2015	64 J	0.60 U	0.88 J	15 J	0.24 U	0.40 U	36000	1.5 U	0.067 J	1.0 J	44 J	0.50 U	11000	14	0.90 U	580 J	2.2 J	0.10 U	710000	0.20 U	4.2 J	3.8 U	0.080 U	
	TMW44102014	Normal	North Alluvial	10/23/2014	31 U	0.60 U	1.0 J	11	0.24 U	0.12 U	33000	1.5 U	0.10 U	1.5 J	30 U	0.50 U	11000	4.4	0.36 J	810 J	2.8 J	0.10 U	780000 J	0.20 U	4.4 J	3.0 J	0.080 U	
TMW45	TMW45042016	Normal	North Alluvial	4/14/2016	70 U	1.0 U	0.93 J	69	0.30 U	1.0 U	29000	1.8 U	0.065 J	2	85 U	0.70 U	7000	26	0.97 J	1800 U	0.76 J	0.10 U	740000	0.20 U	4.1 J	4.9 U	0.080 U	
	TMW45102015	Normal	North Alluvial	11/3/2015	150 U	1.0 U	1.1 J	68	0.30 U	1.0 U	31000	1.8 U	0.086 J	2.9	50 U	0.70 U	7800	52	1.4 J	1300	2.0 U	0.10 U	960000	0.20 U	4.2 J	8.0 U	0.080 U	
	TMW45042015	Normal	North Alluvial	4/9/2015	31 U	0.60 U	0.85 J	78	0.24 U	0.40 U	30000	1.5 U	0.10 U	1.8 J	30 U	0.50 U	8200	37	1.2 J	1100 J	2.0 U	0.10 U	920000	0.20 U	4.0 J	6.0 U	0.080 U	
	TMW45102014	Normal	North Alluvial	10/29/2014	31 U	0.89 J	1.0 J	73	0.24 U	0.12 U	32000	1.5 U	0.072 J	1.6 J	30 U	0.50 U	7700	55	1.1 J	760 J	2.0 U	0.10 U	1000000	0.12 J	4.5 J	6.0 U	0.080 U	
TMW46	TMW46042016	Normal	North Alluvial	4/7/2016	300	1.0 U	1.0 U	15 J	0.30 U	1.0 U	74000	0.71 J	0.14 J	1.1 J	210	0.18 J	16000	4.5	0.63 J	700 J	110	0.10 U	1100000	0.20 U	2.8 J	2.7 U	0.080 U	
	TMW46102015	Normal	North Alluvial	10/29/2015	70 U	1.0 U	0.36 J	10	0.30 U	1.0 U	72000	1.8 U	0.20 U	1.2 J	85 U	0.70 U	181											

5.0 Analytical Results

TABLE 5-8

Summary of Dissolved Metals Analytical Detections (Page 6 of 7)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																								EPA Method 7470 (µg/L)
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6		
					Regulatory Limits																								
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c		
TMW16	TMW16042016	Normal	North Bedrock	4/7/2016	280 J	1.0 U	1.0 U	16 J	0.30 U	1.0 U	3800	13	0.92 J	0.96 J	280	0.70 U	430 J	16	45	690 J	1.2 J	0.10 U	420000	0.20 U	8.7	5.7 U	0.080 U		
	TMW16102015	Normal	North Bedrock	10/28/2015	67 J	1.0 U	0.46 J	16	0.30 U	1.0 U	4000	0.65 J	0.11 J	0.86 J	41 J	0.70 U	440 J	8.5	4	590 J	2.0 U	0.055 J	470000	0.20 U	17	7.1 J	0.080 U		
	TMW16042015	Normal	North Bedrock	4/1/2015	93 J	0.60 U	0.49 J	15 J	0.24 U	0.40 U	4000	1.4 J	0.20 J	1.1 J	52 J	0.50 U	430 J	6.6	5.8	720 J	2.0 U	0.10 U	420000	0.20 U	20	6.3 J	0.080 U		
	TMW16102014	Normal	North Bedrock	10/24/2014	19 J	0.60 U	0.64 J	16 J	0.24 U	0.12 U	4100	1.5 U	0.17 J	1.9 J	30 U	0.50 U	420 J	7.8	7.1	720 J	2.0 U	0.10 U	500000	0.20 U	6.0 J	24	0.080 U		
TMW17	TMW17042016	Normal	North Bedrock	4/15/2016	74 J	1.0 U	1.0 U	15	0.30 U	1.0 U	3600	1.8 U	0.20 U	1.8 U	85 U	0.70 U	490 J	9	0.85 J	1400 U	2.0 U	0.10 U	320000	0.20 U	2.0 U	2.6 U	0.080 U		
	TMW17102015	Normal	North Bedrock	11/3/2015	69 J	1.0 U	1.0 U	13	0.30 U	1.0 U	3700	1.8 U	0.20 U	1.8 U	22 J	0.70 U	470 J	9.3	1.0 U	1100	2.0 U	0.10 U	420000	0.20 U	2.0 U	8.0 U	0.080 U		
	TMW17042015	Normal	North Bedrock	4/7/2015	110 J	0.60 U	1.0 U	15	0.24 U	0.40 U	5700	1.5 U	0.10 U	1.5 U	32 J	0.23 J	520	14	1.0 J	1100 J	2.0 U	0.10 U	400000 J	0.20 U	1.0 U	44	0.080 U		
	TMW17102014	Normal	North Bedrock	10/29/2014	61 J	0.60 U	1.0 U	14	0.16 J	0.12 U	3700	1.5 U	0.070 J	1.5 U	30 U	0.50 U	470 J	8.2	0.90 U	800 J	2.0 U	0.10 U	450000	0.15 J	0.65 J	6.0 U	0.080 U		
TMW18	TMW18042016	Normal	North Bedrock	4/7/2016	90 J	1.0 U	1.0 U	17 J	0.30 U	1.0 U	6900	1.8 U	0.20 U	1.8 U	35 J	0.21 J	1200	6.9	1.0 U	3200	0.93 J	0.10 U	700000	0.20 U	3.9 J	3.4 U	0.080 U		
	TMW18102015	Normal	North Bedrock	10/29/2015	70 U	1.0 U	0.61 J	14	0.30 U	1.0 U	16000	1.8 U	0.20 U	1.8 U	85 U	0.70 U	3900	3.8	1.0 U	970 J	2.0 U	0.10 U	930000	0.20 U	7.1	8.0 U	0.080 U		
	TMW18042015	Normal	North Bedrock	4/1/2015	100 J	0.60 U	2.8 J	12 J	0.24 U	0.40 U	6300	1.0 J	0.10 U	1.5 J	29 J	0.84 J	840	2.3 J	0.47 J	3400	2.0 U	0.034 J	640000	0.20 U	25	2.2 J	0.080 U		
	TMW18102014	Normal	North Bedrock	10/24/2014	120 J	0.60 U	4.3 J	16 J	0.24 U	0.12 U	6100	0.71 J	0.10 U	1.3 J	25 J	0.32 U	820	1.8 U	0.52 J	3800	2.0 U	0.10 U	740000	0.20 U	18 J	5.1 J	0.080 U		
TMW19	TMW19042016	Normal	North Bedrock	4/7/2016	1000	1.0 U	1.0 U	10 J	0.30 U	1.0 U	11000	1.5 J	0.38 J	1.4 J	690	0.47 J	1300	33	8.5	1200 J	1.2 J	0.055 J	670000	0.20 U	3.9 J	43	0.080 U		
	TMW19102015	Normal	North Bedrock	10/28/2015	2400	1.0 U	0.91 J	19	0.28 J	1.0 U	11000	4.6 J	1.1	17	1100	1.3 J	1700	56	28	1500 J	2.0 U	0.14 J	710000	0.20 U	5.1 J	62	0.080 U		
	TMW19042015	Normal	North Bedrock	4/1/2015	100 J	0.60 U	1.0 U	8.4 J	0.24 U	0.40 U	9600	1.5 U	0.10 U	1.5 U	63 J	0.50 U	1000	13	1.2 J	1100 J	2.0 U	0.10 U	640000	0.20 U	6.8	2.7 J	0.080 U		
	TMW19102014	Normal	North Bedrock	10/24/2014	37 J	0.60 U	1.0 U	8.9 J	0.24 U	0.12 U	10000	1.5 U	0.76 J	1.5 U	30 U	0.50 U	1100	22	2.2 J	1200 J	2.0 U	0.10 U	780000	0.20 U	5.6 J	2.4 J	0.080 U		
TMW30	TMW30042016	Normal	North Bedrock	4/7/2016	180 J	1.0 U	0.75 J	11 J	0.30 U	1.0 U	57000	0.56 J	0.090 J	1.0 J	140	0.21 J	11000	5.7	0.58 J	920 J	7.4	0.10 U	460000	0.20 U	13	4.3 U	0.080 U		
	TMW30102015	Normal	North Bedrock	10/29/2015	70 U	1.0 U	0.87 J	7.9	0.30 U	1.0 U	52000	1.8 U	0.10 J	2.5	85 U	0.70 U	11000	3.7	0.64 J	1000 J	6.5	0.10 U	440000	0.20 U	13	5.0 J	0.080 U		
	TMW30042015	Normal	North Bedrock	4/1/2015	23 J	0.60 U	0.92 J	8.6 J	0.24 U	0.40 U	58000	1.5 U	0.10 U	1.4 J	30 U	0.19 J	12000	0.72 J	0.90 U	870 J	7.9	0.14 J	420000	0.055 J	15	6.0 U	0.080 U		
	TMW30102014	Normal	North Bedrock	10/22/2014	110 J	0.60 U	0.82 J	7.4	0.24 U	0.12 U	59000	1.5 U	0.084 J	0.74 J	100	0.50 U	11000	3.6	1.1 U	760 J	7.4	0.10 U	480000	0.20 U	13	2.8 J	0.080 U		
TMW31D	TMW31D042016	Normal	North Bedrock	4/13/2016	70 U	1.0 U	0.48 J	8.4	0.30 U	1.0 U	64000	1.8 U	0.20 U	0.61 J	27 J	0.70 U	12000	2.8 J	0.46 J	1700 J	8.1	0.10 U	590000	0.20 U	6.3	17 J	0.080 U		
	DTW31D042016	Duplicate	North Bedrock	4/13/2016	70 U	1.0 U	0.33 J	9.5	0.30 U	1.0 U	63000	1.8 U	0.20 U	0.85 J	85 U	0.70 U	12000	2.2 J	0.94 J	1700 J	8.5	0.10 U	580000	0.20 U	6.3	17 J	0.080 U		
	TMW31D102015	Normal	North Bedrock	11/5/2015	150 U	1.0 U	0.50 J	10	0.30 U	1.0 U	66000	1.8 U	0.065 J	1.3 J	50 U	0.70 U	11000	2.4 J	1.4 J	1600	7.5	0.054 J	550000	0.052 J	7	19 J	0.080 U		
	DTW31D102015	Duplicate	North Bedrock	11/5/2015	150 U	1.0 U	0.40 J	10	0.30 U	1.0 U	69000	1.8 U	0.072 J	1.6 J	50 U	0.70 U	12000	2.7 J	1.2 J	1700	7.6	0.10 U	540000	0.20 U	7.1	19 J	0.080 U		
	TMW31D042015	Normal	North Bedrock	4/6/2015	31 U	1.8 J	0.46 J	8.9	0.24 U	0.40 U	54000	1.5 U	0.10 J	1.2 J	30 U	0.50 U	9300	2.6 J	0.51 J	1200 J	8.1	0.034 J	560000	0.12 J	5.6 J	19 J	0.080 U		
	TMW31D102014	Normal	North Bedrock	10/30/2014	31 U	0.60 U	0.38 J	9.4	0.24 U	0.12 U	69000	1.5 UJ	0.10 U	1.5 J	30 U	0.50 U	11000	0.88 J	0.90 UJ	1500 J	8.3 J	0.10 U	600000	0.20 U	7.0 J	25 J	0.080 U		
	DTW31D102014	Duplicate	North Bedrock	10/30/2014	31 U	0.60 U	0.55 J	12	0.24 U	0.12 U	66000	0.60 J	0.10 U	1.1 J	30 U	0.50 U	10000	0.90 UJ	0.39 J	1400 J	21 J	0.10 U	580000	0.20 U	12 J	8.6 J	0.080 U		
TMW32	TMW32042016	Normal	North Bedrock	4/13/2016	70 U	0.48 J	1.6 J	7.7	0.30 U	1.0 U	10000	1.8 U	0.20 U	1.8 U	85 U	0.70 U	1200	27 J	1.1 J	1200 J	3.4 J	0.084 J	740000	0.20 U	2.0 J	8.0 U	0.080 U		
	TMW32102015	Normal	North Bedrock	11/5/2015	150 U	1.0 U	1.4 J	8	0.30 U	1.0 U	11000	1.8 U	0.055 J	1.8 U	50 U	0.70 U	1200	29	0.60 J	1300	3.2 J	0.10 U	720000	0.20 U	2.4 J	3.5 J	0.080 U		
	TMW32042015	Normal	North Bedrock	4/9/2015	19 J	0.60 U	1.1 J	8.6	0.24 U	0.40 U	11000	1.5 U	0.10 U	0.58 J	30 U	0.50 U	1300	29	0.84 J	1300 J	3.2 J	0.10 U	710000	0					

5.0 Analytical Results

TABLE 5-8
Summary of Dissolved Metals Analytical Detections (Page 7 of 7)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																						EPA Method 7470 (µg/L)
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6
					Regulatory Limits																						
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c
TMW39D	TMW39D042016	Normal	North Bedrock	4/12/2016	70 U	1.0 U	1.0 U	8	0.30 U	1.0 U	18000	1.8 U	0.20 U	1.8 U	85 U	0.70 U	1800	53	1.0 U	1200 J	2.0 U	0.10 U	750000	0.20 U	2.0 U	8.0 U	0.080 U
	TMW39D102015	Normal	North Bedrock	11/4/2015	420	1.0 U	1.0 U	11	0.30 U	1.0 U	25000	0.51 J	0.21 J	1.0 J	210	0.70 U	3100	57	1.7 J	1700	0.95 J	0.10 U	710000	0.20 U	1.9 J	5.4 J	0.080 U
	TMW39D042015	Normal	North Bedrock	4/6/2015	31 UJ	0.62 J	0.33 J	11	0.24 U	0.40 U	55000	1.5 U	0.10 U	1.5 U	30 UJ	0.50 U	9400	11	0.90 U	1400 J	4.8 J	0.10 U	600000	0.20 U	3.1 J	6.0 UJ	0.080 U
	DTW39D042015	Duplicate	North Bedrock	4/6/2015	19 J	0.60 UJ	1.0 UJ	11	0.24 U	0.40 U	53000	1.5 U	0.10 U	1.5 U	34 J	0.50 U	9300	12	0.90 U	1400 J	4.4 J	0.10 U	610000	0.20 U	3.2 J	2.1 J	0.080 U
	TMW39D102014	Normal	North Bedrock	10/30/2014	31 U	0.60 U	0.36 J	7.9	0.24 U	0.12 U	18000	1.5 U	0.10 U	1.5 U	55 J	0.50 U	1700	57	0.90 U	1300 J	2.0 U	0.10 U	800000	0.062 J	1.0 U	6.0 U	0.080 U
TMW40D	TMW40D042016	Normal	North Bedrock	4/12/2016	70 U	1.0 U	1.0 U	10	0.30 U	1.0 U	15000	1.8 U	0.20 U	1.8 U	85 U	0.70 U	2000	52	1.0 U	1200 J	3.3 J	0.10 U	730000	0.20 U	3.0 J	2.5 J	0.080 U
	TMW40D102015	Normal	North Bedrock	11/3/2015	150 U	1.0 U	0.43 J	9.3	0.30 U	1.0 U	16000	1.8 U	0.067 J	7.2	50 U	0.70 U	2000	55	0.99 J	1600	3.1 J	0.10 U	740000	0.20 U	2.9 J	2.5 J	0.080 U
	TMW40D042015	Normal	North Bedrock	4/9/2015	31 U	0.60 U	0.37 J	10	0.24 U	0.40 U	15000	1.5 U	0.075 J	1.5 U	30 U	0.50 U	2100	52	0.72 J	1300 J	3.1 J	0.10 U	680000	0.20 U	2.7 J	4.6 J	0.080 U
	TMW40D102014	Normal	North Bedrock	10/31/2014	31 U	0.60 U	0.56 J	9.8	0.24 U	0.12 U	14000	1.5 U	0.10 U	1.5 U	30 UJ	0.50 U	1900	53	0.90 U	1000 J	3.1 J	0.10 U	810000	0.20 U	3.1 J	3.2 J	0.080 U
TMW48	TMW48042016	Normal	North Bedrock	4/12/2016	70 U	1.0 U	0.67 J	11	0.30 U	1.0 U	63000	1.8 U	0.20 U	0.75 J	85 U	0.70 U	11000	38	1.0 U	1200 J	6.2	0.10 U	570000	0.20 U	3.3 J	11 J	0.080 U
	TMW48102015	Normal	North Bedrock	11/4/2015	150 U	1.0 U	0.53 J	11	0.30 U	1.0 U	70000	1.8 U	0.20 U	1.7 J	50 U	0.70 U	13000	39	1.2 J	1500	6.4	0.10 U	570000	0.20 U	3.9 J	12 J	0.080 U
	TMW48042015	Normal	North Bedrock	4/6/2015	31 U	0.60 U	0.72 J	11	0.24 U	0.40 U	79000	1.5 U	0.10 U	1.5 U	30 U	0.50 U	16000	24	0.64 J	1100 J	7.5	0.10 U	550000	0.20 U	5.7 J	11 J	0.080 U
	TMW48102014	Normal	North Bedrock	10/30/2014	31 U	0.60 U	0.77 J	11	0.24 U	0.12 U	82000	1.5 U	0.10 U	0.72 J	30 U	0.50 U	15000	16	0.97 J	1300 J	7.5	0.10 U	570000	0.20 U	6.8	12 J	0.080 U
TMW49	TMW49042016	Normal	North Bedrock	4/14/2016	70 U	1.0 U	0.55 J	11	0.30 U	1.0 U	72000	0.79 J	0.20 U	1.0 J	85 U	0.70 U	12000	0.49 J	0.42 J	2400 J	22	0.10 U	450000	0.20 U	11	7.4 U	0.080 U
	TMW49102015	Normal	North Bedrock	11/5/2015	150 U	0.94 J	0.62 J	12	0.30 U	1.0 U	79000	0.69 J	0.055 J	1.7 J	50 U	0.70 U	13000	0.69 J	0.74 J	1600	21	0.093 J	590000	0.084 J	11	8.1 J	0.080 U
	TMW49042015	Normal	North Bedrock	4/9/2015	31 U	0.60 U	0.57 J	14	0.24 U	0.40 U	81000	1.5 U	0.10 U	1.3 J	30 U	0.50 U	15000	0.90 U	0.31 J	1600 J	19	0.10 U	560000	0.20 U	12	6.8 J	0.080 U
	TMW49102014	Normal	North Bedrock	10/30/2014	31 U	0.60 U	0.57 J	14	0.24 U	0.12 U	81000	0.59 J	0.10 U	1.2 J	30 U	0.50 U	13000	0.90 U	0.46 J	1300 J	21	0.10 U	590000	0.20 U	13	8.7 J	0.080 U

Notes:

^a New Mexico Water Quality Control Commission - New Mexico Administrative Code Title 20, Chapter 6, Part 2, Section 3103.

^b EPA Maximum Contaminant Level - *Code of Federal Regulations* Title 40, Parts 141, 142, and 143.

^c EPA Regional Screening Levels, (formerly Human Health Medium Specific Screening Levels) (EPA, 2017).

^d Well not sampled for dissolved metals analysis due to insufficient volume of sample in well despite repeated attempts to collect sample.

Bold indicates analyte was positively detected above regulatory limits.

µg/L = microgram(s) per liter

CAS = Chemical Abstracts Service (registry number)

EPA = U.S. Environmental Protection Agency

J = analyte was positively identified; reported value is estimated.

NE = not established

U = non-detected result reported at the limit of detection.

UJ = analyte was not detected; however, the result is estimated because of discrepancies in meeting certain analyte-specific quality control criteria.

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5.0 Analytical Results

TABLE 5-9

Summary of Total Metals Analytical Detections (Page 1 of 7)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																									EPA Method 7470 (µg/L)
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6			
					Regulatory Limits																									
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c			
BGMW01	BGMW01042016	Normal	North Alluvial	4/15/2016	90 J	1.0 U	0.70 J	16	0.30 U	1.0 U	39000	1.8 U	0.32 J	0.59 J	60 J	0.70 U	22000	170	1.6 J	820 J	2.0 U	0.10 U	630000	0.20 U	1.9 J	2.0 J	0.080 U			
	BGMW01102015	Normal	North Alluvial	11/5/2015	57 J	1.0 U	0.79 J	16	0.30 U	1.0 U	36000	1.9 J	0.27 J	1.1 J	38 J	0.19 J	22000	160	1.2 J	770 J	2.0 U	0.10 U	750000	0.20 U	2.2 J	3.2 J	0.080 U			
	BGMW01042015	Normal	North Alluvial	4/2/2015	58 U	0.60 U	0.77 J	17	0.24 U	0.40 U	46000	1.5 U	0.31 J	1.5 U	57 U	0.50 U	24000	160	2.2 U	490 J	2.0 U	0.10 U	700000	0.20 U	2.0 J	6.0 U	0.080 U			
	BGMW01102014	Normal	North Alluvial	10/24/2014	160 J	0.60 U	0.87 J	16	0.24 U	0.12 U	42000	1.5 U	0.38 J	1.5 J	120	0.50 U	26000	190	1.8 J	750 J	2.0 U	0.10 U	830000	0.20 U	2.1 J	2.8 J	0.080 U			
BGMW02	BGMW02042016	Normal	North Alluvial	4/14/2016	69 J	1.0 U	0.88 J	18	0.30 U	1.0 U	75000	1.8 U	0.091 J	0.98 J	50 J	0.70 U	100000	85	0.61 J	1000 J	71	0.10 U	770000 J	0.20 U	7.5	8.0 U	0.080 U			
	BGMW02102015	Normal	North Alluvial	11/5/2015	240	1.0 U	0.93 J	17	0.30 U	1.0 U	88000	1.8 U	0.10 J	1.1 J	130	0.70 U	120000	73	0.81 J	910 J	66	0.070 J	1000000	0.20 U	7.1	2.5 J	0.080 U			
	BGMW01102013	Normal	North Alluvial	4/2/2015	130 J	0.60 U	0.69 J	20	0.24 U	0.40 U	85000	1.5 U	0.12 J	0.81 J	82 J	0.18 J	110000	120	0.57 J	590 J	79	0.036 J	860000	0.066 U	6.4	2.1 J	0.080 U			
	BGMW02102014	Normal	North Alluvial	10/24/2014	220 J	0.55 J	0.85 J	20	0.24 U	0.12 U	95000	1.5 U	0.13 J	1.7 J	120	0.50 U	130000	84	0.63 J	1200 J	93	0.10 U	1100000	0.20 U	8	2.0 J	0.080 U			
BGMW03	BGMW03042016	Normal	North Alluvial	4/8/2016	460	1.0 U	1.4 J	38	0.30 U	1.0 U	94000 J	1.3 J	0.47 J	2.9	380	0.31 J	19000	69	1.0 J	2600 J	23	0.037 J	690000	0.20 U	8.3	4.6 J	0.080 U			
	BGMW03102015	Normal	North Alluvial	10/30/2015	11000	1.0 U	3.2 J	150	0.74 J	1.0 U	92000	5.5 J	3.1	6.1	7800	7	19000	240 J	3.8	5200	30	0.046 U	720000	0.16 U	20	29	0.038 J			
	BGMW03042015	Normal	North Alluvial	4/1/2015	1100 J	0.60 U	2.1 J	38 J	0.11 J	0.40 U	66000	0.88 J	0.48 J	3	770	0.74 J	15000	43	0.97 J	2200 J	37	0.10 U	710000	0.20 U	13	5.2 J	0.080 U			
	BGMW03102014	Normal	North Alluvial	10/22/2014	6400	0.60 U	2.2 J	110 J	0.57 J	0.12 U	110000	4.3 J	2	4.3	5200	4.2	21000	140	2.6 J	3700	28	0.10 U	730000	0.097 U	16	18 J	0.030 J			
FW31	FW31042016	Normal	North Alluvial	4/7/2016	3800 J	1.0 U	7	120 J	0.19 J	1.0 U	7400	4.7 J	1.2	2.7	1300 J	1.6 J	3100	120	3.9	2700 J	2.0 U	0.079 J	490000	0.20 U	14	14 U	0.080 U			
	FW3112015	Normal	North Alluvial	11/2/2015	980	1.0 U	7.1	57	0.30 U	1.0 U	6900	2.2 J	0.46 J	1.0 J	780	0.66 J	2800	48	1.4 J	2300 UJ	2.0 U	0.14 U	640000 U	0.052 U	11	6.2 J	0.080 U			
	FW31042015	Normal	North Alluvial	4/1/2015	1300 J	0.54 J	7	56 J	0.11 J	0.40 U	7300	2.0 U	0.57 J	1.1 J	590 U	0.64 U	2800	40	1.6 U	2000 J	2.0 U	0.11 J	490000	0.25 J	13	6.5 U	0.080 U			
	FW31102014	Normal	North Alluvial	10/22/2014	470	0.60 U	6.6	24 J	0.24 U	0.12 U	6500	1.5 J	0.13 J	1.5 U	200	0.50 U	2400	10	0.56 J	1600 J	2.0 U	0.043 U	550000	0.20 U	10	4.0 J	0.080 U			
FW35	FW35102015	Normal	North Alluvial	4/2016	Well was dry and was not sampled this event ^d																									
	FW35102015	Normal	North Alluvial	10/2015	Well was dry and was not sampled this event ^d																									
	FW35042015	Normal	North Alluvial	4/2/2015	21000	0.60 U	2.5 J	410	1.1	0.40 U	350000	11	5	12	9700	7.7	120000	630	11	3000	1.1 J	0.14 J	650000	0.15 U	21	230	0.080 U			
	FW35102014	Normal	North Alluvial	10/28/2014	56000 J	0.60 U	15	1700	4.2	2.3	390000	64	32	120	50000	41	130000	3600	76	8000	20	0.60 J	690000	0.55 J	170	3200	0.069 J			
MW01	MW01042016	Normal	North Alluvial	4/6/2016	1200 J	1.0 U	0.72 J	28	0.30 U	1.0 U	35000	1.1 J	0.34 J	1.6 J	630 J	0.45 J	8400	28 J	1.3 J	620 J	17	0.10 U	950000	0.20 U	2.6 U	13 J	0.080 U			
	MW01102015	Normal	North Alluvial	10/28/2015	4000 J	1.0 U	1.2 J	62	0.16 J	1.0 U	36000	2.7 J	1.2	2.2	2400	1.7 J	8800	140	2.6 U	1500 J	19	0.10 U	940000	0.20 U	6.1	28	0.027 J			
	MW01042015	Normal	North Alluvial	4/1/2015	12000 J	0.60 U	2.5 J	130 J	0.53 J	0.40 U	39000	7.6 J	3.3	5.4	6500	4.5	10000	250	6.9	2500 J	19	0.10 U	880000	0.11 J	15	60	0.080 U			
	MW01102014	Normal	North Alluvial	10/23/2014	50000	0.60 U	11	700	2.8	0.38 J	73000	38	18	29	33000	27	20000	1400	35	8500	16	0.077 J	1000000 J	0.51 J	64	290	0.10 J			
MW02	MW02042016	Normal	North Alluvial	4/6/2016	710 J	1.0 U	1.0 U	40	0.30 U	1.0 U	130000	1.0 J	0.21 J	1.9 J	410 J	0.33 J	32000	27 J	0.83 J	740 J	15	0.10 U	430000	0.20 U	1.8 U	25	0.080 U			
	MW02102015	Normal	North Alluvial	10/28/2015	3700 J	1.0 U	1.0 J	100	0.20 J	1.0 U	130000	3.0 J	1.2	1.8 J	2700	2.0 J	31000	190	2.8 U	1700 J	16	0.10 U	380000	0.20 U	6	52	0.080 U			
	MW02042015	Normal	North Alluvial	4/1/2015	9200 J	0.60 U	1.6 J	130 J	0.38 J	0.57 J	130000	4.7 J	2.5	3.7	4200	3.3	30000	290	5.6	1800 J	18	0.10 U	390000	0.069 J	9.9	110	0.080 U			
	MW02102014'	Normal	North Alluvial	10/24/2014	13000	0.60 U	2.8 J	200	0.61 J	0.19 J	160000	9.3 J	5.1	6.2	7900	6.4	39000	800	8.9	2900 J	11	0.035 J	440000	0.14 J	20	140	0.080 U			
MW03	MW03042016	Normal	North Alluvial	4/12/2016	70 U	1.0 U	1.0 U	9	0.30 U	1.0 U	58000	0.53 J	0.12 J	0.67 J	85 U	0.70 U	11000	48	0.69 J	430 J	24	0.10 U	1100000	0.20 U	1.0 J	6.0 U	0.080 U			
	MW03102015	Normal	North Alluvial	10/30/2015	70 U	1.0 U	0.40 J	9.6	0.30 U	1.0 U	55000	1.8 U	0.085 J	1.8 U	85 U	0.70 U	11000	45 J	0.35 J	790 J	22	0.10 U	1200000	0.20 U	0.63 J	4.0 J	0.080 U			
	MW03042015	Normal	North Alluvial	4/3/2015	31 U	0.60 UJ	0.37 J	9.2	0.24 U	0.40 U	56000	1.5 U	0.10 J	0.69 J	51 J	0.50 U	11000	46	0.50 J	800 J	23	0.10 U	1200000	0.20 U	1.6 J	5.4 J	0.080 U			
	MW03102014	Normal	North Alluvial	10/24/2014	31 U	0.60 U	0.40 J	9.0	0.24 U	0.12 U	61000	1.5 U	0.11 J	2.0	39 J	0.50 U	12000	45	0.61 J	980 J	28	0.10 U	1200000	0.20 U	1.3 J	6.0 J	0.080 U			
MW18D	MW18D042016	Normal	North Alluvial	4/12/2016	1800	0.73 J	1.7 J	46	0.30 U	1.0 U	76000	1.4 J	1.6	4.7	1100	1.7 J	19000	680	3.8	1300 J	2.0 U	0.10 U	2100000	0.20 U	19	180	0.080 U			
	MW18D102015																													

5.0 Analytical Results

TABLE 5-9

Summary of Total Metals Analytical Detections (Page 2 of 7)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																				EPA Method 7470 (µg/L)		
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6
					Regulatory Limits																						
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c
MW22D	MW22D042016	Normal	North Alluvial	4/11/2016	70 U	1.0 U	0.43 J	11	0.30 U	1.0 U	84000	1.8 U	0.17 J	1.8 U	85 U	0.70 U	17000	120	0.59 J	480 J	39	0.10 U	1100000	0.20 U	1.5 J	30	0.080 U
	MW22D102015	Normal	North Alluvial	11/2/2015	70 U	1.0 U	1.0 U	11	0.30 U	1.0 U	90000	1.8 U	0.17 J	0.96 J	85 U	0.70 U	17000	150	1.1 J	1200 UJ	38	0.10 U	1400000	0.20 U	0.94 J	9.0 J	0.080 U
	MW22D042015	Normal	North Alluvial	4/6/2015	31 U	0.60 U	1.0 U	11	0.24 U	0.40 U	79000	1.5 U	0.13 J	1.1 J	30 U	0.50 U	16000	130	0.72 J	450 J	39	0.10 U	1100000	0.062 U	0.94 J	10 J	0.080 U
	MW22D102014	Normal	North Alluvial	10/29/2014	31 U	0.60 U	1.0 U	9.8	0.24 U	0.12 U	89000	1.5 U	0.19 J	0.64 J	30 U	0.50 U	16000	130	0.99 J	1300 J	42	0.10 U	1200000	0.20 U	1.6 J	6.7 J	0.029 J
MW22S	MW22S042016	Normal	North Alluvial	4/12/2016	1300	0.52 J	1.1 J	40	0.15 J	1.0 U	87000	2.1 J	0.49 J	4	780	3.9	20000	54	2.0 J	830 J	27	0.13 J	930000	0.20 U	3.3 J	21	0.080 U
	MW22S102015	Normal	North Alluvial	10/30/2015	33000	1.0 U	8.5	460	2.4	1.0 U	110000	13	7.7	13	16000	30	28000	640 J	14	4500	26	0.18 J	1000000	0.28 J	25	57	0.058 J
	MW22S042015	Normal	North Alluvial	4/6/2015	12000	0.64 J	3.5 J	140	0.96 J	0.40 U	99000	6.1 J	3.1	6.7	6900	13	23000	250	6.8	1900 J	24	0.22 J	900000	0.22 U	13	25	0.080 U
	MW22S102014	Normal	North Alluvial	10/22/2014	32000	0.60 U	7.6	390 J	2.5	0.20 J	110000	14	7.6	14	17000	28	25000	600	14	3700	26	0.13 U	900000	0.25 U	28	58	0.058 J
MW23	MW23042016	Normal	North Alluvial	4/7/2016	2400 J	1.0 U	1.1 J	150 J	0.11 J	1.0 U	12000	1.7 J	1.1	3.5	870 J	0.77 J	5100	87	2.6 J	2100 J	2.0 U	0.10 U	480000	0.20 U	8.6	5.0 U	0.080 U
	DMW23042016	Duplicate	North Alluvial	4/7/2016	1900 J	1.0 U	1.1 J	160 J	0.30 U	1.0 U	12000	1.7 J	1.1	3.1	760 J	0.70 J	5100	86	2.5 J	2300 J	2.0 U	0.10 U	350000	0.050 J	7.4	6.1 U	0.080 U
	MW23102015	Normal	North Alluvial	11/6/2015	1300	1.0 U	1.1 J	150 J	0.12 J	1.0 U	12000	0.94 J	1.1	0.79 J	640	0.51 J	5300	88	2.2 J	1800	2.0 U	0.068 J	490000	0.20 UJ	6.1 J	5.2 J	0.080 U
	DMW23102015	Duplicate	North Alluvial	11/6/2015	2300	1.0 U	1.3 J	150 J	0.22 J	1.0 U	11000	1.5 J	1.3	2.0 J	1100	0.81 J	4800	87	2.6 J	2200	2.0 U	0.10 UJ	500000	0.10 J	12 J	4.8 J	0.080 U
	MW23042015	Normal	North Alluvial	4/7/2015	1800 J	0.60 U	1.3 J	160	0.24 U	0.40 U	11000	2.7 J	1.4	1.8 J	1000	0.81 J	5300	100	3.5	1800 J	2.0 U	0.48 J	480000	0.20 U	7.3	4.8 J	0.080 U
	DMW23042015	Duplicate	North Alluvial	4/7/2015	1500 J	0.60 U	1.2 J	150	0.15 J	0.40 U	11000	2.0 J	1.4	1.4 J	810	0.73 J	5300	95	3.5	1700 J	0.86 J	0.26 J	480000	0.090 J	6.9	4.0 J	0.080 U
	MW23102014	Normal	North Alluvial	10/28/2014	630 J	0.60 J	1.2 J	150	0.24 U	0.12 J	12000	2.6 J	1.1	2	370	0.48 J	5500	98	2.8 J	1700 J	2.0 U	0.13 J	490000	0.055 J	6.9	3.0 J	0.080 U
	DMW23102014	Duplicate	North Alluvial	10/28/2014	640 J	0.60 UJ	1.2 J	150	0.24 U	0.12 UJ	11000	1.7 J	1.1	1.9 J	380	0.44 J	5400	96	2.8 J	1700 J	2.0 U	0.049 J	470000	0.20 UJ	6.4	2.7 J	0.080 U
MW24	MW24042016	Normal	North Alluvial	4/6/2016	94 J	1.0 U	0.75 J	300	0.30 U	1.0 U	32000	1.8 U	0.081 J	1.8 U	1900 J	0.70 U	11000	470 J	0.52 J	890 J	2.0 U	0.10 U	270000	0.20 U	2.0 U	3.3 J	0.080 U
	DMW24042016	Duplicate	North Alluvial	4/6/2016	89 J	1.0 U	0.78 J	280	0.30 U	1.0 U	31000	1.8 U	0.073 J	1.8 U	1800 J	0.70 U	10000	450 J	0.49 J	850 J	2.0 U	0.10 U	260000	0.20 U	2.0 U	2.3 J	0.080 U
	MW24102015	Normal	North Alluvial	11/5/2015	520	1.0 U	0.73 J	300	0.30 U	1.0 U	33000	0.55 J	0.13 J	1.8 U	2000	0.26 J	11000	420	1.1 J	1300	2.0 U	0.10 U	270000	0.20 U	1.2 J	2.0 J	0.080 U
	MW24042015	Normal	North Alluvial	4/6/2015	23 J	0.60 U	0.53 J	290	0.24 U	0.40 U	30000	1.5 U	0.10 U	1.5 U	1900	0.38 J	11000	470	0.90 U	810 J	2.0 U	0.10 U	260000	0.20 U	1.0 U	6.0 U	0.080 U
	DMW24042015	Duplicate	North Alluvial	4/6/2015	21 J	0.60 U	0.81 J	290	0.24 U	0.40 U	31000	1.5 U	0.066 J	1.5 U	1800	0.50 U	10000	470	0.90 U	740 J	2.0 U	0.10 U	260000	0.20 U	0.67 J	2.8 J	0.080 U
	MW24102014	Normal	North Alluvial	10/27/2014	25 J	0.60 U	0.77 J	320	0.24 U	0.12 U	31000	1.5 U	0.066 J	1.5 U	1900	0.50 U	10000	500	0.90 U	950 J	2.0 U	0.10 U	280000	0.20 U	0.66 J	2.3 J	0.080 U
	DMW24102014	Duplicate	North Alluvial	10/27/2014	24 J	0.60 U	0.83 J	310	0.24 U	0.12 U	31000	1.5 U	0.058 J	1.5 U	1800	0.50 U	10000	480	0.90 U	880 J	2.0 U	0.10 U	280000	0.20 U	0.53 J	6.0 UJ	0.080 U
SMW01	SMW01042016	Normal	North Alluvial	4/8/2016	70 U	0.57 J	1.4 J	34	0.30 U	1.0 U	33000 J	1.8 U	0.23 J	0.77 J	23 J	0.70 U	11000	130	1.6 J	360 J	2.0 U	0.14 J	860000	0.20 U	2.4 J	8.0 U	0.080 U
	SMW011102015	Normal	North Alluvial	11/3/2015	150 U	1.0 U	0.88 J	37	0.30 U	1.0 U	34000	1.8 U	0.36 J	1.4 J	27 J	0.70 U	11000	180	2.0 J	590 J	2.0 U	0.10 U	870000	0.20 U	2.7 J	2.1 J	0.080 UJ
	SMW01042015	Normal	North Alluvial	4/8/2015	20 J	0.60 U	1.0 J	32	0.24 U	0.40 U	30000	1.5 U	0.30 J	1.5 U	30 U	0.50 U	9700	150	2.5 J	590 J	2.0 U	0.10 U	790000	0.20 U	1.6 J	6.0 U	0.080 U
	SMW01102014	Normal	North Alluvial	10/27/2014	31 UJ	0.60 U	1.1 J	34	0.24 U	0.12 U	27000	1.5 U	0.47 J	1.0 J	39 J	0.50 U	8400	270	1.9 J	310 J	2.0 U	0.10 U	750000	0.20 U	2.6 J	6.0 U	0.080 U
TMW01	TMW01042016	Normal	North Alluvial	4/8/2016	70 U	0.71 J	0.83 J	12	0.11 U	1.0 U	110000 J	1.8 U	0.20 U	6.4	85 U	0.70 U	18000	9.7	1.0 U	390 J	4.9 J	0.10 U	570000	0.10 U	12	8.0 U	0.080 U
	TMW01102015	Normal	North Alluvial	11/4/2015	150 U	1.0 U	0.94 J	12	0.30 U	1.0 U	110000	0.90 J	0.071 J	6.7	50 U	0.70 U	20000	11	1.0 U	570 J	5.4	0.10 U	560000	0.19 U	13	8.0 U	0.080 U
	TMW01042015	Normal	North Alluvial	4/7/2015	31 U	0.60 U	0.87 J	14	0.24 U	0.40 U	96000	0.54 J	0.10 U	8.9	30 U												

5.0 Analytical Results

TABLE 5-9

Summary of Total Metals Analytical Detections (Page 3 of 7)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																							EPA Method 7470
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6	
					Regulatory Limits																							
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
TMW07	TMW07042016	Normal	North Alluvial	4/8/2016	830	1.0 U	2.2 J	29	0.30 U	1.0 U	42000 J	2.3 J	0.52 J	2.6	780	0.40 J	7800	260	2.1 J	11000	2.0 U	0.25 J	1100000	0.20 U	2.0 J	4.3 J	0.080 U	
	TMW07102015	Normal	North Alluvial	10/30/2015	1500	1.0 U	2.7 J	48	0.30 U	1.0 U	41000	4.5 J	0.89 J	3.9	1100	0.76 J	7900	240 J	4.4	12000	2.0 U	0.39 J	1300000	0.20 U	4.3 J	16 J	0.080 U	
	TMW07042015	Normal	North Alluvial	4/1/2015	860 J	0.40 J	1.3 J	30 J	0.24 U	0.40 U	57000	1.6 J	0.91 J	0.57 J	720	0.58 J	9900	370	2.9 J	5500	2.0 U	0.060 J	1200000	0.20 U	6.3	5.4 J	0.080 U	
	TMW07102014	Normal	North Alluvial	10/23/2014	1300	0.75 J	1.2 J	47	0.24 U	0.12 U	64000	6.0 J	1.1	4.5	1100	0.81 J	11000	400	6.9	6000	2.0 U	0.044 J	1300000 J	0.20 U	5.8 J	14 J	0.034 J	
TMW08	TMW08042016	Normal	North Alluvial	4/12/2016	49 J	1.0 U	0.43 J	11	0.30 U	1.0 U	250000	0.56 J	0.47 J	1.6 J	1200	0.70 U	72000	370	1.6 J	2200 J	43	0.10 U	4100000	0.20 U	1.8 J	9.1 U	0.080 U	
	TMW08102015	Normal	North Alluvial	11/5/2015	77 J	1.0 U	0.61 J	11	0.30 U	1.0 U	230000	1.8 U	0.50 J	1.5 J	2500	0.70 U	70000	350	1.3 J	3800	38	0.10 U	4100000	0.20 U	3.1 J	12 J	0.080 U	
	TMW08042015	Normal	North Alluvial	4/8/2015	37 J	0.60 U	0.38 J	9.3	0.24 U	0.40 U	240000	1.5 U	0.32 J	2	2200	0.50 U	68000	300	1.4 J	3600	37	0.039 J	3900000	0.20 U	1.1 J	15 J	0.080 U	
	TMW08102014	Normal	North Alluvial	10/29/2014	68 J	0.60 U	0.33 J	8.6	0.24 U	0.12 U	340000	1.5 U	0.24 J	1.3 J	1700	0.50 U	79000	300	0.99 J	6600	19	0.10 U	4300000	0.20 U	1.6 J	6.4 J	0.080 U	
TMW10	TMW10042016	Normal	North Alluvial	4/12/2016	70 U	1.0 U	0.52 J	17	0.30 U	1.0 U	73000	0.91 J	0.20 U	5.1	85 U	0.70 U	17000	14	0.84 J	670 J	2.0 U	0.10 U	1900000	0.20 U	3.0 J	2.4 U	0.080 U	
	TMW10102015	Normal	North Alluvial	11/4/2015	150 U	1.0 U	0.58 J	18	0.30 U	1.0 U	70000	1.4 J	0.20 U	26	50 U	0.70 U	17000	12	0.67 J	1200	2.0 U	0.091 J	1800000	0.085 U	3.2 J	8.0 U	0.080 U	
	TMW10042015	Normal	North Alluvial	4/7/2015	31 U	0.60 U	0.65 J	18	0.24 U	0.40 U	67000	1.5 U	0.10 U	15	30 U	0.50 U	18000	13	0.89 J	1100 J	1.1 J	0.10 U	1800000	0.20 U	2.4 J	6.0 U	0.080 U	
	TMW10102014	Normal	North Alluvial	10/28/2014	31 U	0.60 U	0.72 J	19	0.24 U	0.12 U	82000	1.5 U	0.10 U	3.9	30 U	0.50 U	20000	74	1.3 J	1600 J	1.0 J	0.10 U	2000000	0.20 U	3.5 J	6.0 U	0.080 U	
TMW11	TMW11042016	Normal	North Alluvial	4/11/2016	2100	1.0 U	0.47 J	29	0.11 U	1.0 U	20000	2.4 J	0.47 J	1.8 U	1000	0.50 J	3800	27	1.5 J	970 J	14	0.037 J	580000	0.20 U	4.7 J	6.6 J	0.080 U	
	TMW11102015	Normal	North Alluvial	11/4/2015	1700	1.0 U	0.70 J	34	0.30 U	1.0 U	24000	3.2 J	0.36 J	3.6	1400	0.72 J	4200	42	2.1 J	1200	14	2.5 J	680000	0.20 U	6.5	16 J	0.080 U	
	TMW11042015	Normal	North Alluvial	4/8/2015	1800	0.55 U	1.0 U	26	0.24 U	0.40 U	16000	2.2 J	0.29 J	1.5 U	880	0.38 J	3400	17	1.1 J	1100 J	14	0.10 U	520000	0.20 U	3.3 J	5.8 J	0.080 U	
	TMW11102014	Normal	North Alluvial	10/29/2014	31 U	0.60 U	0.52 J	28	0.24 U	0.12 U	20000	2.6 J	0.37 J	0.65 J	23 J	0.47 J	3600	17	1.3 J	770 J	15	0.10 U	630000	0.20 U	4.5 J	6.7 J	0.080 U	
TMW13	TMW13042016	Normal	North Alluvial	4/12/2016	70 U	1.0 U	1.0 U	19	0.30 U	1.0 U	24000	0.69 J	0.20 U	1.8 U	85 U	0.70 U	4600	0.61 J	1.0 U	460 J	11	0.10 U	530000	0.058 U	2.9 J	8.0 U	0.080 U	
	TMW13102015	Normal	North Alluvial	11/4/2015	150 U	1.0 U	1.0 U	19	0.30 U	1.0 U	26000	0.66 J	0.20 U	0.68 J	50 U	0.70 U	4800	0.74 U	1.0 U	760 J	11	0.16 J	550000	0.24 U	2.6 J	8.0 U	0.080 U	
	TMW13042015	Normal	North Alluvial	4/9/2015	31 U	0.60 U	1.0 U	17	0.24 U	0.40 U	27000	0.57 J	0.10 U	1.5 U	30 U	0.50 U	5200	0.63 J	0.90 U	550 J	12	0.10 U	510000 J	0.20 U	2.4 J	6.0 U	0.080 U	
	TMW13102014	Normal	North Alluvial	10/27/2014	31 UJ	0.60 U	1.0 U	18	0.24 U	0.12 U	24000	0.77 J	0.10 U	1.5 U	30 U	0.50 U	4400	0.90 U	0.90 U	510 J	12	0.10 U	540000	0.20 U	3.3 J	3.1 J	0.080 U	
TMW15	TMW15042016	Normal	North Alluvial	4/13/2016	70 U	1.0 U	1.0 U	22	0.30 U	1.0 U	19000	0.92 J	0.20 U	1.8 U	85 U	0.70 U	3400	0.95 U	1.0 U	800 J	12	0.10 U	420000	0.20 U	1.6 J	4.2 J	0.080 U	
	DTW15042016	Duplicate	North Alluvial	4/13/2016	70 U	1.0 U	1.0 U	21	0.30 U	1.0 U	19000	0.96 J	0.20 U	1.8 U	85 U	0.70 U	3400	0.95 U	1.0 U	710 J	13	0.10 U	430000	0.056 J	1.8 J	5.5 J	0.080 U	
	TMW15102015	Normal	North Alluvial	11/6/2015	150 U	1.0 U	1.0 U	24 J	0.30 UJ	1.0 U	21000	0.89 J	0.20 U	1.8 U	41 J	0.70 U	3800	1.5 J	1.0 UJ	700 J	13	0.051 J	570000	0.20 U	1.9 J	7.8 J	0.080 U	
	DTW15102015	Duplicate	North Alluvial	11/6/2015	150 U	1.0 U	1.0 U	23 J	0.11 J	1.0 U	21000	0.92 J	0.20 U	1.8 U	27 J	0.70 U	3800	1.1 J	0.30 J	830 J	13	0.10 UJ	570000	0.20 U	2.2 J	6.9 J	0.080 U	
	TMW15042015	Normal	North Alluvial	4/8/2015	31 U	0.60 U	1.0 U	24	0.24 U	0.40 U	19000	0.92 J	0.10 U	1.5 U	30 U	0.50 U	3700	0.53 J	0.90 U	740 J	14	0.10 U	560000	0.20 U	1.2 J	6.7 J	0.080 U	
	DTW15042015	Duplicate	North Alluvial	4/8/2015	26 J	0.60 U	1.0 U	23	0.24 U	0.40 U	19000	1.0 J	0.10 U	1.5 U	30 U	0.50 U	3600	0.63 J	0.90 U	740 J	14	0.10 U	550000	0.20 U	1.5 J	7.2 J	0.080 U	
	TMW15102014	Normal	North Alluvial	10/29/2014	31 U	0.60 U	1.0 U	22	0.24 U	0.12 U	20000	1.1 J	0.10 U	1.5 U	30 U	0.50 U	3600	0.38 U	0.34 J	870 J	14	0.10 U	630000	0.20 U	2.2 J	7.3 J	0.080 U	
TMW21	TMW21042016	Normal	North Alluvial	4/11/2016	34000	1.0 U	7.4	410	2.2	1.0 U	50000	20	11	37	22000	15	15000	570	20	6200 J	4.1 J	0.25 J	620000	0.22 J	40	64	0.080 U	
	TMW21102015	Normal	North Alluvial	10/29/2015	38000	1.0 U	9.5	510	2.4	0.28 J	54000	19	11	49	25000	17	17000	840	22	6900	2.8 J	0.36 J	700000	0.25 J	43	73	0.060 J	
	TMW21042015	Normal	North Alluvial	4/3/2015	24000 J	1.3 J	6.4	340	1.8	0.40 U	43000	16	8.7	49	17000 J	11	13000</											

5.0 Analytical Results

TABLE 5-9

Summary of Total Metals Analytical Detections (Page 4 of 7)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																							EPA Method 7470
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6	
					Regulatory Limits																							
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
TMW25	TMW25042016	Normal	North Alluvial	4/13/2016	140 J	1.0 U	0.83 J	18	0.30 U	1.0 U	49000	1.8 U	1.3	1.3 J	410 J	0.41 J	9800	1100 J	1.8 J	890 J	2.0 U	1.0 J	630000	0.20 U	5.7 J	22	0.080 U	
	TMW25102015	Normal	North Alluvial	11/4/2015	340	1.0 U	3.4 J	58	0.30 U	1.0 U	58000	1.9 J	6.9	3.8	4700	1.8 J	11000	6200	9.3	570 J	2.0 U	1.6 J	890000	0.20 U	25	200	0.080 U	
	TMW25042015	Normal	North Alluvial	4/7/2015	300 J	0.60 U	0.83 J	15	0.24 U	0.40 U	47000	1.5 U	0.46 J	0.65 J	310	0.18 J	11000	340	1.2 J	640 J	2.0 U	0.10 U	830000	0.20 U	4.3 J	5.4 J	0.080 U	
	TMW25102014	Normal	North Alluvial	10/31/2014	120 J	0.60 U	0.78 J	15	0.24 U	0.12 U	56000	1.5 U	0.71 J	1.1 J	160	0.50 U	12000	570	1.4 J	380 J	4.0 U	0.10 U	950000	0.20 U	5.2 J	8.4 J	0.032 J	
TMW26	TMW26042016	Normal	North Alluvial	4/8/2016	270 J	1.0 U	1.0 J	22	0.083 U	1.0 U	19000 J	1.8 U	0.30 J	2.3	140	0.70 U	7000	110	1.8 J	520 J	2.0 U	0.10 U	840000	0.20 U	3.9 J	2.1 J	0.080 U	
	TMW26102015	Normal	North Alluvial	10/30/2015	270 J	1.0 U	1.2 J	24	0.30 U	1.0 U	18000	1.8 U	0.32 J	1.6 J	130	0.70 U	6900	120 J	1.9 J	690 J	2.0 U	0.10 U	890000	0.20 U	3.8 J	8.0 U	0.028 J	
	DTW26102015	Duplicate	North Alluvial	10/30/2015	260 J	1.0 U	0.94 J	22	0.30 U	1.0 U	18000	1.8 U	0.31 J	1.7 J	130	0.70 U	7200	110 J	1.9 J	590 J	2.0 U	0.046 J	950000	0.20 U	3.6 J	8.0 U	0.080 U	
	TMW26042015	Normal	North Alluvial	4/7/2015	250 J	0.60 U	1.3 J	22	0.24 U	0.40 U	16000	1.5 U	0.35 J	2.3	120	0.50 U	6800	110	2.1 J	680 J	1.2 J	0.10 U	770000	0.20 U	3.4 J	2.6 J	0.080 U	
	DTW26042015	Duplicate	North Alluvial	4/7/2015	330 J	0.60 U	1.2 J	22	0.24 U	0.40 U	17000	1.5 U	0.38 J	2.2	180	0.50 U	7400	120	2.5 J	700 J	0.75 J	0.10 U	930000	0.20 U	3.9 J	6.0 U	0.080 U	
	TMW26102014	Normal	North Alluvial	10/27/2014	640 J	0.60 U	1.4 J	31	0.24 U	0.12 U	18000	0.87 J	0.44 J	3.2	340	0.23 J	6700	120	2.4 J	640 J	2.0 UJ	0.10 U	830000	0.20 UJ	5.4 J	7.5 J	0.080 U	
	DTW26102014	Duplicate	North Alluvial	10/27/2014	560 J	0.60 U	1.4 J	30	0.24 U	0.12 U	17000	0.78 J	0.40 J	3.1	300	0.20 J	6400	130	2.4 J	550 J	0.74 J	0.10 U	810000	0.073 J	5.4 J	2.0 J	0.080 U	
TMW27	TMW27042016	Normal	North Alluvial	4/8/2016	70 U	1.0 U	22	130	0.30 U	1.0 U	21000 J	1.8 U	0.13 J	1.8 U	500	0.70 U	5400	550	1.0 U	460 J	2.0 U	0.10 U	290000	0.20 U	2.0 U	4.1 J	0.080 U	
	TMW27102015	Normal	North Alluvial	10/30/2015	70 U	1.0 U	21	140	0.30 U	1.0 U	24000	1.8 U	0.21 J	1.8 U	580	0.70 U	6400	570 J	0.64 J	690 J	2.0 U	0.10 U	370000	0.20 U	2.0 U	4.3 J	0.080 U	
	TMW27042015	Normal	North Alluvial	4/7/2015	31 U	0.47 J	21	120	0.24 U	0.40 U	23000	1.5 U	0.16 J	1.5 U	1100	0.50 U	6400	580	0.68 J	650 J	2.0 U	0.10 U	390000	0.20 U	1.0 U	5.6 J	0.080 U	
	TMW27102014	Normal	North Alluvial	10/27/2014	31 UJ	0.56 J	22	120	0.24 U	0.12 U	24000	1.5 U	0.18 J	1.5 U	580	0.50 U	6000	570	0.75 U	590 J	2.0 U	0.10 U	350000	0.20 U	0.57 J	3.0 J	0.080 U	
TMW28	TMW28042016	Normal	North Alluvial	4/11/2016	27 J	1.0 U	1.0 U	51	0.11 U	1.0 U	110000	1.8 U	0.12 J	1.8 U	400	0.70 U	33000	370	1.0 U	1300 J	2.0 U	0.10 U	340000	0.20 U	1.2 J	28	0.080 U	
	TMW28102015	Normal	North Alluvial	11/3/2015	150 U	1.0 U	1.0 U	60	0.30 U	1.0 U	110000	1.8 U	0.099 J	1.8 U	370	0.70 U	32000	430	1.0 U	1300	2.0 U	0.10 U	340000	0.20 U	0.78 J	2.4 J	0.080 U	
	TMW28042015	Normal	North Alluvial	4/7/2015	31 U	1.2 J	1.0 U	79	0.24 U	0.40 U	120000	1.5 U	0.15 J	1.5 U	490	0.50 U	39000	530	0.54 J	1300 J	2.0 U	0.050 U	430000	0.13 J	0.66 J	3.3 J	0.080 U	
	TMW28102014	Normal	North Alluvial	10/29/2014	22 J	0.60 U	1.0 U	59	0.24 U	0.12 U	91000	1.5 U	0.15 J	1.5 U	430	0.50 U	27000	370	0.42 J	1300 J	2.0 U	0.10 U	340000	0.20 U	1.6 J	40	0.080 U	
TMW29	TMW29042016	Normal	North Alluvial	4/7/2016	5800 J	0.73 J	1.9 J	76 J	0.22 J	1.0 U	43000	4.7 J	1.3	2.3	2800 J	1.7 J	8400	78	3.4	2500 J	20	0.10 U	400000	0.20 U	10	13 U	0.080 U	
	TMW29102015	Normal	North Alluvial	10/28/2015	6500 J	1.0 U	2.2 J	82	0.29 J	1.0 U	43000	4.6 J	1.6	2.1	4000	3.1	8800	110	4.5	2400 J	19	0.10 U	560000	0.051 U	10	14 J	0.080 U	
	TMW29042015	Normal	North Alluvial	4/3/2015	6400 J	0.41 J	2.1 J	99	0.41 J	0.40 U	43000	7.1 J	2.1	3.7	3900 J	2.4 J	9100	130	6.2	2500 J	20	0.080 J	620000	0.083 J	13	14 J	0.080 U	
	TMW29102014	Normal	North Alluvial	10/23/2014	19000	0.60 U	4.5 J	280	1.2	0.73 J	60000	20	6.2	9.9	11000	7.8	13000	370	19	4600	16	0.044 J	670000 J	0.17 U	28	46	0.043 J	
TMW31S	TMW31S042016	Normal	North Alluvial	4/6/2016	1700 J	0.68 J	0.47 J	32	0.13 J	1.0 U	110000	2.9 J	0.49 J	1.3 J	790 J	0.65 J	21000	52 J	1.5 J	790 J	9.2	0.038 J	540000	0.065 J	4.3 J	7.8 J	0.080 U	
	TMW31S102015	Normal	North Alluvial	10/29/2015	5100	1.0 U	0.60 J	78	0.17 J	1.0 U	110000	4.6 J	1.5	1.2 J	2200	2.9 J	22000	130	3.3	1400 J	9.5	0.10 U	570000	0.20 U	7.3	11 J	0.080 U	
	TMW31S042015	Normal	North Alluvial	4/2/2015	67000	0.60 U	3.4 J	660	3.2	0.40 U	170000	34	17	15	27000	20	36000	1300	37	6200	8.4	0.10 J	580000	0.27 U	57	100	0.080 U	
	TMW31S102014	Normal	North Alluvial	10/22/2014	4500	0.60 U	0.55 J	84 J	0.30 J	0.12 U	120000	3.6 J	1.4	1.8 J	2200	1.6 J	21000	110	3	1000 J	9.2	0.10 U	570000	0.20 U	7.3	15 J	0.027 J	
TMW33	TMW33042016	Normal	North Alluvial	4/7/2016	7000 J	1.0 U	1.8 J	110 J	0.38 J	1.0 U	110000	7.3 J	2.6	5.5	3400 J	2.6 J	28000	820	7.2	4500	2.0 U	0.047 J	2300000	0.053 J	13	15 U	0.080 U	
	TMW33102015	Normal	North Alluvial	10/30/2015	840	1.0 U	1.0 J	36	0.13 J	1.0 U	100000	1.5 J	0.64 J	2.5	580	1.1 J	29000	470 J	2.7 J	2900 J	2.0 U	0.049 U	2600000	0.20 U	4.7 J	7.5 J	0.043 J	
	TMW33042015	Normal	North Alluvial	4/2/2015	5500	0.44 J	1.5 J	90	0.44 J	0.40 U	94000	3.9 J	1.5	6.7	3100													

5.0 Analytical Results

TABLE 5-9

Summary of Total Metals Analytical Detections (Page 5 of 7)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																							EPA Method 7470
																												(µg/L)
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6	
					Regulatory Limits																							
50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c						
TMW39S	TMW39S042016	Normal	North Alluvial	4/6/2016	3800 J	0.73 J	0.89 J	60	0.30 U	1.0 U	76000	5.2 J	0.81 J	2.1	1900 J	1.7 J	18000	73 J	2.3 J	1500 J	11	0.041 J	890000	0.20 U	7.2	8.9 J	0.080 U	
	TMW39S102015	Normal	North Alluvial	10/29/2015	9900	1.0 U	1.2 J	160	0.47 J	1.0 U	84000	8.2 J	2.6	3.8	4800	3.4	19000	240	5.1	2600 J	10	0.091 J	960000	0.069 J	14	18 J	0.080 U	
	TMW39S042015	Normal	North Alluvial	4/1/2015	7300 J	0.60 U	1.2 J	99 J	0.34 J	0.40 U	81000	6.8 J	1.7	2.4	3300	1.9 J	18000	130	4.4	1900 J	11	0.10 U	850000	0.11 J	11	11 J	0.080 U	
	TMW39S102014	Normal	North Alluvial	10/23/2014	6100	0.60 U	0.98 J	87	0.098 J	0.12 U	75000	5.9 J	1.5	3.2	3000	1.7 J	17000	100	3.6	2000 J	2.2 J	0.10 U	950000 J	0.078 U	9.9	9.2 J	0.030 J	
TMW40S	TMW40S042016	Normal	North Alluvial	4/8/2016	6200	1.0 U	13	99	0.65 J	1.0 U	66000 J	2.7 J	1.2	2.3	3100	5.3	11000	130	2.7 J	1300 J	61	0.053 J	970000	0.11 U	40	42	0.080 U	
	TMW40S102015	Normal	North Alluvial	10/28/2015	59000 J	1.0 U	23	1000	9.8	0.70 J	120000	20	11	18	34000	75	27000	1400	25	4900	54	0.33 U	960000	0.23 U	65	480	0.053 J	
	TMW40S042015	Normal	North Alluvial	4/1/2015	120000 J	0.60 U	30	1800 J	15	0.72 J	140000	42	23	33	49000	100	37000	2200	48	6500	56	0.22 J	980000	0.39 J	97	760	0.027 J	
	TMW40S102014	Normal	North Alluvial	10/22/2014	71000	0.60 U	26	1300 J	12	0.48 J	130000	34	17	24	38000	89	29000	1800	37	5000	53	0.19 U	1100000	0.32 J	86	610	0.069 J	
TMW41	TMW41042016	Normal	North Alluvial	4/7/2016	560 J	1.0 U	0.54 J	12 J	0.30 U	1.0 U	16000	2.3 J	0.11 J	0.74 J	210 J	0.70 U	3600	4.6	0.63 U	1100 J	1.2 J	0.10 U	670000	0.20 U	6.4	5.1 U	0.080 U	
	TMW41102015	Normal	North Alluvial	10/29/2015	500	1.0 U	0.53 J	16	0.30 U	1.0 U	15000	1.8 J	0.14 J	1.8 U	220	1.8 J	3900	6.7	0.49 J	1300 J	1.4 J	0.070 J	920000	0.20 U	7.5	5.4 J	0.080 U	
	TMW41042015	Normal	North Alluvial	4/1/2015	360 J	1.5 J	0.61 J	13 J	0.24 U	0.40 U	15000	2.0 J	0.10 J	1.5 U	190	0.23 J	3600	5.5	0.90 U	870 J	1.4 J	0.10 UJ	790000	0.18 J	7.5	5.5 J	0.080 U	
	TMW41102014	Normal	North Alluvial	10/23/2014	540	0.61 J	0.55 J	12	0.24 U	0.12 U	15000	2.1 J	0.12 J	1.5 U	260	0.26 J	3600	5.7	0.41 J	1100 J	1.4 J	0.10 U	940000 J	0.15 U	6.8	4.9 J	0.080 U	
TMW43	TMW43042016	Normal	North Alluvial	4/13/2016	70 U	1.0 U	1.0 U	18	0.30 U	1.0 U	33000	1.8 U	0.068 J	1.8 U	85 U	0.70 U	5900	48 J	1.0 U	940 J	6.1	0.10 U	440000	0.20 U	1.8 J	2.6 J	0.080 U	
	DTW43042016	Duplicate	North Alluvial	4/13/2016	70 U	0.47 J	1.0 U	19	0.30 U	1.0 U	33000	1.8 U	0.088 J	1.8 U	85 U	0.70 U	5800	48 J	1.0 U	1200 J	6.3	0.091 J	430000	0.12 J	1.8 J	2.2 J	0.080 U	
	TMW43102015	Normal	North Alluvial	11/3/2015	150 U	1.1 J	1.0 U	20	0.30 U	1.0 U	35000	1.8 U	0.15 J	1.8 U	50 U	0.70 U	6400	48	1.0 U	920 J	6.2	0.037 U	580000	0.051 J	1.5 J	8.0 U	3.3 J	
	DTW43102015	Duplicate	North Alluvial	11/3/2015	150 U	0.43 J	1.0 U	19	0.26 J	1.0 U	35000	1.8 U	0.16 J	1.8 U	50 U	0.70 U	6500	49	0.53 J	1100	6.7	0.033 U	580000	0.14 J	1.9 J	8.0 U	0.080 UJ	
	TMW43042015	Normal	North Alluvial	4/10/2015	200 J	0.60 U	1.0 U	20	0.24 U	0.40 U	34000	1.5 U	0.095 J	1.5 U	140	0.50 U	6500	54	0.90 U	790 J	5.7	0.10 U	590000	0.13 J	1.5 J	2.1 J	0.080 U	
	DTW43042015	Duplicate	North Alluvial	4/10/2015	41 J	0.60 U	1.0 U	19	0.23 J	0.40 U	30000	1.5 U	0.12 J	1.5 U	25 J	0.50 U	6100	51	0.90 U	800 J	6.4	0.10 U	510000	0.13 J	1.6 J	6.0 U	0.080 U	
	TMW43102014	Normal	North Alluvial	10/31/2014	31 U	0.60 U	1.0 U	21	0.24 U	0.12 U	36000	1.5 U	0.086 J	1.5 U	30 U	0.50 U	6700	51	0.90 U	700 J	6.9	0.10 U	600000	0.20 U	2.0 J	3.0 J	0.080 U	
	DTW43102014	Duplicate	North Alluvial	10/31/2014	31 U	0.60 U	1.0 U	21	0.24 U	0.12 U	36000	1.5 U	0.095 J	1.5 U	30 U	0.50 U	6800	52	0.90 U	760 J	7.4	0.10 U	600000	0.20 U	2.0 J	2.8 J	0.080 U	
TMW44	TMW44042016	Normal	North Alluvial	4/8/2016	710	1.0 U	0.85 J	21	0.30 U	1.0 U	34000 J	0.68 J	0.18 J	1.2 J	380	0.29 J	11000	79	1.4 J	610 J	2.1 J	0.10 U	700000	0.20 U	4.2 J	3.8 J	0.080 U	
	TMW44102015	Normal	North Alluvial	10/29/2015	4700	1.0 U	1.5 J	62	0.24 J	1.0 U	38000	3.0 J	1.8	1.5 J	2600	1.8 J	13000	330	2.8 J	1700 J	2.0 J	0.042 J	800000	0.050 J	9.1	10 J	0.027 J	
	TMW44042015	Normal	North Alluvial	4/1/2015	16000 J	0.60 U	3.5 J	170 J	0.69 J	0.40 U	45000	9.7 J	6.1	7.8	8500	6.5	14000	820	8.6	2900 J	2.3 J	0.10 U	700000	0.17 J	22	25	0.080 U	
	TMW44102014	Normal	North Alluvial	10/23/2014	17000 J	0.60 U	4.0 J	240	1.2	0.12 U	49000	11	6.6	7.4	11000	9.8	15000	700	10	4000	2.4 J	0.10 U	870000 J	0.21 U	25	40	0.042 J	
TMW45	TMW45042016	Normal	North Alluvial	4/14/2016	82 J	1.0 U	1.1 J	74	0.30 U	1.0 U	26000	1.1 J	0.27 J	1.7 J	59 J	0.70 U	6600	180	2.0 J	990 J	0.76 J	0.10 U	770000 J	0.20 U	4.7 J	8.0 U	0.080 U	
	TMW45102015	Normal	North Alluvial	11/3/2015	79 J	1.0 U	1.0 J	72	0.30 U	1.0 U	29000	0.52 J	0.20 J	2	43 J	0.70 U	7500	170	1.4 J	1000	0.70 J	0.059 U	910000	0.20 U	4.2 J	8.0 U	0.080 UJ	
	TMW45042015	Normal	North Alluvial	4/9/2015	55 J	0.60 U	0.95 J	66	0.24 U	0.40 U	31000	1.5 U	0.15 J	1.3 J	34 J	0.50 U	8000	150	1.3 J	680 J	1.1 J	0.051 J	830000 J	0.20 U	3.7 J	6.0 U	0.080 U	
	TMW45102014	Normal	North Alluvial	10/29/2014	220 J	0.54 J	1.0 J	72	0.24 U	0.12 U	31000	1.5 U	0.25 J	1.6 J	140	0.18 J	7600	180	1.5 J	1200 J	2.0 U	0.036 J	990000	0.11 U	4.8 J	6.0 U	0.030 J	
TMW46	TMW46042016	Normal	North Alluvial	4/7/2016	5700 J	1.0 U	1.2 J	98 J	0.28 J	1.0 U	83000	3.7 J	1.6	4.4	2600 J	2.4 J	18000	100	2.4 J	2900 J	110	0.10 U	1200000	0.20 U	8.3	11 U	0.080 U	
	TMW46102015	Normal	North Alluvial	10/29/2015	8000	1.0 U	1.9 J																					

5.0 Analytical Results

TABLE 5-9

Summary of Total Metals Analytical Detections (Page 6 of 7)

Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																					EPA Method 7470 (µg/L)	
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6
					Regulatory Limits																						
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c
TMW16	TMW16042016	Normal	North Bedrock	4/7/2016	4700 J	1.0 U	1.1 J	61 J	0.16 J	1.0 U	12000	11	2.1	4.6	1500 J	1.1 J	2100	140	67	2500 J	1.0 J	1.2 J	480000	0.20 U	11	37	0.080 U
	TMW16102015	Normal	North Bedrock	10/28/2015	1900 J	1.0 U	0.75 J	34	0.30 U	1.0 U	4500	2.8 J	0.72 U	2.7	1200	1.0 U	970	27	6.4	1000 J	2.0 U	0.59 J	420000	0.27 U	14	18 J	0.038 J
	TMW16042015	Normal	North Bedrock	4/1/2015	1900 J	0.60 U	0.61 J	34 J	0.24 U	0.40 U	4500	4.2 J	0.68 J	4.5	920	0.79 J	950	23	8.7	1000 J	2.0 U	0.43 J	440000	0.20 U	23	20	0.080 U
	TMW16102014	Normal	North Bedrock	10/24/2014	2300	0.60 U	0.61 J	37	0.094 J	0.12 U	4400	3.8 J	0.87 J	7.3	1000	1.0 J	1100	25	10	1300 J	2.0 U	0.30 J	460000	0.20 U	9.7	40	0.080 U
TMW17	TMW17042016	Normal	North Bedrock	4/15/2016	170 J	1.0 U	1.0 U	15	0.30 U	1.0 U	3500	1.8 U	0.075 J	1.1 J	62 J	0.84 J	460 J	14	0.40 J	960 J	2.0 U	0.052 U	430000	0.20 U	0.77 J	55	0.080 U
	TMW17102015	Normal	North Bedrock	11/3/2015	260	1.0 U	1.0 U	15	0.30 U	1.0 U	3700	0.61 J	0.074 J	1.3 J	110	0.90 J	530	16	0.84 J	910 J	2.0 U	0.044 U	420000	0.20 U	0.84 J	110	0.080 UJ
	TMW17042015	Normal	North Bedrock	4/7/2015	510 J	0.60 U	0.37 J	19	0.24 U	0.40 U	6200	1.0 J	0.17 J	2.4	250	2.0 J	660	27	1.8 J	990 J	1.2 J	0.40 J	510000	0.20 U	1.2 J	600	0.080 U
	TMW17102014	Normal	North Bedrock	10/29/2014	210 J	0.60 U	1.0 U	17	0.24 U	0.12 U	3700	1.5 U	0.068 J	1.2 J	90 J	0.96 J	520	14	0.47 J	1100 J	2.0 U	0.10 U	440000	0.061 U	0.67 J	100	0.080 U
TMW18	TMW18042016	Normal	North Bedrock	4/7/2016	400 J	1.0 U	2.4 J	16 J	0.30 U	1.0 U	6700	1.3 J	0.088 J	0.90 J	130 J	0.34 J	1000	8	0.59 U	4000	0.81 J	0.58 J	470000	0.20 U	13	3.7 U	0.080 U
	TMW18102015	Normal	North Bedrock	10/29/2015	210 J	1.0 U	1.0 U	18	0.30 U	1.0 U	7000	1.8 U	0.20 U	1.6 J	140	0.43 J	1200	7.4	0.35 J	3700	2.0 U	0.10 U	750000	0.20 U	3.9 J	2.8 J	0.080 U
	TMW18042015	Normal	North Bedrock	4/1/2015	440 J	0.60 U	2.0 J	19 J	0.24 U	0.40 U	7100	0.92 J	0.11 J	3.3	200	0.75 J	1100	8	0.64 J	3600	2.0 U	0.25 J	670000	0.20 U	12	7.8 J	0.080 U
	TMW18102014	Normal	North Bedrock	10/24/2014	320	0.60 U	3.3 J	29	0.24 U	0.12 U	7500	1.1 J	0.10 J	3.4	140	0.80 J	1100	6.3	0.96 J	3900	2.0 U	0.38 J	710000	0.20 U	10	16 J	0.080 U
TMW19	TMW19042016	Normal	North Bedrock	4/7/2016	3600 J	1.0 U	0.58 J	20 J	0.080 J	1.0 U	13000	3.3 J	0.76 J	2.1	1500 J	0.95 J	2000	71	2.9 J	2200 J	2.0 U	1.6 J	610000	0.20 U	4.5 J	10 U	0.080 U
	TMW19102015	Normal	North Bedrock	10/28/2015	880 J	1.0 U	0.36 J	9	0.20 J	1.0 U	9700	1.1 J	0.27 U	0.99 J	380	0.42 U	1200	24	3.3	1100 J	2.0 U	0.14 U	670000	0.14 U	7.7	7.7 J	0.080 U
	TMW19042015	Normal	North Bedrock	4/1/2015	1200 J	0.60 U	0.33 J	12 J	0.12 J	0.40 U	10000	0.86 J	0.34 J	0.68 J	620	0.59 J	1300	23	4.2	1200 J	2.0 U	0.40 J	680000	0.20 U	6.9	7.1 J	0.080 U
	TMW19102014	Normal	North Bedrock	10/24/2014	1200	0.60 U	1.0 U	13	0.080 J	0.12 U	12000	0.93 J	0.32 J	1.8 J	590	0.53 J	1500	33	4	1500 J	2.0 U	0.074 J	750000	0.20 U	5.0 J	8.2 J	0.080 U
TMW30	TMW30042016	Normal	North Bedrock	4/7/2016	3400 J	0.50 J	1.2 J	42 J	0.16 J	1.0 U	56000	3.0 J	0.93 J	3.6	2200 J	2.2 J	11000	48	2.4 J	2000 J	7.1	0.19 J	450000	0.055 J	18	30	0.080 U
	TMW30102015	Normal	North Bedrock	10/29/2015	460	1.0 U	0.79 J	13	0.30 U	1.0 U	49000	1.6 J	0.21 J	1.4 J	330	0.52 J	11000	8.3	0.92 J	1100 J	6.5	0.23 J	460000	0.20 U	13	9.6 J	0.030 J
	TMW30042015	Normal	North Bedrock	4/1/2015	500 J	0.60 U	1.0 J	16 J	0.088 J	0.40 U	58000	0.90 J	0.24 J	0.88 J	460	0.56 J	12000	9.5	0.40 J	940 J	8.5	0.10 U	440000	0.060 J	16	9.3 J	0.080 U
	TMW30102014	Normal	North Bedrock	10/22/2014	2300	0.60 U	1.4 J	40 J	0.17 J	0.12 U	61000	2.3 J	0.98 J	3.3	2100	2.1 J	12000	47	1.7 J	1200 J	7.6	0.10 U	490000	0.063 U	20	35	0.028 J
TMW31D	TMW31D042016	Normal	North Bedrock	4/13/2016	70 U	1.0 U	1.0 U	8.5	0.30 U	1.0 U	64000	0.59 J	0.20 U	0.92 J	85 U	0.70 U	11000	1.8 J	0.51 J	2000 J	7.9	0.10 U	430000	0.20 U	6.7	18 J	0.080 U
	DTW31D042016	Duplicate	North Bedrock	4/13/2016	70 U	1.0 U	0.45 J	8.7	0.30 U	1.0 U	60000	0.63 J	0.20 U	0.62 J	85 U	0.70 U	10000	2.8 J	0.45 J	1800 J	7.7	0.10 U	370000	0.20 U	6.7	17 J	0.080 U
	TMW31D102015	Normal	North Bedrock	11/5/2015	150 U	1.0 U	0.52 J	9	0.30 U	1.0 U	62000	1.8 U	0.062 J	1.8 UJ	50 U	0.70 U	11000	2.1 J	0.41 J	1600	7.3	0.10 U	530000	0.20 U	6.3	18 J	0.080 U
	DTW31D102015	Duplicate	North Bedrock	11/5/2015	150 U	1.0 U	0.40 J	8.3	0.30 U	1.0 U	66000	1.8 U	0.20 UJ	0.57 J	50 U	0.70 U	11000	2.8 J	0.45 J	1600	7.2	0.10 U	550000	0.20 U	6.6	19 J	0.080 U
	TMW31D042015	Normal	North Bedrock	4/6/2015	31 U	0.40 J	0.51 J	9.8	0.24 U	0.40 U	45000	1.5 U	0.064 J	1.5 J	30 U	0.50 U	8300	3.6	0.31 J	1100 J	7.7	0.10 U	570000	0.075 U	5.8 J	19 J	0.080 U
	TMW31D102014	Normal	North Bedrock	10/30/2014	31 U	0.60 U	0.46 J	9.6	0.24 U	0.12 U	61000	1.5 U	0.10 U	2.7	30 U	0.50 U	11000	1.1 J	0.30 J	1300 J	9.1	0.10 U	560000	0.20 U	7.4	21	0.080 U
	DTW31D102014	Duplicate	North Bedrock	10/30/2014	31 U	0.60 U	0.47 J	9.3	0.24 U	0.12 U	58000	1.5 U	0.10 U	2.2	30 U	0.50 U	10000	1.1 J	0.90 UJ	1300 J	8.8	0.10 U	540000	0.20 U	7	22	0.080 U
TMW32	TMW32042016	Normal	North Bedrock	4/13/2016	70 U	0.42 J	1.8 J	7.8	0.30 U	1.0 U	11000	1.8 U	0.20 U	1.8 U	85 U	0.70 U	1100	29 J	0.44 J	1400 J	3.6 J	0.039 J	530000	0.20 U	2.0 J	3.7 J	0.080 U
	TMW32102015	Normal	North Bedrock	11/5/2015	150 U	0.42 J	1.5 J	7.9	0.30 U	1.0 U	11000	1.8 U	0.20 U	1.8 U	50 U	0.70 U	1100	28	0.39 J	1300	3.4 J	0.10 U	720000	0.20 U	2.3 J	3.8 J	0.080 U
	TMW32042015	Normal	North Bedrock	4/9/2015	800	0.60 U	1.4 J	13	0.24 U	0.40 U	11000	1.5 U	0.31 J	0.61 J	380	0.51 J	1400	34	1.9 J	960 J	3.7 J	0.066 J	650000 J	0.20 U	3.3 J	21	0.080 U
	TMW32102014	Normal	North Bedrock	10/30/2014	31 U	1.2 J	2.0 J	8.9	0.24 U	0.12 U	11000	1.5 U	0.068 J	1.5 U	30 U	0.50 U	1100	33	0.47 J	860 J	4.9 J	0.10 U	760000	0.20 U	2.5 J	3.0 J	0.080 U
TMW36	TMW36042016	Normal	North Bedrock	4/7/2016	850 J	1.0 U	1.2 J	12 J	0.080 J	1.0 U	9800	11	0.79 J	2.7	540 J	2.5 J	1200	39	19	1800 J	2.0 U	0.37 J	640000	0.20 U	3.6 J	65	0.080 U
	TMW36102015	Normal	North Bedrock	10/28/2015	250 J	1.0 U	1.0 U	11	0.12 J	1.0 U	8100	12	0.35 U	0.89 J	210	0.91 U	930	28	7	1100 J	2.0 U	0.28 U	620000	0.063 U	3.2 J	25	0.080 U
	TMW36042015	Normal	North Bedrock	4/1/2015	650 J	0.60 U	0.45 J	12 J	0.096 J	0.40 U	8800	0.83 J	0.28 J	2.1	360	1.8 J	1000	19	1.5 J	1100 J	2.0 U	0.45 J	660000	0.20 U	3.4 J	58	0.080 U
	TMW36102014	Normal	North Bedrock	10/24/2014	1000	0.60 U	0.53 J	16	0.24 U	0.12 U	9500	1.3 J	0.37 J	4.1	630	3.2	1200	29	1.6 J	1500 J	2.0 U	0.34 J	720000	0.20 U	4.9 J	100	0.080 U
TMW37	TMW37042016	Normal	North Bedrock	4/7/2016	3400 J	1.0 U	0.97 J	35 J	0.11 J	1.0 U	12000	36	2.4	4.4	1800 J	6.2	1800	80	99	2200 J	2.0 U	1.3 J	540000	0.20 U	11	260	0.080 U
	TMW37102015	Normal	North Bedrock	10/28/2015	510 J	1.0 U	0.48 J	13	0.094 J	1.0 U	7100	3.6 J	0.51 U	1.5 J	420	1.7 J	860	29	16	1000 J	2.0 U	0.44 J	580000	0.054 U	3.0 J	66	0.080 U
	TMW37042015	Normal	North Bedrock	4/1/2015	380 J	0.60 U	0.68 J	15 J	0.24 U	0.40 U	5300	1.3 J	0.20 J	1.1 J	240	1.3 J	630	12	2.8 J	840 J	2.0 U	0.058 J	510000	0.20 U	16	53	0.080 U
	TMW37102014	Normal	North Bedrock	10/24/2014	630	0.60 U	0.63 J	18	0.24 U	0.12 U	8400	8.8 J	0.54 J	13	460	2.3 J	1100	37	20	1200 J	2.0 U	0.38 J	660000	0.20 U	4.3 J	120	0.080 U
TMW38	TMW38042016	Normal	North Bedrock	4/14/2016	42 J	0.55 J	0.60 J	18	0.30 U	1.0 U	16000	1.8 U	0.11 J	1.8 U	210 J	0.70 U	1800	110	1.0 U	1700 J	2.0 U	0.10 U	770000 J	0.20 U	2.0 U	4.5 J	0.080 U

5.0 Analytical Results

TABLE 5-9

Summary of Total Metals Analytical Detections (Page 7 of 7)
Groundwater Periodic Monitoring Report January through June 2016 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 6010/6020 (µg/L)																						EPA Method 7470 (µg/L)
					Aluminum CAS 7429-90-5	Antimony CAS 7440-36-0	Arsenic CAS 7440-38-2	Barium CAS 7440-39-3	Beryllium CAS 7440-41-7	Cadmium CAS 7440-43-9	Calcium CAS 7440-70-2	Chromium CAS 7440-47-3	Cobalt CAS 7440-48-4	Copper CAS 7440-50-8	Iron CAS 7439-89-6	Lead CAS 7439-92-1	Magnesium CAS 7439-95-4	Manganese CAS 7439-96-5	Nickel CAS 7440-02-0	Potassium CAS 7440-09-7	Selenium CAS 7782-49-2	Silver CAS 7440-22-4	Sodium CAS 7440-23-5	Thallium CAS 7440-28-0	Vanadium CAS 7440-62-2	Zinc CAS 7440-66-6	Mercury CAS 7439-97-6
					Regulatory Limits																						
					50 ^b	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	50 ^a	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c
TMW39D	TMW39D042016	Normal	North Bedrock	4/12/2016	55 J	0.55 J	1.0 U	7.9	0.30 U	1.0 U	18000	1.8 U	0.20 U	1.8 U	36 J	0.70 U	1900	55	1.0 U	1300 J	2.0 U	0.10 U	740000	0.10 U	2.0 U	8.0 U	0.080 U
	TMW39D102015	Normal	North Bedrock	11/4/2015	150 U	1.0 U	1.0 U	9.9	0.30 U	1.0 U	20000	1.8 U	0.20 U	1.8 U	50 U	0.70 U	2100	58	1.0 U	1400	2.0 U	0.10 U	730000	0.20 U	2.0 U	8.0 U	0.080 U
	TMW39D042015	Normal	North Bedrock	4/6/2015	31 U	0.60 U	1.0 U	9.4	0.24 U	0.40 U	19000	1.5 U	0.10 U	1.5 U	30 U	0.50 U	2200	58	0.90 U	1200 J	2.0 U	0.10 U	720000	0.20 U	0.58 J	6.0 U	0.080 U
	DTW39D042015	Duplicate	North Bedrock	4/6/2015	31 U	0.60 U	1.0 U	7.2	0.24 U	0.40 U	19000	1.5 U	0.10 U	1.5 U	30 U	0.50 U	2200	55	0.90 U	1100 J	2.0 U	0.10 U	730000	0.20 U	1.0 U	6.0 U	0.080 U
	TMW39D102014	Normal	North Bedrock	10/30/2014	31 U	0.60 U	1.0 U	8.2	0.24 U	0.12 U	18000	1.5 U	0.10 U	1.5 U	22 J	0.50 U	1800	58	0.90 U	1100 J	2.0 U	0.10 U	770000	0.20 U	1.0 U	6.0 U	0.080 U
TMW40D	TMW40D042016	Normal	North Bedrock	4/12/2016	70 U	1.0 U	0.51 J	9.7	0.30 U	1.0 U	15000	1.8 U	0.068 J	1.8 U	85 U	0.70 U	2000	52	1.0 U	1100 J	3.3 J	0.10 U	730000	0.20 U	2.8 J	4.6 U	0.080 U
	TMW40D102015	Normal	North Bedrock	11/3/2015	150 U	1.0 U	0.42 J	10	0.30 U	1.0 U	14000	1.8 U	0.071 J	0.72 J	50 U	0.70 U	1900	53	1.0 U	1200	3.5 J	0.10 U	690000	0.20 U	3.4 J	4.1 J	0.080 UJ
	TMW40D042015	Normal	North Bedrock	4/9/2015	28 J	0.60 U	0.41 J	12	0.24 U	0.40 U	15000	1.5 U	0.065 J	1.5 U	30 U	0.50 U	2000	55	0.90 U	1100 J	3.3 J	0.10 U	650000 J	0.20 U	2.9 J	4.1 J	0.080 U
	TMW40D102014	Normal	North Bedrock	10/31/2014	31 U	0.60 U	0.56 J	11	0.24 U	0.12 U	15000	1.5 U	0.061 J	0.85 J	30 U	0.50 U	1900	56	0.90 U	1100 J	4.0 J	0.10 U	740000	0.20 U	3.4 J	6.8 J	0.049 J
TMW48	TMW48042016	Normal	North Bedrock	4/12/2016	70 U	1.0 U	0.44 J	11	0.30 U	1.0 U	77000	1.8 U	0.20 U	1.8 U	85 U	0.70 U	15000	39	0.42 J	1400 J	7.3	0.10 U	560000	0.20 U	4.9 J	10 U	0.080 U
	TMW48102015	Normal	North Bedrock	11/4/2015	150 U	1.0 U	0.61 J	11	0.30 U	1.0 U	76000	1.8 U	0.20 U	0.79 J	50 U	0.70 U	15000	33	1.0 U	1500	7.3	0.10 U	550000	0.20 U	5.3 J	7.8 J	0.080 U
	TMW48042015	Normal	North Bedrock	4/6/2015	31 U	0.60 U	0.74 J	12	0.24 U	0.40 U	58000	1.5 U	0.10 U	0.96 J	30 U	0.50 U	11000	34	0.59 J	1300 J	6.5	0.10 U	590000	0.20 U	3.2 J	12 J	0.080 U
	TMW48102014	Normal	North Bedrock	10/30/2014	31 U	0.60 U	0.75 J	13	0.24 U	0.12 U	83000	1.5 U	0.10 U	0.69 J	78 J	0.50 U	15000	19	0.42 J	1300 J	8.5	0.10 U	600000	0.20 U	5.8 J	11 J	0.080 U
TMW49	TMW49042016	Normal	North Bedrock	4/14/2016	300	1.0 U	0.56 J	17	0.30 U	1.0 U	61000	1.7 J	0.22 J	1.6 J	120 J	0.42 J	11000	8.3	5.2	1700 J	23	0.20 U	470000 J	0.20 U	11	8.8 J	0.080 U
	TMW49102015	Normal	North Bedrock	11/5/2015	150 U	1.0 U	0.56 J	11	0.30 U	1.0 U	67000	0.92 J	0.20 U	1.3 J	20 J	0.21 J	12000	3.2 J	1.1 J	1700	22	0.10 U	620000	0.20 U	10	7.8 J	0.080 U
	TMW49042015	Normal	North Bedrock	4/9/2015	31 U	0.60 U	0.78 J	11	0.24 U	0.40 U	64000	0.54 J	0.088 J	1.1 J	89 J	0.18 J	11000	0.55 J	1.5 J	1500 J	24	0.066 J	670000 J	0.084 U	11	4.5 J	0.080 U
	TMW49102014	Normal	North Bedrock	10/30/2014	31 U	0.60 U	0.70 J	14	0.24 U	0.12 U	87000	0.62 J	0.10 U	1.3 J	30 U	0.50 U	14000	0.37 J	0.43 J	1400 J	24	0.10 U	600000	0.20 U	14	12 J	0.080 U

Notes:

^a New Mexico Water Quality Control Commission - New Mexico Administrative Code Title 20, Chapter 6, Part 2, Section 3103

^b EPA Maximum Contaminant Level - *Code of Federal Regulations* Title 40, Parts 141, 142, and 143

^c EPA Regional Screening Levels (Formerly Human Health Medium Specific Screening Levels) (EPA, 2017)

^d Well was dry and was not sampled this event.

Bold indicates analyte was positively detected above regulatory limits.

µg/L = microgram(s) per liter

CAS = Chemical Abstracts Service (registry number)

EPA = U.S. Environmental Protection Agency

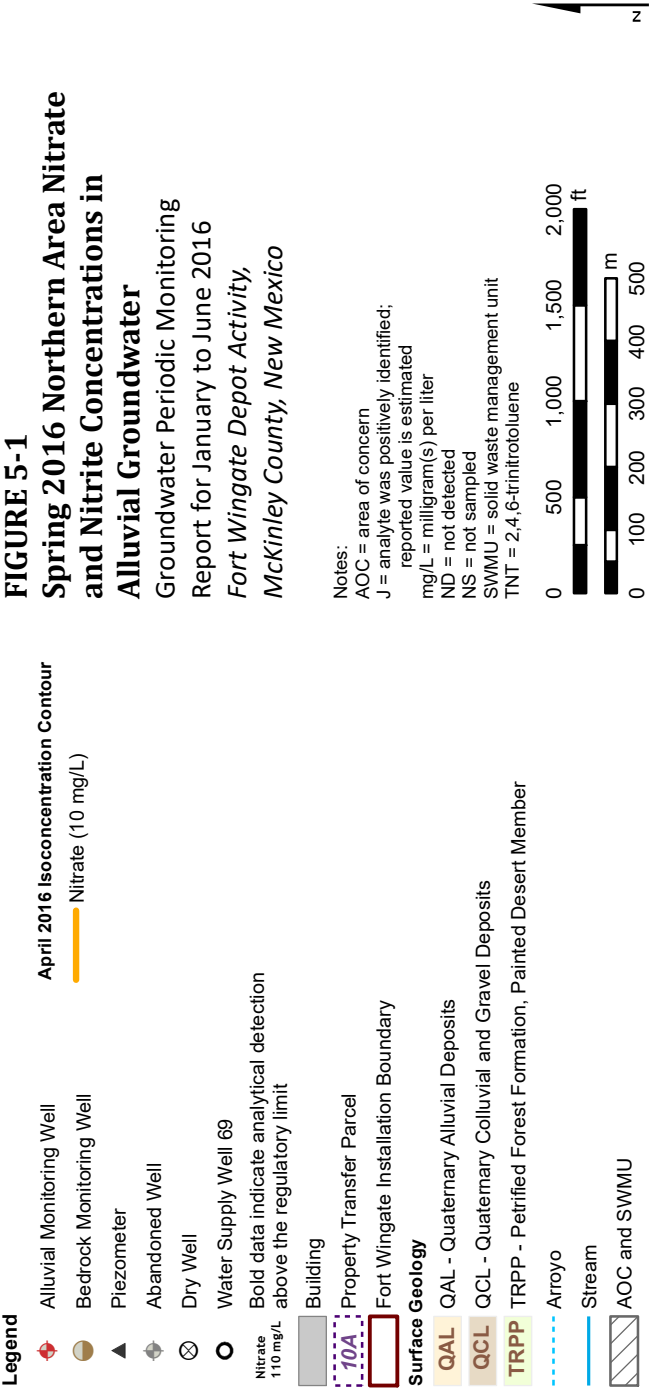
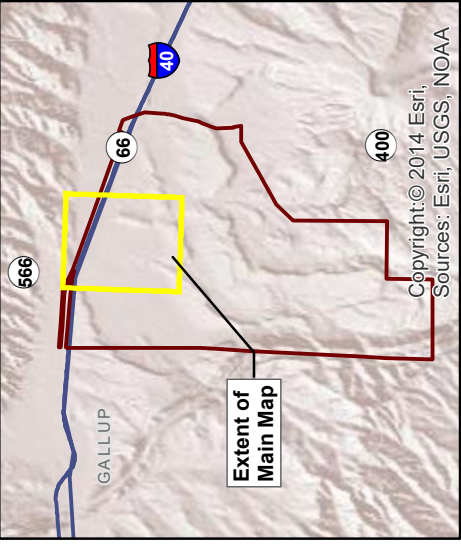
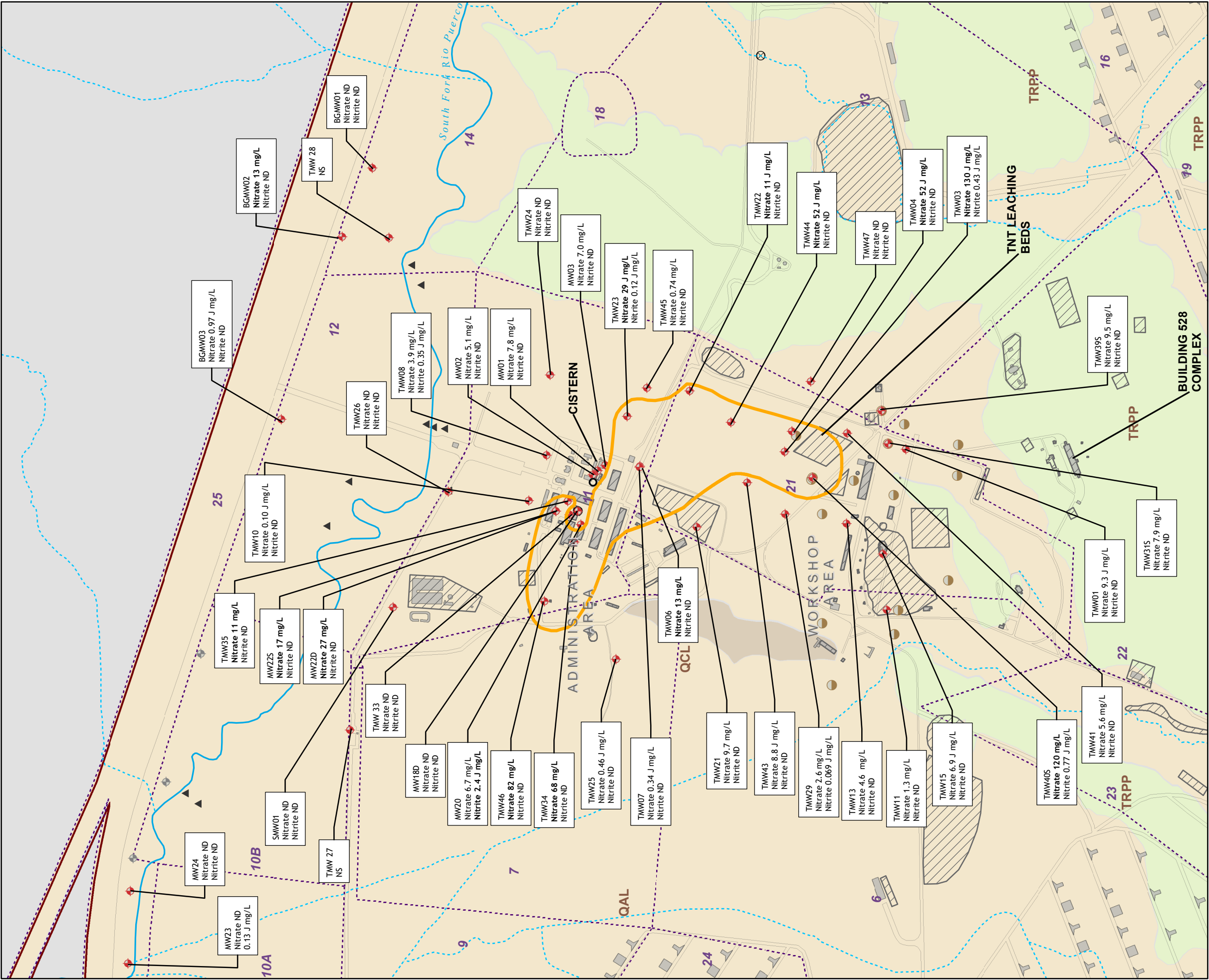
J = analyte was positively identified; reported value is estimated.

NE = not established

U = non-detected result reported at the limit of detection.

UJ = analyte was not detected; however, the result is estimated because of discrepancies in meeting certain analyte-specific quality control criteria.

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State Plane Coordinate System, New Mexico West,
North American Datum 1983, US Feet.

Data Sources:
Roads, Railroad: Tele Atlas GDT-Dynamap, 2008;
Populated Places: ESRI, 2005;
Fort Wingate Environmental Restoration Detail: USACE.

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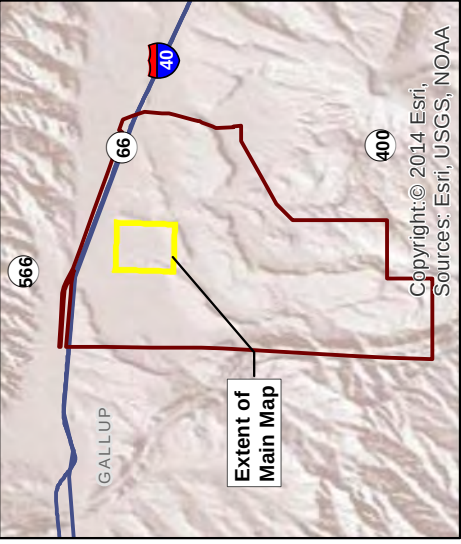
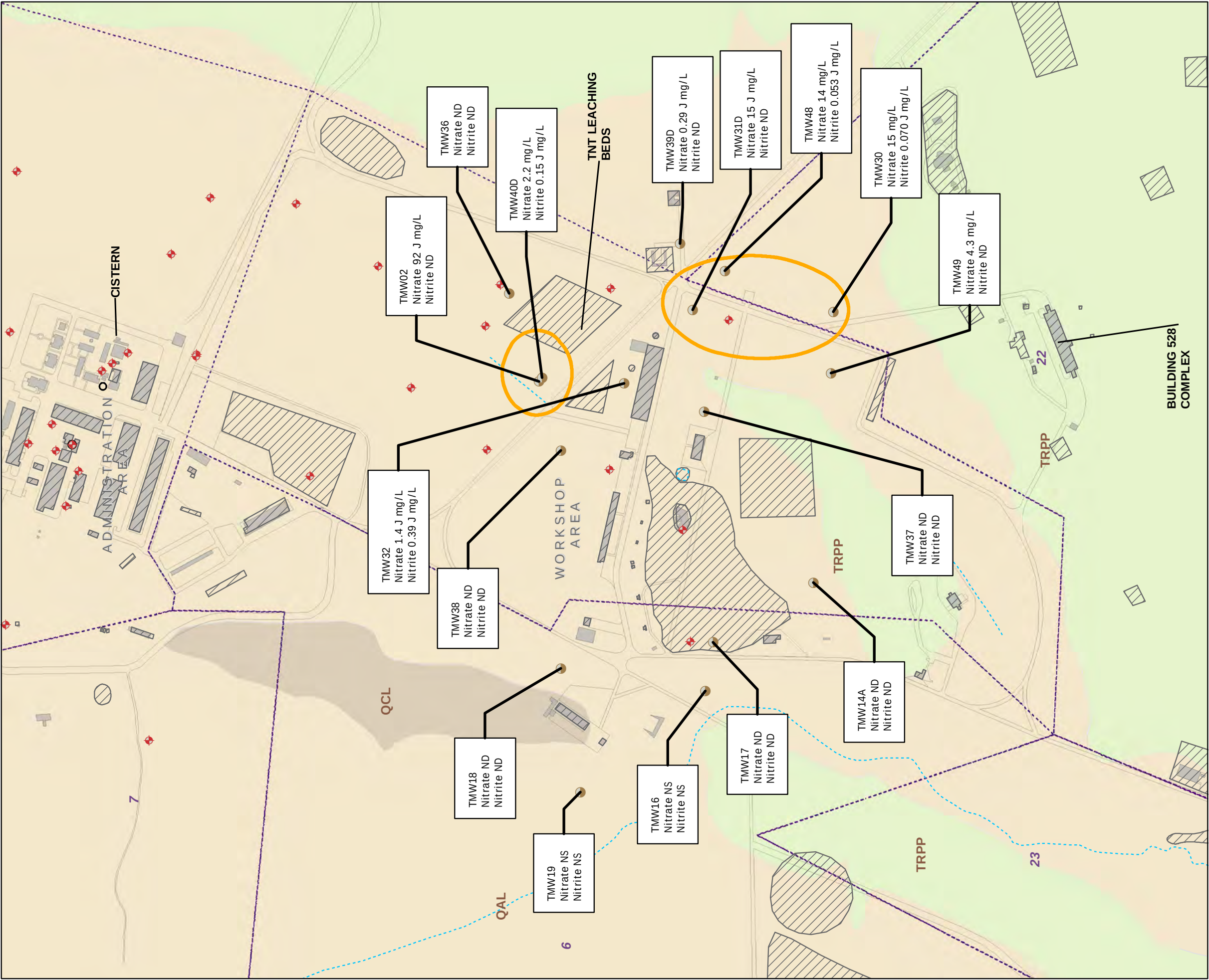
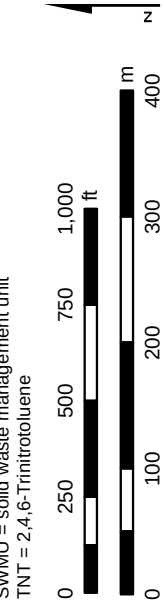


FIGURE 5-2
Spring 2016 Northern Area Nitrate and Nitrite Concentrations in Bedrock Groundwater
Groundwater Periodic Monitoring
Report for January to June 2016
Fort Wingate Depot Activity,
McKinley County, New Mexico



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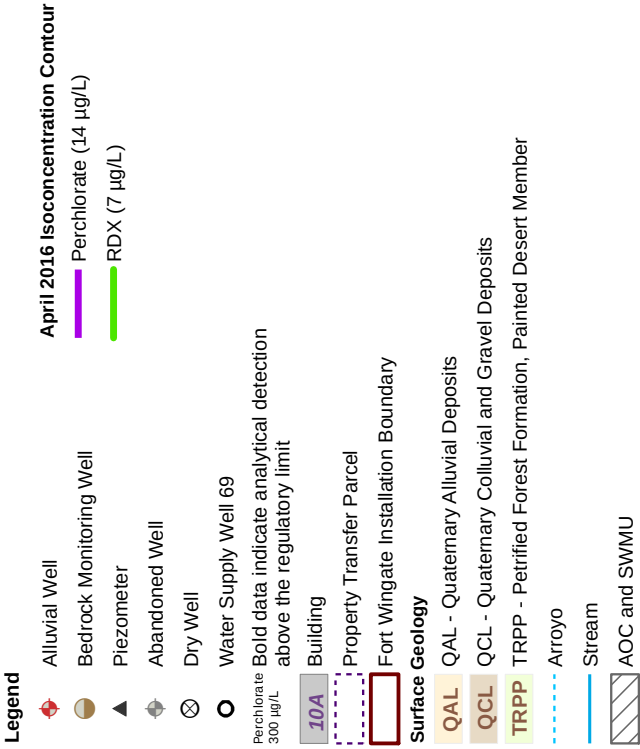
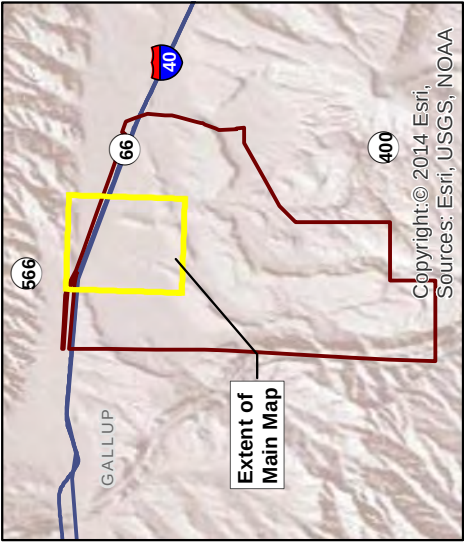
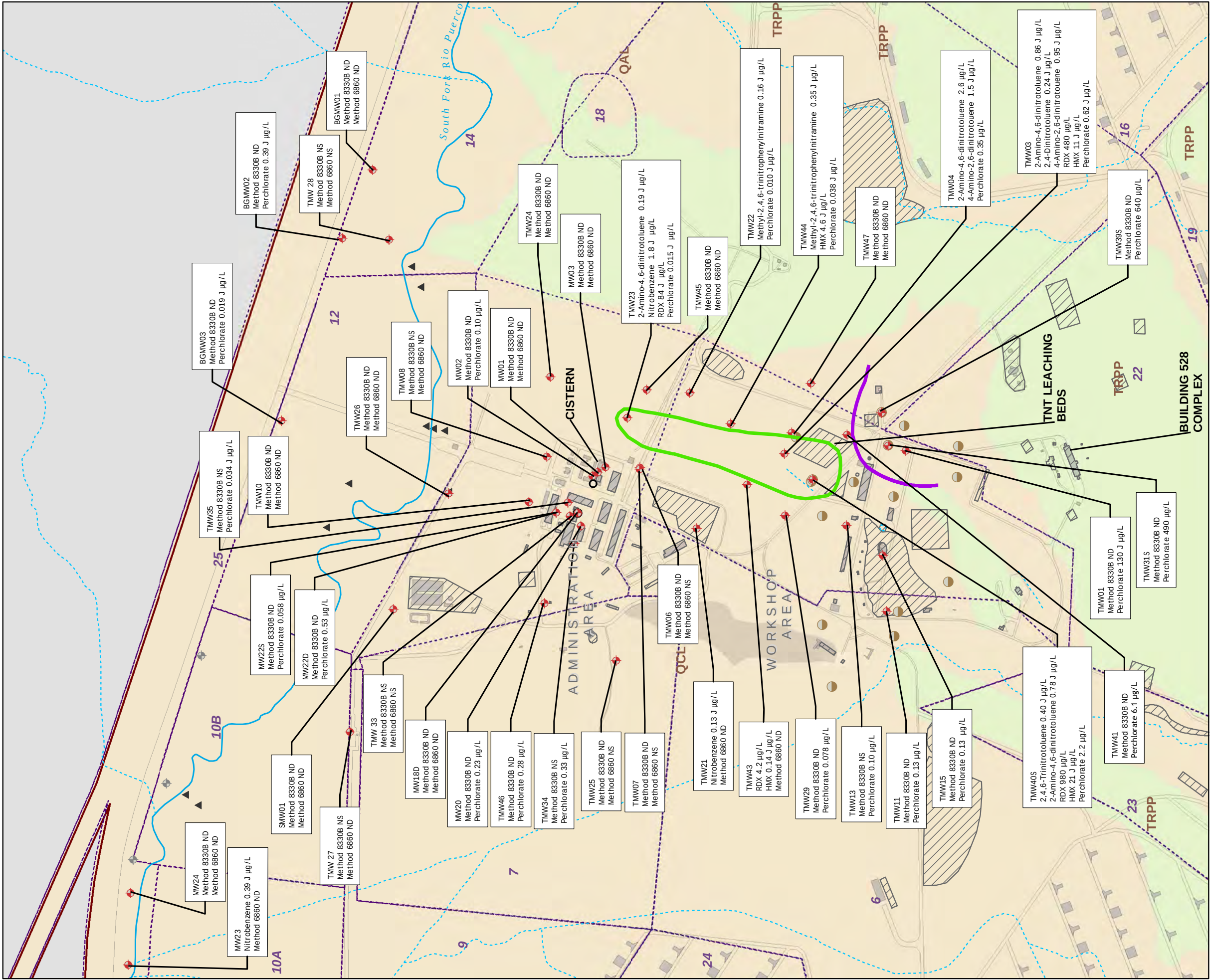


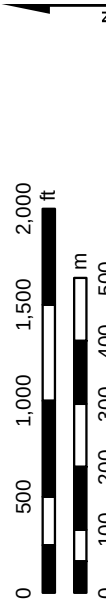
FIGURE 5-3
Spring 2016 Northern Area Explosives and Perchlorate Concentrations in Alluvial Groundwater

Groundwater Periodic Monitoring
Report for January to June 2016
Fort Wingate Depot Activity,
McKinley County, New Mexico

Notes:
AOC = area of concern
HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
J = analyte was positively identified; reported value is estimated
ND = not detected
NS = not sampled
RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine
SWMU = solid waste management unit
TNT = 2,4,6-Trinitrotoluene
µg/L = microgram(s) per liter

State Plane Coordinate System, New Mexico West, North American Datum 1983, US Feet.

Data Sources:
Roads, Railroad: Tele Atlas GDT-Dynamap, 2008;
Populated Places: ESRI, 2005;
Fort Wingate Environmental Restoration Detail: USACE.



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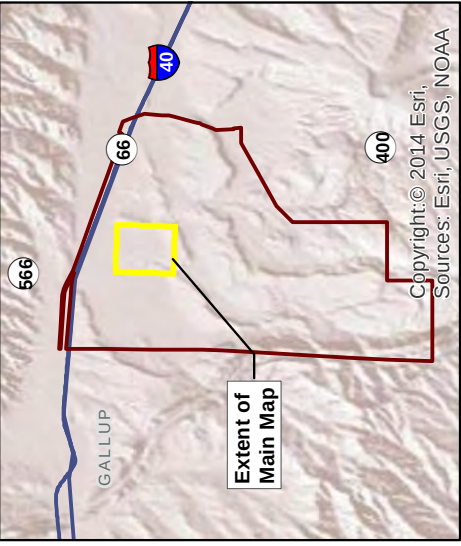
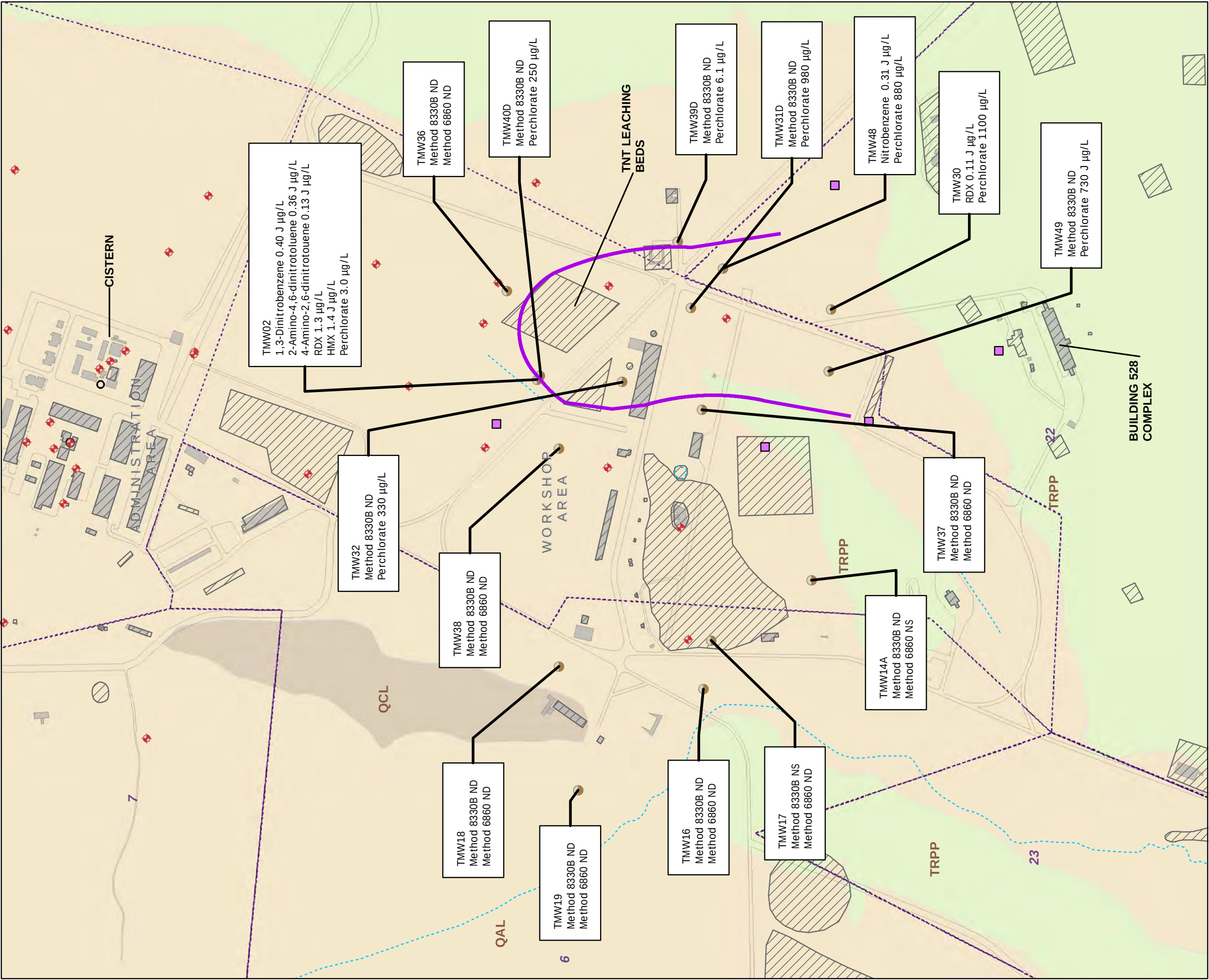
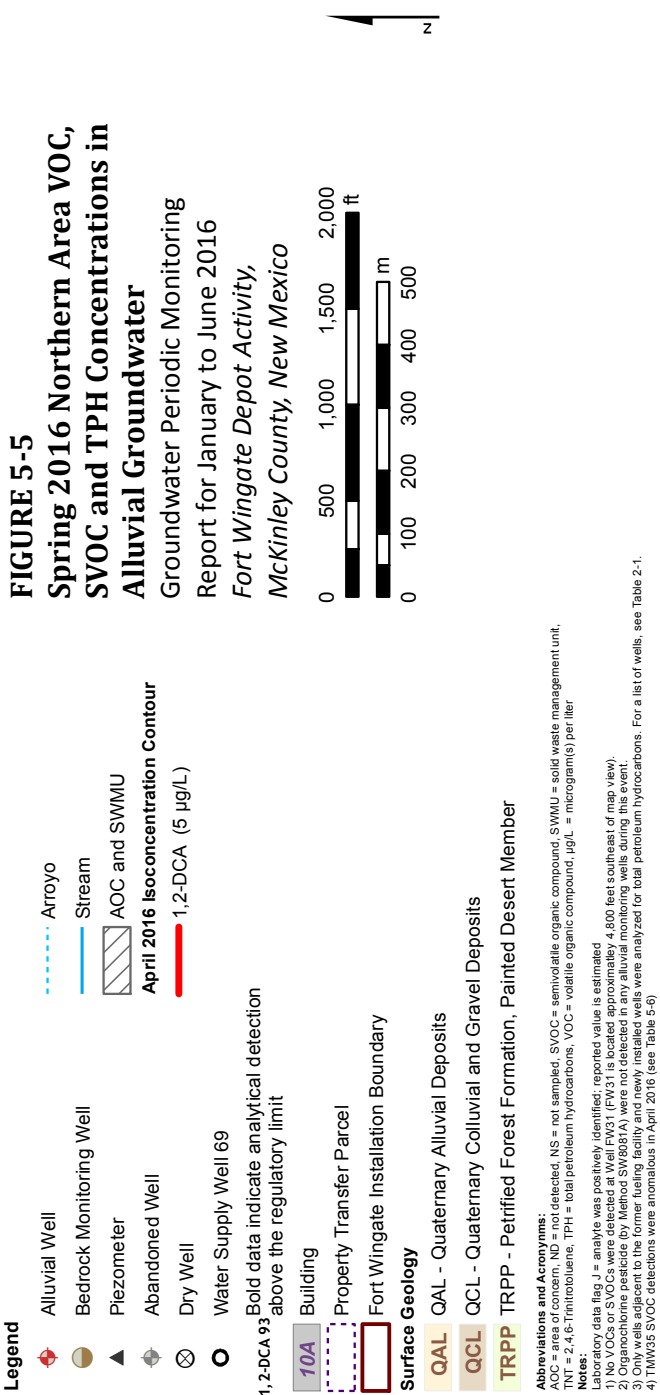
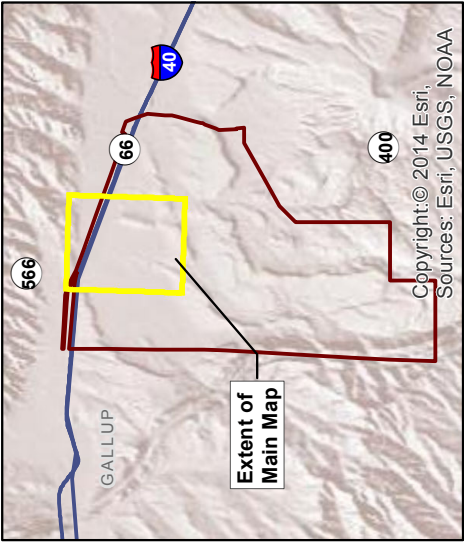
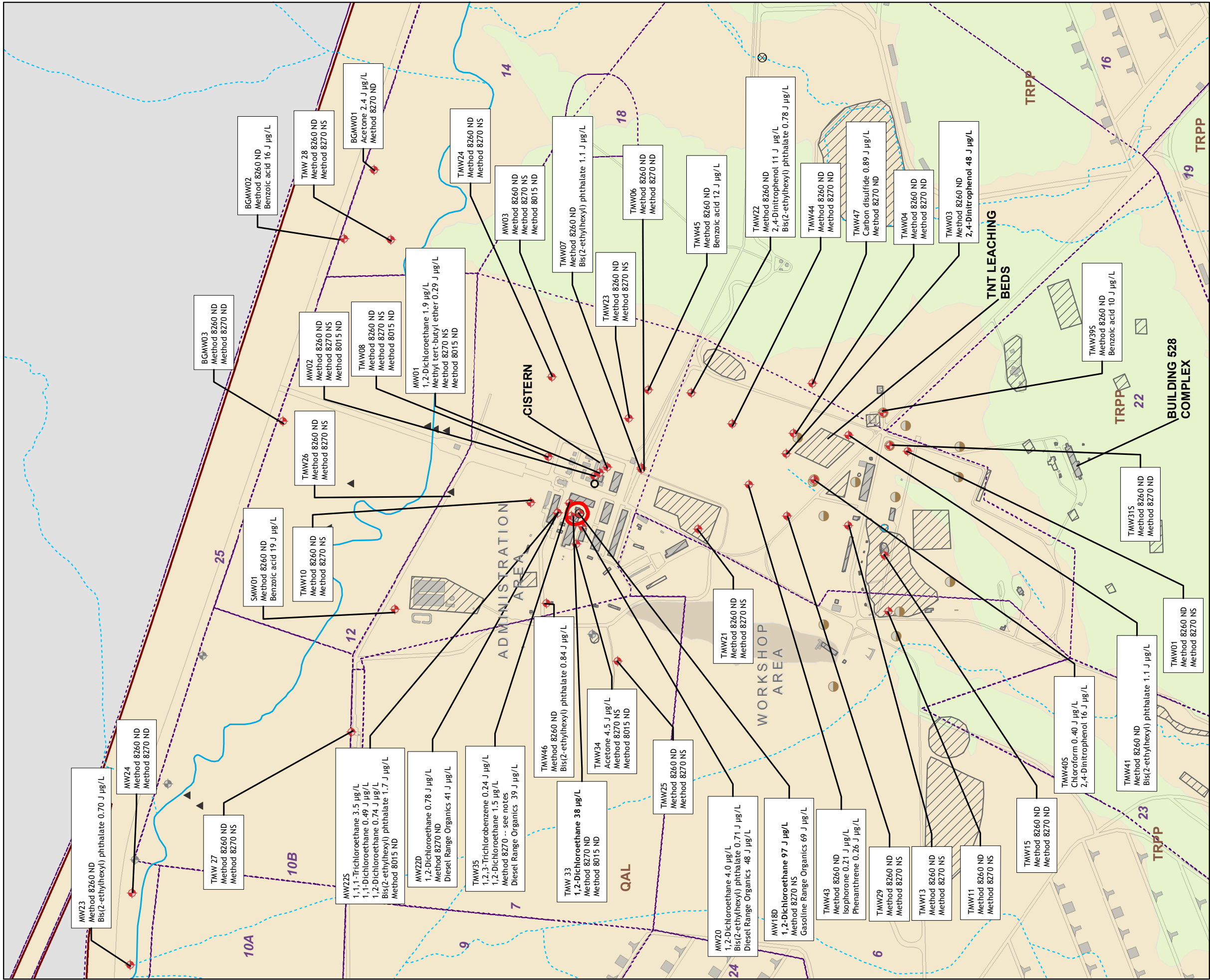


FIGURE 5-4
Spring 2016 Northern Area Explosives and Perchlorate Concentrations in Bedrock Groundwater
Groundwater Periodic Monitoring
Report for January to June 2016
Fort Wingate Depot Activity, McKinley County, New Mexico

Notes:
AOC = area of concern
HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
J = analyte was positively identified; reported value is estimated
ND = not detected
NS = not sampled
RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine
SWMU = solid waste management unit
TNT = 2,4,6-Trinitrotoluene
µg/L = microgram(s) per liter

0 250 500 750 1,000
0 100 200 300 400
m
ft

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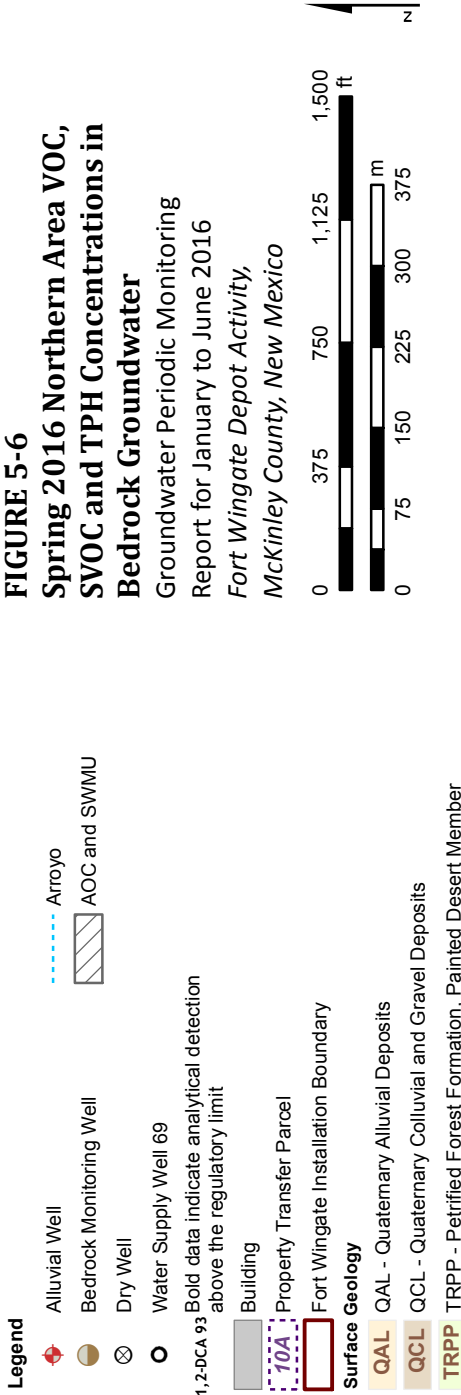
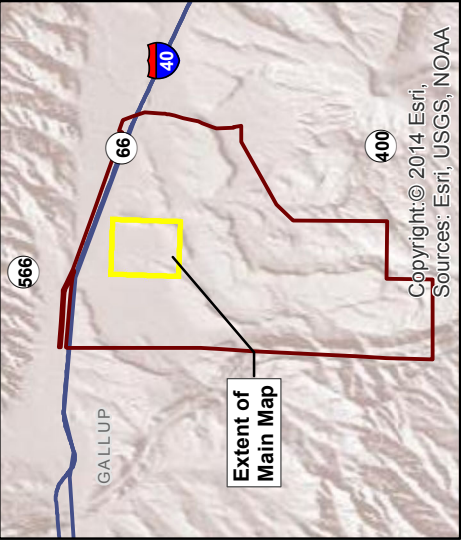
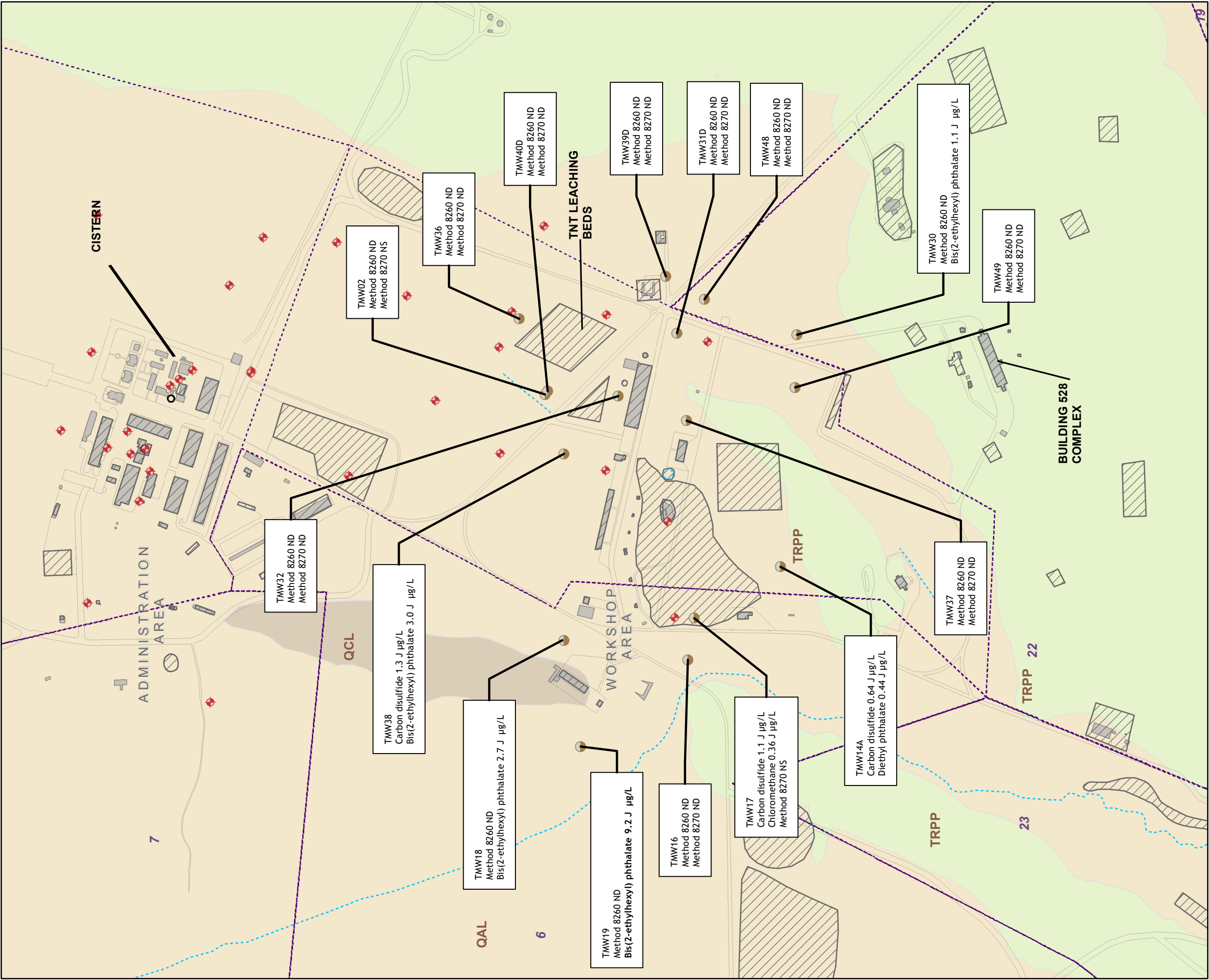


State Plane Coordinate System, New Mexico West,
North American Datum 1983, US Feet.

Data Sources:
Roads, Railroad: Tele Atlas GDT-Dynamap, 2008;
Populated Places: ESRI 2006;
Fort Wingate Environmental Restoration Detail: USACE.

Copyright:© 2014 Esri,
Sources: Esri, USGS, NOAA

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State Plane Coordinate System, New Mexico West,
North American Datum 1983, US Feet.

Data Sources:
Roads, Railroad: Tele Atlas GDT-Dynamap, 2008;
Populated Places: ESRI 2006;
Fort Wingate Environmental Restoration Detail: USACE.

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6.0 Summary and Recommendations

6.1 Summary

Two groundwater elevation surveys and one groundwater sampling event were performed during the monitoring period from January through June 2016. Groundwater elevation surveys were conducted on January 14 and 15, 2016, and April 4, 2016. The groundwater sampling event for the reporting period was performed from April 4 to April 15, 2016.

Shallow groundwater in the Northern Area of FWDA is present in both the unconsolidated alluvium and bedrock. The groundwater flow direction in the alluvium is from potentiometric highs in the east, north, and south toward a potentiometric low west of the Administration Area. A small groundwater mound is present in the Administration Area near monitoring wells MW01, MW02, and MW03. This groundwater mound has been previously attributed to a leaking water storage cistern in the Administration Area. The cistern is no longer in service. Hydraulic gradients ranged from 0.003 ft/ft to 0.03 ft/ft in the alluvial groundwater unit. Groundwater in the bedrock appears to flow radially to a potentiometric low south of monitoring well TMW32 in the eastern portion of the Workshop Area and to the west in the western portion of the Workshop Area, with an interpreted geologic structural feature impeding flow between the two areas. Hydraulic gradients in the bedrock unit were approximately 0.005 ft/ft to 0.006 ft/ft in the Workshop Area. The groundwater elevation in the bedrock groundwater unit is slightly higher than in the alluvial groundwater unit and exists under hydraulically confined conditions under most of the Northern Area. The confining unit for the bedrock aquifer is missing in the vicinity of monitoring wells TMW30 and TMW48.

Nitrate, perchlorate, explosives, one VOC, one SVOC, and metals were detected in groundwater samples at concentrations above the cleanup or regulatory screening levels. Groundwater contaminant plumes at FWDA appear to be limited to the Northern Area. Six groundwater contaminant plumes have been identified: two nitrate plumes, one in the alluvial groundwater unit and one in the bedrock groundwater unit; two perchlorate plumes, one in the alluvial groundwater unit and one in the bedrock groundwater unit; an explosives plume in the alluvial groundwater unit; and a 1,2-dichloroethane plume in the alluvial groundwater unit.

The highest concentrations of nitrate contamination occur in alluvial groundwater units of the Northern Area. The nitrate plume in the alluvial groundwater unit appears to originate from the TNT Leaching Beds (SWMU 1) and extends downgradient to the Administration Area. The groundwater concentrations in the alluvial nitrate plume decline in the vicinity of the former leaking water storage cistern and the installation water supply well (monitoring wells MW01 and MW02). The extent of the alluvial nitrate plume is not defined west and north of the Administration Area. The bedrock nitrate plume is also present at the TNT Leaching Beds (SWMU 1) but extends downgradient to the south. A portion of the bedrock nitrate plume is collocated with the bedrock perchlorate plume. The collocated perchlorate and nitrate plumes appear to have a common source at the Building 528 Complex (SWMU 27). In addition, groundwater nitrate concentrations were detected above the screening level in the sample from background monitoring well BGMW02. This well is located on the boundary of FWDA and upgradient of any SWMUs or AOCs. Therefore, the source of nitrate in monitoring well BGMW02 does not appear to originate from FWDA.

The highest perchlorate concentrations were detected in groundwater samples from the bedrock groundwater unit in the Workshop Area. The boundary of the bedrock perchlorate plume has not been defined. The alluvial perchlorate plume is located in the same vicinity as the bedrock plume. Historical releases of perchlorate-containing materials at the Building 528 Complex (SWMU 27) are believed to be the common source of both plumes in the alluvial and bedrock groundwater units.

RDX is the primary explosive compound of interest. This compound is consistently detected at concentrations above screening levels in the Workshop and eastern Administration Areas. The explosives plume in the alluvial groundwater unit appears to originate from the TNT Leaching Beds (SWMU 1) in the Workshop Area.

6.0 Summary and Recommendations

Groundwater concentrations of explosive compounds (primarily RDX) attenuate to levels below the screening criteria within 2,500 feet downgradient of the TNT Leaching Beds.

One VOC was detected in groundwater samples at concentrations above regulatory cleanup standards. The compound 1,2-dichloroethane was historically used as a gasoline additive and degreasing solvent. The 1,2-dichloroethane plume in the alluvial groundwater unit is limited to a group of wells near a former fueling facility (SWMU 45, Building 6) in the Administration Area. Groundwater samples collected from four alluvial monitoring wells had concentrations above the EPA MCL of 5 µg/L. No other VOCs were detected above cleanup standards. The SVOC bis(2-ethylhexyl) phthalate was detected at concentrations above the regulatory cleanup standard. The detection of bis(2-ethylhexyl) phthalate is likely attributable to sampling and laboratory contamination.

Dissolved aluminum, arsenic, iron, lead, manganese, and selenium were detected above regulatory screening levels in multiple groundwater samples. Because background groundwater concentrations have not been accepted for FWDA, it cannot clearly be demonstrated whether the detected concentrations are a result of natural conditions or anthropogenic sources of contamination. A background evaluation of FWDA groundwater was issued to NMED in September 2014 and is currently being revised based on comments received from NMED.

Additional delineation and investigation for groundwater plumes at FWDA are planned. A Supplemental RCRA Facility Investigation (RFI) Work Plan was submitted to NMED in February 2015, and responses to NMED comments are currently in progress. The Supplemental RFI proposes locations for additional groundwater monitoring wells necessary to further delineate the alluvial and bedrock groundwater contaminant plumes.

6.2 Recommendations

Based on a review of the monitoring activities and results, recommendations were developed to optimize the groundwater monitoring program at FWDA. The following recommendations are made for future monitoring events:

- Remove alluvial aquifer monitoring well MW18S from the sampling program. This monitoring well has been dry or has had water levels below the bottom of the well screen consistently since 2013, and intermittently before that time. Historical results from MW18S are not significantly different from the adjacent nested alluvial monitoring well MW18D.
- Re-survey the elevations of all bedrock and alluvial monitoring wells. Wells were surveyed during multiple events, which is believed to have introduced errors into the measured groundwater elevation data and associated groundwater potentiometric surface maps. The mapped groundwater flow directions in the bedrock aquifer conflict with the observed contaminant distributions.
- Suspend groundwater sampling activities at monitoring wells containing less than one foot of saturated well screen. The stagnant water present in the well sump cannot be effectively purged, and groundwater samples collected from these wells are not believed to be representative of formation water. Alluvial monitoring well MW22S is currently included in the monitoring program and meets this criterion. Alluvial monitoring well MW22S is collocated with MW22D in the same borehole with a screen depth 16 feet above that of MW22D. It is recommended that sampling be suspended from MW22S due to lack of saturated well screen. Monitoring well MW22D and the surrounding monitoring wells TMW10, TMW33, and TMW35 provide sufficient monitoring coverage of the alluvial aquifer in this area.
- Recommend that well FW35 be abandoned and replaced with a new well. Historic analytical detections at this location are not indicative of groundwater impacts (Appendix D), however high detections for lead and chromium from the total metals analysis prior to the well going dry may need further investigation. This well has been dry for the last three monitoring events.

- o Remove the dedicated BESST pump from TMW24 and purge the well dry with a non-dedicated pump. The sustainable recharge and pumping rates at this well are very slow and require approximately three hours to fill the required sample bottles.

The following recommendations are made for the analytical program, data analysis, and investigation:

- o Obtain regulatory consensus on the results of the FWDA background study. Implementation of background study findings is necessary to determine whether dissolved metals concentrations detected above regulatory screening levels are naturally occurring or the result of waste management activities at FWDA.
- o Perform additional investigation of the alluvial aquifer nitrate plume to define the western and northern boundary of the plume. The nitrate plume boundaries will be investigated as part of the revised Supplemental RFI.
- o Perform additional investigation of the bedrock aquifer perchlorate plume to define the northern boundary of the plume and refine the bedrock groundwater flow direction. The perchlorate plume boundaries will be investigated as part of the revised Supplemental RFI, which includes additional bedrock monitoring well installation.

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APPENDIX A

Field Notes

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4/4/16

FWDA FACILITY-WIDE APRIL 2016
GROUNDWATER SAMPLING EVENT

(101)

WEATHER: AM: CALM AND CLEAR, ~35°F
PM: LIGHT BREEZE TO 10mph Gusts, CLEAR ~70°F

PERSONNEL: JOHN NANCE, LUKE HILL, WILL KITE, DAVID ESPARZA
ONSITE: RYAN WORTMAN, CONNIE WATTANACHINDA - VERNON
USACE

ONSITE: ANDREW TRAMER

0700 AT TRAILER #1, CHECK OUT RADIOS & WELL KEYS,
DISCUSS OPERATIONS AND LOGISTICS WITH TIM BATHANNON

~~0725~~ ^{JOJO} 0815 AT BUILDING 34 (FIRESTATION) SAFETY TALK BY
L. HILL AND J. NANCE; SPLIT TEAMS TO COLLECT GW
LEVELS, L. HILL & J. NANCE TO SET UP FIRESTATION AND
SUPPLIES FOR SAMPLING EVENT

0850 W.K. AND D.E. TO COLLECT NORTHERN HALF OF WELLS,
C.W.V. AND R.W. TO COLLECT SOUTHERN HALF OF WELLS

1620 BOTH TEAMS ARRIVE AT FIRESTATION, ALL WELLS
MEASURED EXCEPT FOR FW31 AND TMW10.

NOTE: CALLED MARTIN EASTRIDGE, LEFT MESSAGE
SUNDAY TO BE ON SITE AND VISITING
FW31 AND TMW27 FROM 4/4 TO 4/15

1635 C.W.V./R.W. AT TMW10 - WELL PUMP SUPPORT WIRE
BREAKS ON WELL, WIRE LINE PULLED OUT OF WELL, PUMP
PRESUMED TO BE INTACT WITH TAPPING, WILL BE
FIXED AT LATER DATE

J.N./D.E./W.K. AT FW31, COLLECT WATER LEVEL
READING

161735 ALL PERSONNEL OFF SITE

^{MEASURE}
~~DATE~~ ALL 63 MONITORING WELLS AND 10 PIEZOMETERS
END DAY

APPENDIX - FW0420160001
EQUIPMENT BLANK COLLECTED

(101)
4/8/16

David Nance
4/4/16

(102)

FWDA FACILITY-WIDE APRIL 2016 GROUNDWATER SAMPLING EVENT

4/5/16

WEATHER: AM ~30°F, CALM AND CLEAR
PM ~70°F, WINDY 10-20 mph AND CLEAR

PERSONNEL

ONSITE: JOHN NANCE, CONNIE WATANACHINDA-VERNON,
DAVID ESPARZA, LUKE HILL, WILKITE, RYAN WATMAN

USACE

OVERSIGHT: ANDREW TRAINOR

0720 SAFETY TAILGATE BY J. NANCE

0735 CALIBRATE WATER QUALITY METERS AND PREP FOR DAYS
ACTIVITIES — PLAN TO PURGE ALL SLOW-PRODUCING WELLS

0830 TEAMS IN FIELD TO PURGE WELLS. TEAMS ARE:

CWV-BW

DE-JN

LH-WK

1600 ALL TEAMS RETURN TO FIRESTATION

PURGED: TMW16, TMW18, TMW19, TMW36, TMW37,
MW225, TMW405, MW01, MW02, MW23, TMW29

NO ISSUES OR PROBLEMS ENCOUNTERED, ALBUT
THREE WELLS WERE PURGED

1645 ALL PERSONNEL OFF SITE

John Nance 4/5/16

ADDITION: PURGED FW31, TMW30, TMW315, TMW395,
TMW41, TMW44, TMW22, TMW07,
TMW23 — WELL PURGED ON 4/5/16

JDN-
4/8/16

4/6/16

FWDA FACILITY-WIDE APRIL 2016 GROUNDWATER SAMPLING EVENT

(103)

WEATHER: AM ~30°F CALM AND CLEAR
PM ~73°F LIGHT BREEZE TO 10 mph WIND, CLEAR

PERSONNEL ON SITE: JOHN NANCE, WILLIAM KITE, LUKE HILL, RYAN WORTMAN
DAVID ESPARZA, CONNIE WATTANACHINDA - VERNON

USACE

OVERSIGHT: ANDREW TRAINOR

0710 SAFETY TAILGATE BY JOHN NANCE

0730 CALIBRATE WATER QUALITY METERS, LOAD TRUCKS FOR DAY

0830 ALL TEAMS DEPART FOR WELL PURGE AND SAMPLING, TEAMS

ARE: WK/LH

DE/JN

CWV/RW

1145 LH/WK RETURN TO BLDG 5 TO SET UP AND PROCESS SAMPLES

1230 CWV/RW RETURN TO BLDG 5 TO PROCESS SAMPLES - ICE DELIVERY NOT YET ARRIVED

1245 RW LEAVES TO PURCHASE 15 BAGS ICE TO PROCESS/SHIP SAMPLES

1315 JN/DE RETURN TO BLDG 5

PURGED: TMW33, TMW46, BGMW03, MW23, MW24

SAMPLED: MW24, TMW31S, TMW39S, MW02 (PARTIAL, NO DRG)
MW01, MW22S PARTIAL, (VOCs ONLY)ISSUES: FEDEX MOVED CUTOFF BACK TO 1545-1600, NEED TO
PULL OUT OF FIELD AT 1330 TO MAKE DROPICE DELIVERED LATE IN DAY, NEEDED TO MAKE EMERGENCY
PURCHASE OF ICE TO SHIP SAMPLES

1435 SAMPLES SHIPPED (FEDEX)

1700 ALL PERSONNEL OFF SITE

John Nance 4/6/16

(104)

FUDA FACILITY-WIDE APRIL 2016 GROUNDWATER SAMPLING EVENT

4/7/16

0700 WEATHER AM 35°F CALM, PARTLY CLOUDY
PM 75°F MOSTLY CLOUDY, WIND 5-10mph, HUMID

PERSONNEL DAVID ESPARZA JOHN NANCE
ONSITE: CONNIE WATANABE-VERNON, LUKELLY, WILL KITE,
KEVIN WARTMAN,

USACE

OVSIGHT: ANDREW TRAINOR

0710 SAFETY TAILGATE BY J. NANCE

0720 CALIBRATE WATER QUALITY METERS & LOAD EQUIPMENT TO
FIELD TRUCKS

0740 ALL TEAMS DEPART FOR DAYS ACTIVITIES. TEAMS ARE:
CWV/RW
DE/JN
LH/WK

1255 LH/WK RETURN TO BLDG 5 TO PROCESS SAMPLES

1330 DE/JN, CWV/RW AT BLDG 5 TO PROCESS SAMPLES

SAMPLED: EQUIP#02, FW31, TMW30, TMW41, TMW33,
TMW46, TMW36, TMW37, TMW18, TMW19,
TMW16, TMW29, TMW40S (PARTIAL), MW23,
MW02 (DRO, WELL COMPLETE), MW22S (PARTIAL, GRO, NITRATE)

NO ISSUES ENCOUNTERED

1530 SAMPLES TAKEN TO FEDEX FOR SHIPPMENT

1645 KEYS/RADIOS TURNED INTO A. TRAINOR, ALL PERSONNEL
OFF SITE

David Nance 4/7/16

4/8/16 FWDA FACILITY-WIDE APRIL 2016
GROUNDWATER SAMPLING EVENT

(105)

0715 WEATHER AM RAIN, ~40°F
PM CLOUDY ~70°F

PERSONNEL

ON SITE: DAVID ESPARZA, JASON NANCE, LUKE HILL, WILL KITE,
CONNIE WATTANACHINDA - VERNON, RYAN WORTMAN

USACE OVERSIGHT: ANDREW TANNER

0720 SAFETY TAILGATE BY J. NANCE

0730 CALIBRATE WATER QUALITY METERS AND
LOAD TRUCKS

0805 ALL TEAMS DEPART FOR DAYS ACTIVITIES

TEAMS ARE: WK/LH
CWV/RW
JN/DE

0922 CWV/RW HAVE A DEAD TRUCK BATTERY, GET ASSISTANCE
AND A JUMP.

0933 TRUCK RESTARTED AND TEAM RESUMES SAMPLING

1355 ALL TEAMS RETURN TO BUILDING 5, PROCESS SAMPLES

SAMPLED: TMW01, TMW03, TMW40S, TMW44, TMW07,
TMW22, TMW23, BGMW03, TMW26, SMW01,
TMW27, MW23S (PARTIAL)

ISSUES: ONE FIELD TRUCK HAD LOW BATTERY AND NEEDED A
JUMP-START

1535 SAMPLES TAKEN TO FED EX FOR SHIPMENT

1635 ALL TEAMS OFF SITE, KEYS/RADIOS TURNED INTO A. TANNER,
END DAY

John Nance 4/8/16

(106)

FWDA FACILITY-WIDE APRIL 2016
GROUNDWATER SAMPLING EVENT

4/11/16

0700 WEATHER: 140°F, CLOUDY WITH LIGHT RAIN
 ONSITE: TOMMY CHARLEY, LUKE HILL, JOHN NANCE
 RYAN WOLTMAN CONNIE WATTANACHIRADA-VERNON
 DAVID ESPALZA

USACE
 OVERSIGHT: JUSTIN KEMER

0720 SAFETY TALK BY L. HILL & J. NANCE

0735 CALIBRATE FIELD EQUIP. AND LOAD TRUCKS

0815 ALL TEAMS DEPART BUILDING 34, TEAMS ARE:

JN/DE

CWP/RW

JC/LH

1340 ALL TEAMS RETURN TO BLDG 5, PROCESS AND
 PACK SAMPLES TO SHIP

1445 SAMPLES TAKEN TO FED EX TO SHIP

1530 RECEIVE ICE DELIVERY AT BLDG 5

SAMPLED: TMW35, TMW20, MW225 (PARTIAL),
 MW22D, TMW21, TMW405 (PARTIAL) TMW11, TMW28

ISSUES: CHECKED CONNECTIONS AT TMW25, MADE MINOR
 ADJUSTMENTS

1630 RETURN KEYS AND RADIOS TO USACE TRAILER, ALL TEAMS
 OFF SITE - END DAY

John D. Nance
 4/11/16

4/12/16 FWDA FACILITY-WIDE APRIL 2016
GROUNDWATER SAMPLING EVENT

(107)

0700 WEATHER ~35°F, CLOUDY

ON SITE: TOMMY CHALEY, LUKE HILL, DAVID ESPARZA,

JOHN NANCE, LYNN WORTMAN, CONNIE WATTAVACHINDA-VERON.

USACE OVERSIGHT: JUSTIN REACE

0720 SAFETY TRINGATE BY LUKE HILL

0730 CALIBRATE WATER QUALITY METERS AND LOAD
EQUIPMENT IN FIELD TRUCKS

0815 ALL TEAMS DEPART BLDG 34 TO SAMPLE.

TEAMS ARE: JN/DE

TC/LH

CWV/RW

1245 TC/LH RETURN TO BLDG 5 TO PACK SAMPLES

1350 CWV/RW RETURN TO BLDG 5

1415 JN/DE RETURN TO BLDG 5

1445 RW/CWV TAKE SAMPLES TO FEDEX

~~1530 ALL JN~~

SAMPLED: TMW39D, TMW40D, TMW13, TMW48,
MW223 (PARTIAL), TMW34, TMW06, MW18D,
TMW08, MW03, TMW10

ISSUES: NO ISSUES TODAY

1530 ALL TEAMS OFF SITE, KEYS/RADIOS TURNED IN TO
USACE TRAILER - END DAY.

John Nance
4/12/16

(108)

FWDA FACILITY-WIDE APRIL 2016 4/13/16 GROUNDWATER SAMPLING EVENT

0700 WEATHER: 240°F PARTLY CLOUDY

ONSITE: LOUIE WITTANACHINDA-VERNON, JOHN NANCE,
LUKE HILL, TOMMY CHARLES, DAVID ESPARZA, RYAN JOHNSON

USACE OVERSIGHT: RON MULBET

0715 SAFETY TAILGATE BY LUKE HILL

~~003~~
JDN

0730 CALIBRATE WATER QUALITY METERS AND LOAD
EQUIPMENT INTO FIELD TRUCKS

0800 ALL TEAMS DEPART BLDG 34, TEAMS ARE:

CWV/RW

TC/LH

JN/DE

1310 JN/DE, LH/TC RETURN TO BLDG 5 TO
PROCESS AND PACK SAMPLES

1420 CWV/RW RETURN TO BLDG 5

SAMPLED: TMW43, TMW04, MW225(PARTIAL),
TMW15, TMW02, TMW31i, TMW32, TMW25

- NO ISSUES TODAY -

1520 SAMPLES TAKEN TO FEDEX, ALL TEAMS OFF SITE
RADIOS & KEYS TURNED IN TO USACE - END DAY

John Nance
4/13/16

4/14/16 FWDFA FACILITY-WIDE APRIL 2016 GROUNDWATER SAMPLING EVENT

(108)

0710 WEATHER: 40°F CALM AND CLEAR
ON SITE: TOMMY CHARLEY, DAVID ESPARZA, RYAN WORTMAN
LUKE HILL, JOHN NANCE, CONNIE WATTANACHINDA-VERNON
USAR: RON MULBEN

0720 SAFETY TAILGATE BY L. HILL

0730 CALIBRATE WATER QUALITY METERS & LOAD EQUIPMENT

0750 ALL TEAMS DEPART BLDG 34 FOR SAMPLING.
TEAMS ARE TC/LH
CWV/RW
JN/DE

0820 TMW17 WELL NOT MAKING WATER, CWV/RW
CALL JN/DE FOR ASSISTANCE. ADVISE TO MOVE
TO ANOTHER WELL AND WILL ATTEMPT A FIX ON TMW17
LATER IN DAY

1300 LH/TC RETURN TO BLDG 5 TO PROCESS AND
PACK SAMPLES

1340 JN/DE RETURN TO BLDG 5

1420 CWV/RW RETURN TO BLDG 5

1515 SAMPLES TAKEN TO FEDEX FOR SHIPMENT
LH/TC JN/DE AT TMW17 -

1610 GET PUMP AND TUBING PULLED OUT AND RESET
WELL IS NOW FUNCTIONAL

SAMPLED: TMW47, TMW49, TMW45, BGMW02,
TMW38, TMW14a

ISSUES: TMW17 PUMP TUBING, WEDGED IN WELL - CORRECTED
ISSUE AND WELL NOW FUNCTIONAL

1620 ALL TEAMS OFF SITE, END DAY

John Nance 4/14/16

(110)

FWDA FACILITY-WIDE APRIL 2016
GROUNDWATER SAMPLING EVENT

4/15/16

0700 WEATHER ~ 45°F, PARTLY CLOUDY & BREEZY
~~0710~~ ^{JDN} ~~ON SITE:~~ RYAN WARTMANN, LUKE HILL, JOHN NANCE
 TOMMY CHARLES, DAVID ESPARZA, CONNIE W. VERNON

USACE - ~~2 JDN~~ ~~FWDA~~ TRAILER 1 LOCKED

0710 TAILGATE SAFETY BY L. HILL

0720 CLEAN UP BLDG 5 & BLDG 34, SWEEP AREAS
 CALIBRATE METERS & LOAD TRUCKS

0815 BUILDING "TRAILER" 1 OPENED, RON MULBET
 DOWN RANGE AND AWAKE SUNDANCE ON SITE

0845 ALL TEAMS DEPART TO SAMPLE

1100 CWV/RW & LH/TC RETURN TO BLDG 5 TO
 PACK/PROCESS SAMPLES

1145 JN/DE RETURN TO BLDG 5

SAMPLED: TMW24, TMW17, BGMW01, MW22S (PARTIAL)
 → ALL WELLS COMPLETED →

ISSUES: TRAILER 1 WAS LOCKED UPON ARRIVAL, GAINED
 ACCESS AT 0800

1245 SAMPLES SHIPPED TO FedEx

1315 COMPLETE SITE CLEANUP AND CHECK IN KEYS
 AND RADIOS, LOCKED BUILDINGS. ALL TEAMS
 OFF SITE AND SAMPLING EVENT COMPLETED

1530 RETURN TO ABQ, END EVENT

John Nance
 4/15/16

4/4/16 FLDA Ground Water Sampling
 Staff Ryan Wortman and Connie Wilk

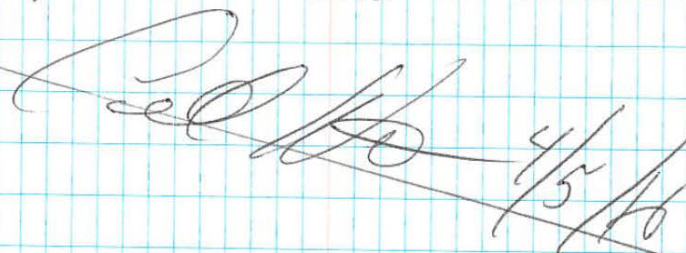
0700 Arrive at USACE trailer
 0745 Orientation and safety meeting
 0830 Prep for ground water level readings.
 0852 Arrive at FW35 for water level.
 0913 Water level taken at
 0916 TMW-22 measured water level.
 0922 TMW-44 " " "
 0925 TMW-36 " " "
 0940 TMW-47 " " "
 0948 TMW-04 " " "
 0954 TMW-43 " " "
 1003 TMW 29 " " "
 1012 TMW 02 " " "
 1020 TMW 40S and 40D " " "
 1026 TMW 03 " " "
 1034 TMW 41 " " "
 1100 TMW 21 " " "
 1115 TMW 18 " " "
 1130 TMW 19 " " "
 1145 TMW 11
 1150 TMW 17
 1155-1225 Lunch Break
 1241 TMW 15
 1250 TMW 37
 1300 TMW 31D measured water level
 1308 TMW 31S " " "
 1309 TMW 01 " " "
 1313 TMW 49 " " "
 1318 TMW 30 " " "
 1331 TMW 48 " " "
 1337 TMW 39S " " "
 1342 TMW 39D " " "

1352 TMW 32 measured water level.
 1402 TMW 13 " " "
 1409 TMW 38 " " "
 1427 TMW 14A
 1500 Back at fire station
 1510 Went to see Luke at Blvd 5
 Luke assigned us 4 more wells to measure.
 1516 FAAMW 22 S measured water level.
 1519 MW 22 D " " "
 1525 MW 33 " " "
 1530 MW 35 " " "
 1538 MW 18 D " " "
 1557 TMW 34 " " "
 1608 MW 20 " " "
 1615 Arrived at the fire station after we
 finished our wells.
 1635 John assigned us to do one last well TMW 10.
 The well cable was broken. We had to call Luke
 and have him come to assist us. The well
 cable is still broken.
 1659 Ryan, Luke and myself are finish working.
 1708 Ryan, Luke and myself have returned to
 the fire station to lock up our equipment.

4/4/16

- 4/5/16 FWOA Groundwater
 Staff Ryan Wartman and Constance
~~0700~~ Wottonach Indar Vernon
- 0700 Safety meeting with John, Luke,
 Will, Ryan, Connie and Dave.
- 0725 Started Calibrating the equipment,
 refilling the ~~CD~~ Spray bottles with
 DE water and Cleaner. Started
 preparing the Supplies and Equipment
 for the day.
 Horiba # 24294.
- 0800 preparing to drive to the Blvd 5
 to get the Rack for the Nitrogen tank.
- 0805 We picked up the tank.
- 0815 We went back to the fire station to
 get additional Buckets.
- 0830 We have all of our equipment and
 leaving to go to Well # TMW 36.
- 0850 Arrived at well # TMW 36 and started
 preparing the equipment for purging
 the well.
- 1012 Finished purging well and reloading
 the truck.
- 1017 Dump the water in the buckets from
 well # TMW 36.
- 1025 Arrived at the fire station to pick up
 more buckets.
- 1037 Arrived at well # TMW 37, preparing
 to start purging the well.
- 1135 We are finished purging the well.
 we are cleaning and loading the equipment
 leaving ~~to~~ to go dump the well water.
- 1200 Arrived at well # TMW 19; we are going
 to eat lunch here.
- 1230 Lunch is over!

- 1235 Getting equipment ready to purge
Well # TMW19.
- 1335 Finished purging, reloaded the truck
1340 on our way to dump the well water
in the buckets.
- 1347 Arrived at well # TMW16. Preparing
Equipment for purging.
- 1353 Started Purging the well.
- 1440 Arrived at the water dump site to
dump the well water Buckets.
- 1500 on our way to Well # TMW18
Preparing to purge the well.
- 1540 Andrew came to visit our worksite.
- 1600 We are finished the well and on
our way to dump the well water
buckets.
- 1625 Unloaded our ~~equip~~ equipment at
the fire station. And returned our
Nitro tank to storage.
- 1635 Returned the Tank Truck Rack back
to building 5.
- 1641 Back to the fire station. In a
meeting with Luke and John, Ryan
Will, Dave and myself.
Discussing the work assignments
for 4/6/16.
- 1700 off from work and worksite!

 4/5/16

- 4/6/16 FWDA Groundwater Sampling
- 0700 onsite for work, Ryan Nordman and Constance Wattanachinda Vernon Staff.
- 0710 Safety meeting with all Staff- John, Luke, Will, Ryan, Dave, and myself Connie.
- 0720 Calibrating equipment for well Sampling and Luke and John are giving all teams ~~are~~ our assignments for the day.
- 0740 Loading up our trucks and preparing to get additional Sampling supplies from Building 5 and Building near the Sandvine trailer.
- 0829 On our way to well #TMW02 and TMW01.
- 0840 Arrived at TMW02 and setup equipment for Sample collecting.
- * 0900 Collected Samples for TMW02.
- 1030 On our way to Well #TMW01 for Sample collecting.
- * 1040 Started collecting Samples for TMW01.
- 1130 finished Sampling and loaded up the truck. We are on our way to TMW25.
- 1140 Preparing to Sample Well #TMW25
- * 1145 Collected Sample.
- 1200 - Lunch time. We went to Bldg 5 location
- 1230 - We are finished with Lunch and I went to talk to Luke about Sampling our last well for the day. Luke told me and Ryan to start preparing our samples for shipping, because we had no ice. Luke sent Ryan to buy 15 bags of ice, because the ice had not arrived yet.
- 1245 Ryan went get ice for shipping.

- 1300 We are working on preparing
 Samples for shipping and
 Quality checking all Samples
 1400 The samples are packed and
 ready for shipping. We are
 Loading the Silver Tundra to
 go to Fedex.
 1408 Ryan and Myself are on our
 way to Fedex.
 1435 At Fedex and unloading the
 truck and placing the ice
 Chest in the shipping area.
 1455 On our way back to FWOA
 worksite.
 1520 Back at the worksite and
 preparing our equipment and
 supplies for 4/7/16.
 1630 Organizing equipment and
 supplies and stocking up the
 Building 5 supply area.
 1655 Planning to secure all Buildings
 before leaving off site. Returned
 all Keys and Radios back to
 Andrew.
 1700 Leaving offsite

4/16/16

- 4/7/16 FWOA Groundwater
- 0700 Staff Ryan Wortman and Constance Wattamachio da-Vernon
- 0715 All Staff at the Fire Station safety meeting.
- 0720 calibrating equipment, Collecting Supplies, and loading trucks.
- 0735 on our way to Building 5 to pick the rest of our equipment.
- ★ 0800 Arrived at Well TMW36.
Prepared to sample the well.
- 0845 Samples completed and we are leaving to well # TMW37
- 0850 Arrived at well TMW37
- 0850 Ken Vernon onsite.
- 0900 Ken Vernon off site.
- 0905 Started collecting Samples for well.
- ★ 0921 Finished at Well TMW37,
- 0922 on our way to dump Extra well water.
- ★ 0956 Collecting Samples for well TMW18 Andrew onsite.
- ★ 1020 finish collecting Samples Loading the truck. Andrew still onsite.
- 1022 on our way to dump water bucket and go to well # TMW19.
- ★ 1024 Arrived at well # TMW19.
1 started setting up equipment for Sampling
- 1035 Collected Samples.
- ★ 1100 Arrived at well TMW16.
- 1130 Collected Samples for TMW16.
John came by our site and gave

4/7/16

US Two more wells to sample. We drove to TMW29 for sampling.

1200 - 1235 we ate lunch and then prepared to sample TMW29.

* 1230 - we collected samples for TMW29.

1255 - we finished and are on our way to TMW405.

* 1305 collected samples for TMW405.

1327 - we are back at building 5 to prepare samples for shipping.

1535 - Ryan, Luke, Will and myself are on our way to Fedex to ship out 15 Ice chest with samples.

1550 - we arrived at Fedex and unloaded our trucks. Luke and Will left after the drop off. Ryan and myself waited for the Fedex truck to make sure the driver was able to take all of the Ice chest.

1600 - Ryan and myself talked to the Fedex man. He was able to take all of Ice chest. Today was a good day. Everybody worked hard.

1625 - we went back to Fort Wingate and returned the keys and walkie talkie back to John.

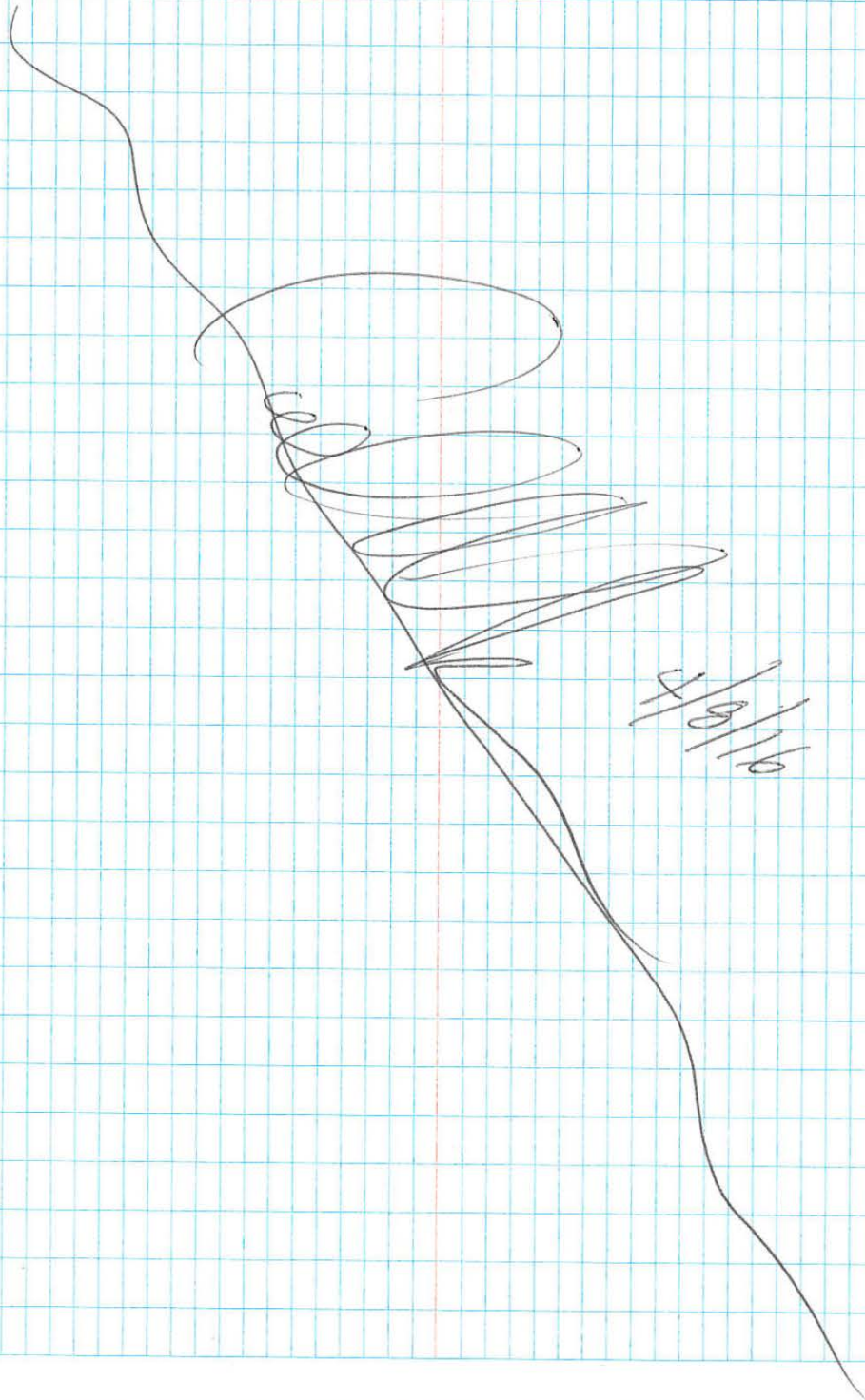
1700 offsite.

[Signature]
4/7/16

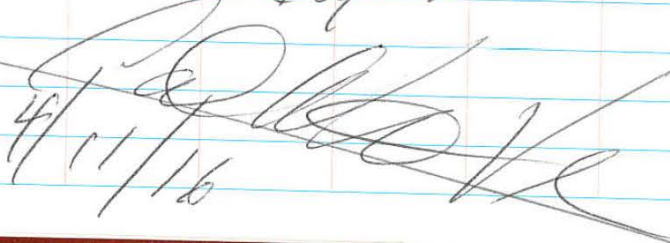
- 4/8/16 FWA Groundwater Sampling
- 0700 Staff Ryan Wortman and Constance Wattamachinda Vernon
 - 0720 Safety meeting - discussed rain, lightning cold weather and overall Project Safety. Prepared the equipment; Supplies and calibrated the Horiba. We went to building 5 to get the supplies and ice Chest for Sampling.
 - 0805 Arrived at 405 for Sampling.
 - 0821 collected Samples.
 - 0832 Arrived at 44 for Sampling.
 - 0845 Collected Samples for 44.
 - 0922 We discovered we have a dead battery.
 - 0927 We informed John Nance and John asked Andrew to come help us with a jump start with battery cables.
 - 0929 We can see Andrew and his truck. He is almost at our location to assist us.
 - 0933 Andrew is here and we have our ^{car} truck started - Woo hoo! Now we ~~get~~ get back to collecting Samples!
 - 0940 on our way to well 07.
 - 0956 Collected Samples for 07.
 - 1020 on our way to well 22.
 - 1031 Collected Samples for 22.
 - 1049 on our way to well 23.
 - 1059 collected Samples for 23.
 - 1135 on our way to BGMW03.
 - 1206 Collected Samples for 03.
 - 1302 on our way back to Building 5 to prepare samples for shipping.
 - 1535 on our way to Fedex to ship the Samples.
 - 1600 Leaving Fedex and going back

4/8/16 FWDPA Groundwater Sampling
to Fort Windgate to close and look
the buildings and supplies for
the weekend.

1715 Leaving the worksite for the weekend.
Today was a great day.



- 4/11/16 Fortwindgate ^{ground} Water
 staff Ryan Wartman and Constance
 Wattamachinda - Vernon
- 0700 Arrived on site at the fire station.
 0715 Safety meeting, Discussed Rain, Thunder
 Lightning, mud and wet weather, personal
 and equipment safety.
- 0730 Ready to start calibrating equipment
 and loading Supplies in the trucks
- 0750 Leaving fire station and going to
~~Building~~ Building 5 to get supplies for
 Sampling.
- 0835 Arrived at well #TMW35 for Low Flow
 Sampling.
 John showed Ryan and Myself
 how to Use the low flow equipment.
 We collected all Samples for this well.
- 1119 Finished at well TMW35.
- 1123 Arrived at well TMW20.
- 1330 Finished collecting Samples.
 We started collecting Samples for
 Well TMW20 at 1159.
- 1340 We are building 5 to prepare
 Samples for Shipping.
- 1445 We are at Fedex early today.
 Today is great day!
 Good weather, Sampling with
 no problems.
- 1530 we are back at the worksite
- 1545 off for the day!!


 4/11/16

4/12/16 Fort Windgate Ground Water p. 1 of 2
 Staff Ryan Wortman and Constance Wattamackie
 - Vernon

0700 Arrived onsite ~~At~~ [@] the fire station.

0720 Safety meeting. Discussed weather, footing metal poles near wells, warm weather bugs and snakes, wear safety gear, clean equipment.

0730 Ready to start calibrating equipment. Ryan is calibrating. I am loading the truck.

0755 leaving the fire station on our way to building 5 for supplies, ice chest and ice.

0810 preparing sample collections in ice chest for our 3 wells today.

0845 on our way to well # TMW08. unloading the truck and equipment for sample collecting.

0852 Started collecting samples for well # TMW08. Everything is going great!

0935 We are leaving well # TMW08.

0945 We stopped at the fire station for a restroom break.

0956 We arrived at MW03 for sampling.

1156 We are finished sampling at MW03 using low flow.

1200 We saw John and asked him about doing TMW10. John said we have enough time. We are on our way to collect samples from TMW10.

1210 We are at TMW10 preparing for sampling.

1304 We started sample collection

~~We are finished at well # TMW10~~

1340 On our way back to Build. 5 to prepare to ship samples.

P.202 4/12/16 Fort Windgate Ground Water
Staff Constance Wattanachinda Vernon
Ryan Wortman

1349 We are back at Building 5, to prepare
the samples for shipping.

1445 Ragan and myself are on our
way to Fedex to drop off the
samples for today.

1530 off site and off from work.
Great day!

[Large handwritten signature]
4/12/16

4/13/16 F W D A Groundwater Sampling
Staff Ryan Wortman and Constance
Wattamachinda - Vernon

0700 At the Fire Station for work.

0710 Safety meeting for All staff.

0720 Calibrating equipment and loading
Supplies in the truck.

0735 on our way to Building for pick up
Sampling Supplies for today's wells.

0759 Arrived at Well # TMW43042016.

DTW43042016, TMW43042016 MS, TMW
43042016 MSD, for Sampling.

0850 Collected Samples for all 4 collections.

1045 Left the well because we are
finished collecting samples.

1115 we arrived at well # TMW04042016
Unloaded the truck and prepared
for Sampling.

1245 Started collecting Samples for well
TMW04.

1420 finished with Sampling at TMW04.
on our way back to Building 5
to prepare Samples for Shipping.

1520 Ryan and myself are on our
way back to the Fedex for Shipping
of the Samples today. Today
was a good day. Great weather!

1700 off from work for the day!

4/13/16

- 4/14/16 FWDA Groundwater Sampling
 Staff Ryan Wortman and Constance Wattanachinda-Vernon
- 0700 Arrived at the fire station for work.
 - 0710 Safety meeting with all staff.
 - 0720 Loading up the truck and calibrating all the equipment.
 - 0735 Arrived at Building 5 to prepare ice chest and collect sampling supplies and ice.
 - 0757 Arrived at well # TMW17 for sampling.
 - 0810 We took a reading on the Horiba after we got water.
 - 0815 We took another reading. The water stopped coming up.
 - 0820 Took another reading, No water coming up. Ryan called John. We are having problems.
 - 0830 John arrived onsite at our well to assist us with resolving the problems. John worked on trying to fix the the problems with the well.
 - 0843 John made the decision that the well is not usable. He will deal with it later. He instructed us to go collect samplings at one of our other assigned wells for the day.
 - 0849 We loaded up our truck and went to Well # TMW47.
 - 0900 We Arrived at well # TMW47. Set up the truck equipment and prepared for sampling.
 - 1005 started collecting samples.
 - 1405 We are finally finished and loading up the truck to go to Building 5 to prepare the samples for shipping.

4/14/16 WDA Groundwater Sampling
1420 Arrived at Building 5. To prepare
the Samples for Shipping.
1515 We are on our way to Fedex
to drop off the Samples.
1600 we are off for the day.

Cell Wall

4/14/16

- 4/15/16 FWDA Groundwater Sampling
 Staff Ryan Wortman and Constance Wattanachinda-Vernon
- 0700 Arrived at the fire station for work.
- 0710 Safety meeting for the day.
- 0720 Started loading the trucks and calibrating the equipment.
- 0735 John went to get the keys and Radios.
- 0745 Ryan and Myself were assigned by John to clean building #33 on our way to clean.
- 0810 We are finished cleaning building #33. on our way back to the fire station. We stopped by the 2nd trailer where Lisa works. She open up trailer 1, because John was not able to get keys and Radios because there was nobody in the Trailer 1.
- 0840 John is at the Trailer 1 with Ryan and myself. We are ready to go do the wells now!
- 0845 on our way to well # BGMW01
- 0854 Arrived at well # BGMW01
- 0945 started collecting Samples.
- 1100 We are finished collecting Samples and loading up the truck.
- 1109 Arrived at the fire station. We helped put equipment away and organize the equipment and Supplies.
- 1125 Went to building 5 and dropped off our Samples and completed Paperwork.
- 1135 Came back to fire station picked up trash for dumpster. And dumped the trash.
- 1200 and put our Hydro tanks in the cage.
- 1215 Back at Building 5

4/15/16 FWDA Groundwater Sampling 0.2
1230 we are still cleaning up Building
5 and Fire Station. Packing equipment
to be shipped back to pine. Sweeping
up trash and cleaning up the last
trash.

1315 Leaving Worksite to return
home off work.

1600 Arrived at home.

~~4/15/16~~

FWDA - Groundwater Level 4/4/16
Measurements - April 16

0855 - William Kite & David Esparza
MW-23

Clear
Church Rock 32°

0905 MW-24

0940 leaving PZ09 & PZ10
moving to Win BGM 03
PZ05 & PZ06

1040 BGM 02 → TMW 28

1107 Moving from BGM 01 to
PZ08 & PZ07

1133 moving to PZ43, PZ42 & PZ41

1151 moving to TMW 26

1338 Rtn from Gas station for fixed flat
start @ TMW 46
move to TMW 25

1440 ~~FW~~ move from TMW 45 →
TMW 23

1514 leaving TMW 24

1540 MW1, MW2 & MW3

1602 Complete

4 Apr. 16

4/5/16

FWDA GROUNDWATER SAMPLING
FACILITY-WIDE APRIL 2016

- 0710 ONSITE AT BLDG 34
- 0715 SAFETY MEETING BY J. NANCE & L. HILL
- 0730 BEGIN CALIBRATION OF WATER QUANTITY METER AND
LOADING TRUCKS FOR DAY - JOHN NANCE AND DAVID ESPARZA
ON THIS BOOK
- 0800 CONTINUE LOADING EQUIPMENT, COORDINATE PURGING
PLAN WELL
- 0840 GO TO FOUR CORNERS WELDING TO PICK UP NITROGEN
TANKS
- 0940 AT MW225, SET UP TO PURGE
- 1020 COMPLETE PURGE, MOVE TO MW02
- 1030 AT MW02, SET UP TO PURGE
- 1050 COMPLETE PURGE, MOVE TO MW01
- 1120 COMPLETE PURGE AT MW01 MOVE TO TMW29
- 1140 AT TMW29, SET UP TO PURGE
- 1215 COMPLETE PURGE AT TMW29 MOVE TO TMW405
- 1235 AT TMW405, BEGIN TO PURGE
- 1310 COMPLETE PURGE AT TMW405 MOVE TO L. HILL & MIKE
AT TMW41 -
- 1320 DECIDE TO CHANGE EQUIPMENT TO PURGE MW23, MOVE
TO FIRE STATION TO GET WATER TANK AND EQUIP.
- 1425 AT MW23, SET UP TO PURGE
- 1550 MW23 RAN DRY. BREAK DOWN TO HEAD BACK
TO BLDG 34
- 1615 AT BLDG 34 - OFF LOAD EQUIPMENT
- 1645 TURN IN KEYS & RADIOS, SIGN OUT FOR DAY

[Signature] 4/5/16
J. Nance

FWDA GROUNDWATER SAMPLING FACILITY - WIDE APRIL 2016

4/6/16

0710 WEATHER ~30°F CALM AND CLEAR

ONSITE: LURE HILL, WILL KITE, DAVE ESPARZA, CONNIE W.V.
JOHN NANCE RYAN WORTMAN

0715 SAFETY BY L. HILL & J. NANCE

ON THIS BOOK: D. ESPARZA / J. NANCE

0730 SET UP EQUIPMENT, CALIBRATE, LOAD TRUCKS

0845 DEPART FOR MW23

0900 BEGIN PURGE - CONTINUED FROM YESTERDAY -

0956 WELL DRY, PACK UP TO MOVE TO MW24

1030 AT MW24, BEGIN PURGE

★ 1150 SAMPLE MW24042016

1240 DEPART FOR MW23

1250 AT MW23 - CALL FROM L. HILL, ICE NOT
ARRIVED YET - CHANGE PLAN AND DEPART
FOR BUILDING 5 TO PACK SAMPLES AND
RETRIEVE ICE

1315 AT BLDG 5, R. WORTMAN TO BUY ICE
PACK SAMPLE AND QC

1330 R. WORTMAN RETURNS W/ ICE

1420 R. WORTMAN / CONNIE W.V. GO TO SHIP SAMPLES

1500 GO TO EVAL TANK, DRAIN WATER TOTE

1600 BACK AT BLDG 5, CLOSE UP

1620 OFF SITE, END DAY

[Signature] 4/6/16
Nance

4/7/16

FWDA FACILITY-WIDE APRIL 2016 GROUNDWATER SAMPLING EVENT

0700 WEATHER ~30°F CLOUDY/CLEAR

ONSITE: JOHN NANCE, DAVID ESPARZA, WILLIAM KITE,
LUKE HILL, RYAN WERTMAN, CONNIE WATTAMCHINDA V.
USACE: ANDREW TRAINOR

0710 SAFETY TAILGATE BY J. NANCE

0715 CALIBRATE WATER METERS

0740 DEPART FIREHOUSE (D. ESPARZA / J. NANCE ON THIS SIDE)
HEAD TO GAS STATION, REFUEL TRUCK

0815 ARRIVE AT MW23, SET UP TO PURGE

0835 BEGIN THIRD SET PURGE AT MW23

★ 0950 COLLECT MW23042016

1110 COMPLETE SAMPLING, MOVE TO BLDG 5

1150 MEET CWN & RW, EXCHANGE PAPERWORK
MOVE TO MW22S

★ 1220 COLLECT NITRATE, GRO - MW22S0416 PARTIAL
MOVE TO MW0Z

★ 1230 COLLECT MW0Z042016, TPH-DRO PARTIAL

1245 MOVE TO TMW29, MEET CWN/RW, DISCUSS
PROGRESS

1300 AT NITROGEN CAGE, DROP N₂ BOTTLES - MOVE
TO BLDG 5

1310 D. ESPARZA GOES TO FIRESTATION TO OFF-LOAD
EQUIPMENT, J. NANCE TO PROCESS SAMPLES AT
BLDG 5

1335 D. ESPARZA RETURNS - PROCESS SAMPLES

1530 SAMPLES SENT TO FED EX, MOVE TO EVAP TANK
TO EMPTY TOTE & PURGE BUCKETS

1645 TURN IN RADIOS/KEYS TO ANDREW TRAINOR, DEPART SITE
END DAY

John Nance 4/7/16
Nance

FWDA FACILITY - WIDE APRIL 2016 GROUNDWATER SAMPLING EVENT

4/8/16

0715 WEATHER ^{AM} ~ 40°F RAINY

ONSITE: JOHN NANCE, DAVID ESPARZA, CONNIE^W JERNON, LIKE HILL,
WILL KITE, RYAN WORTMAN

USACE: ANDREW TRAINOR

0720 SAFETY TRAILGATE BY J. NANCE

0730 CALIBRATE METERS

0800 MOB TO MNZZS

0810 NO TWINE, PACK UP AND MOVE TO TMW26

0845 AT TMW26, BEGIN PURGE

★ 0940 COLLECT TMW26042016

1015 DEPART FOR SMW01

1040 BEGIN PURGE AT SMW01

★ 1140 COLLECT SMW01042016

1230 DEPART FOR TMW27

1245 BEGIN PURGE AT TMW27

★ 1315 COLLECT TMW27042016

1335 DEPART FOR EVAP TANK

1340 DUMP PURGE WATER, MOVE TO BLDG 5

1355 AT BLDG 5, PREP AND PACK SAMPLES

1415 MOVE TO MNZZS,

★ 1425 COLLECT MNZZS042016 (PARTIAL SVOCS, ONE AMBER)

1430 MOVE TO BLDG 5, CONTINUE PACKING SAMPLES

1530 SAMPLES SENT TO FED EX

1635 ALL TEAMS OFF SITE END DAY



4/8/16

4/11/16

FWDA FACILITY-WIDE APRIL 2016
GROUNDWATER SAMPLING EVENT

0710 WEATHER ~ 40°F CLOUDY w/ SOME RAIN
ON SITE: TOMMY CHARLIE, LUKE HILL, DAVE ESPARZA, RYAN WARTMAN
JOHN NANCE, CORNIE WATANABE - VERNON
USACE: JUSTIN PEARCE

0725 SAFETY TAIL GATE BY L. HILL AND J. NANCE
ON THIS BOOK: J. NANCE, D. ESPARZA

0735 CALIBRATE HORIBA METER

0815 DEPART FOR MW225 & 22D

0840 AT MW225, SET UP TO PULL BALL OF WATER

~~0900~~ MOVE TO TMW35, ASSIST CWW & RW ON SET UP
0945 COLLECT MW225042016 (EXPLOSIVES, PARTIAL)
SET UP TO PURGE MW22D

1010 COLLECT MW22D042016
MW22D042016MS
MW22D042016MSD

1235 LOAD TRUCK AND MOVE TO FIRE STATION - DROP
EQUIPMENT, DUMP TRASH,

1250 TAKE PURGE WATER TO EVAP TANK

1330 AT BLDG 5, PACK SAMPLES

1435 CWW & RW DEPART TO SHIP SAMPLES
J. NANCE CALLS GAULF WATERWORKS TO GET
ICE DELIVERED

1505 MOVE TO TMW25, CHECK PUMP CONNECTIONS

1515 RETURN TO BLDG 5, CLEAN-UP

1545 ICE DELIVERED

1630 RETURN RADIOS/KEYS, END DAY

[Signature]
4/11/16

FUDA FACILITY-WIDE APRIL 2016 GROUNDWATER SAMPLING EVENT

4/12/16

0700 WEATHER ~ 35°F CLOUDY

ON SITE: TOMMY CHARLEY, LUKE HILL, CONNIE WATAMACHINDA
DAVE ESPARZA, RYAN WORTMAN, JOHN NANCE

USARV: JUSTIN REACE

0715 SAFETY TAILGATE BY LUKE HILL

0730 CALIBRATE HORIZA, LOAD TRUCK

0805 MOVE TO MW225

* 0825 COLLECT MW225042016 (PARTIAL TOTAL METALS)

0840 MOVE TO TMW34 TO PURGE

* 1020 COLLECT TMW34042016DTW34042016

1115 MOVE TO TMW06 TO PURGE

* 1225 COLLECT TMW06042016

1300 MOVE TO MW18D

NOTE: PURGED 18D TODAY AT 0830 - 21.5 LITERS BAILED,
WELL WENT DRY* 1350 COLLECT TMW18D042016

1415 MOVE TO BLDG 5 TO PACK SAMPLES

1500 ALL TEAMS OFF SITE, END DAY

[Signature] 4/12/16
JH

4/13/16

FADA FACILITY-WIDE APRIL 2016 GROUNDWATER SAMPLING EVENT

0700 ONSITE: TOMMY CHAFFET, LUKE HILL, JOHAN NANCE
DAVID ESPARZA, RYAN WOERTMAN, CONNIE WHITTAKER
VEENON

USAGE: RON MULBEY

0715 SAFETY TAILGATE BY LUKE HILL

0730 CALIBRATE HORIBA, LOAD EQUIPMENT

0745 DEPART FOR MW225

← DAVID ESPARZA AND JOHAN NANCE ON THIS BOOK →

★ 0800 COLLECT MW225042016 (PARTIAL DISSOLVED METALS)

0820 MOVE TO TMW15

0840 AT TMW15, BEGIN PURGE

★ 0915 COLLECT TMW15042016
DTW15042016

1110 MOVE TO TMW02

★ 1215 COLLECT TMW02042016

1300 AT BLDG 5, PACK SAMPLES

1400 MOVE TO FIREHOUSE, OFF LOAD EQUIPMENT

1425 RETURN TO BLDG 5, PACK SAMPLES

1500 SAMPLES TAKEN TO FED EX

1520 ALL TEAMS OFF SITE, END DAY →

[Signature]
4/13/16
[Signature]

FWIW FACILITY - WIDE APRIL 2016
GROUNDWATER SAMPLING EVENT

9/14/16

- 0715 ONSITE: D. ESPARZA, J. NANCE, L. HILL, T. CHARLES
R. WORTMAN C. W. VERNON
- 0720 SAFETY BY L. HILL
- 0730 CALIBRATE HORIZON, LOAD TRUCK
- 0755 AT TMW 49
- 0815 HAVE TROUBLE MAKING WATER - HAND VALVE ON
REGULATOR TURNED OFF
- 0825 CWV/RW RADIO - TMW 17 NOT STABILIZING
BREAKS DOWN EQUIP. MOVE TO TMW 17
- 0835 PUMP SEEMS TO BE STUCK IN WELL, CANNOT
PULL PUMP UP, AND IS NOT GOING DOWN - NOT
MAKING WATER - ADVISE CWV/RW TO MOVE TO
NEXT WELL, DE/JN RETURN TO TMW 49
- 0845 RESTART PURGE AT TMW 49
- * 0925 ^{JON} ~~START~~ COLLECT TMW 49 042016
- 1015 MOVE TO TMW 45
- 1025 BEGIN PURGE
- 1115 COLLECT TMW 45 042016
- 1145 MOVE TO BGMW 02
- 1205 BEGIN PURGE BGMW 02
- * 1240 COLLECT BGMW 02 042016
BGMW 02 042016 MS
- 1340 MOVE TO 1 BGMW 02 042016 MS
BLDG 5
- 1555 SAMPLES SHIPPED, ~~ALL TEAMS OFF SITE~~ ^{JON}
MOVE TO TMW 17. 1
- 1610 PULL PUMP AND TUBING, FREE PUMP AND RESET
PUMP WORKING AGAIN
- 1620 ALL TEAMS OFF SITE, END DAY

John D. [Signature]
[Signature]

4/15/16

FWDA FACILITY-WIDE GROUNDWATER MONITORING EVENT - APRIL 2016

0700 ONSITE: CW VERNON, L. HILL, DESPARRA, J. NANCE
R. WORTMAN, T. CHARLEY

USACE: Ron MURPHY

NOTE: TRUCK 1 LOCKED, NO RADIO OR KEYS YET

0715 SAFETY MEETING BY L. HILL

0720 CALIBRATE AERIALS

LOAD TRUCKS

0740 STILL NO KEYS, DIVIDE TEAMS TO CLEAN BLDGS 34, 33, & 5

0815 GET KEYS AND RADIOS, FINISH CLEAN-UP

0830 MOVE TO TMW 17

0905 BEGIN PURGE TMW 17

★ 1010 COLLECT TMW 17 04 2016

1145 MOVE TO BLDG 5, DROP TRASH

★ 1210 COLLECT MW 225042016 (DRO, PARTIAL, COMPLETE)

1220 PACK SAMPLES

1240 SAMPLES SENT TO FED EX

1300 COMPLETE SITE CLEANING

1315 ALL TEAMS OFF SITE, KEYS & RADIOS CHECKED
IN, BUILDINGS LOCKED - END OF EVENT

John J. [Signature]
4/15/16

Location FWDA Date 4/5/16
 Project / Client Facility - Wide Groundwa
Sampling Event

0720	Arrive @	Site
0725	PTSP / H + S	Meeting
0735	Calibrate	HORIBA U-52
0800	Loading	truck w/ equip
0820	Go to	town to air up truck tire
0850	Mobilizing	to FW-31
0900	Personnel:	L. Hill + W. Kite
Weather: Clear Skies, 60s - 70s °F		
Activity: Purging MWs Dry w/ Grundfos Pump		
0915	Arrive @	FW-31 + begin setting up to purge MW
0953	FW-31	purged dry.
1030	Arrive @	TMW-30. Setting up to purge
1050	TMW-30	purged dry.
1055	Packing up equipment + mobilizing to	TMW-31S
1120	Setting up @	TMW-31S
1145	TMW-31S	purged dry.
1200	Mobilizing	to TMW-39S
1238	TMW-39S	purged dry
~~1255 Disposing of purge H₂O~~		
~~+ picking up more DI H₂O. - LK~~		

106

Location

FWDA

Date

4/5/16

Project / Client

Facility - Wide Groundwater

Sampling Event

1300 Setting up @ TMW-41
 1327 TMW-41 purged dry
 1340 Disposing of Purge H₂O in evaporation basin
 1400 Mobilizing to TMW-44
 1424 TMW-44 Purged Dry
 1445 Mobilizing to TMW-22
 1504 TMW-22 Purged Dry
 1520 Mobilizing to TMW-07
 1534 TMW-07 Purged Dry
 1545 Mobilizing to TMW-23
 1608 TMW-23 Purged Dry
 1620 Returning to field office to unload equipment
 1700 Leaving site

4/5/16

L. Hill

Location

FWDA

Date

4/6/16

107

Project / Client

Facility - Wide Groundwater

Sampling Event

0710 Arrive site Personnel: L. Hill, W. Kite
 0715 Prep/HIS meeting
 0725 Calibrate Horiba U-52
 0750 Loading equipment in truck
 Personnel: L. Hill + W. Kite
 Weather: Clear, 50s °F
 Activity: Purging MWs dry w/ Grundfos Pump + bail/sample MWs
 0830 Arrive @ TMW-33 to purge dry
 0855 TMW-33 purged dry
 0934 TMW-46 purged dry
 0942 Mobilizing to BGMW-03
 1005 BGMW-03 purged dry
 1025 Headed to sample TMW-39S
 1050 Collect TMW39S042016
 1115 Headed to TMW39S
 1130 Collect TMW39S042016
 1145 Returning to field office to pack samples
 1430 Samples packed + delivered to FedEx
 1500 Disposing of Purge H₂O
 1610 Preparing Bottle Kits for sampling tomorrow. Unload equip.
 1628 Leaving Site

4/6/16

108

Location FWDA Date 4/7/16Project / Client Facility - Wide GroundwaterSampling Event

0715 Arrive @ site

0720 Calibrate HANNA - ~~0-52~~

0725 PTSP

0730 Loading truck

Weather: cloudy, 40s F

Personnel: W. Kite, L. Hill

Activity: Bail Samples

0830 Collect FW042016EQ0020900 Mobilizing to FW-310930 Collect FW310420161015 Collect TMW300420161050 Collect TMW410420161140 Collect TMW330420161240 Collect TMW46042016

1255 Packing Samples

1524 Headed to deliver samples
at FEDEX.

1620 Samples are shipped leaving site.

W. Kite
4/7/16

Location FWDA Date 4/8/16 109Project / Client Facility - Wide GroundwaterSampling Event

0715 Arrive @ site

0725 Calibrate HORIBA U-52

0735 PTSP + H+S Meeting

0740 Loading equipment in truck

Weather: Overcast, Raining, 50s F

Personnel: W. Kite, L. Hill

Activity: Sample MWs

1020 Collect TMW010420161110 Complete Sampling TMW010420161115 Arrive at TMW031220 Collect TMW03042016

1300+120 Return to pack samples

1530 Samples shipped; Cleaning
up the field office

1600 Leaving Site

4/8/16 RLD

110

Location FWDA Date 4/11/16Project / Client Facility - Wide GroundwaterSampling Event

0700 Arrive on Site
 0720 PTSP / H+S Meeting
 0730 Calibrating HORIBA U-52 +
 loading equipment in truck
⁰⁹¹⁵ 0820 Mobilizing to ~~TMW-25~~ TMW-21
 0930 Collect TMW28042016
 0950 Mobilizing to TMW-405 to
 collect remaining partial Sample
 1020 Collect TMW405042016 for
 SVOCs, Perchlorate, + Dissolved Metals
 1030 Picking up Nitrogen tanks +
 mobilizing to TMW-11
 1150 Collect TMW11042016
 1300 Collect TMW28042016
 1315 Return to pack/ship samples
 1500 Samples on the way to
 Fed Ex. Begin ~~Y.M.~~ Disposing of purge
 H₂O + unload equipment @
 fire station.
 1530 Leaving Site

[Signature] 4/11/16

Location FWDA Date 4/12/16 111Project / Client Facility - Wide GroundwaterSampling Event

0710 Arrive on Site
 0720 PTSP / H+S Meeting
 0730 Calibrating HORIBA U-52 +
 loading equipment in truck
 0900 Collect TMW310042016
 1010 Collect TMW405042016
 1120 Collect TMW13042016
 1210 Collect TMW48042016
 1245 Packing samples for shipment
 1530 Leaving Site

[Signature] 4/12/16

112

Location FWDA Date 4/13/16Project / Client Facility-Wide Groundwater
Sampling Event

0710 Arrive @ site
 0720 PTSP/H+S Meeting
 0730 Calibrating HORIBA U-52
 Personnel: L. Hill + T. Charley
 Weather: Clear Skies, 40s - 50s °F
 0745 Loading Equipment
 0900 Collect TMW31D042016 +
DTW31D042016
 1045 Collect TMW32042016
 1250 Collect TMW25042016
 1310 Packing samples for shipment
 1530 Leaving site

4/13/16



113

Location FWDA Date 4/14/16Project / Client Facility-Wide Groundwater
Sampling Event

0710 Arrive @ Site.
 Personnel: L. Hill + T. Charley
 Weather: Clear Skies, 40s - 60s °F
 0720 PTSP/H+S Meeting
 0730 Calibrating HORIBA U-52
 0745 Loading equipment in
 truck
 1015 Collect TMW38042016
 1200 Collect TMW14A042016
 1300 Packing Samples for shipment.
 1505 Samples shipped
 1510 Repairing TMW-17
 1600 Leaving Site

4/14/16



114 Location FWDA Date 4/15/16
 Project / Client Facility - Wide Groundwater
Sampling Event

0700	Arrive @ Site
0710	PTSP/H+S Meeting
0720	Calibrating HORIBA U-52
0730	Army Cor. not here @ site.
	No well keys. Begin cleaning up while waiting for MW keys.
1000	Collect <u>TMW24042016</u>
1105	Packing samples for shipment + cleaning up/unloading trucks
1245	Samples shipped
1310	Cleaning up field office.
1530	Return to ABQ.

[Signature] 4/15/16

APPENDIX B

Groundwater Sampling Field Data Sheets and Chain of Custody Forms

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Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID BGMW01	LOCATION Northern Area Alluvial	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION: NE road next to I-40			
WEATHER (wind/temp/ppt):			
OTHER NOTABLE FIELD CONDITIONS:			
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
4.3 gal	34 ft	12.5-32.5 ft	30 psi, 3 sec on, 40 sec off, 86 mL/min
BESST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond			
USED: Horiba U-52			

[illegible]

SAMPLE DATE:	4/15/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	R. Wortman, C. W-Vernon				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump	SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement		
SAMPLE ID(s):	BGMW01042016	DUPLICATE/BLANK SAMPLE ID(s):			
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):		Clear water w/some sediment initially			

Sample ID	Sample Time	Sample Containers	Preservatives	Analytical Method		Laboratory
		No. Volume/Type	(ice, acids, bases, others)			
BGMW010420 16	1045	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		2 1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel RW, CWV

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID BGMW02	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION: W of Navajo Blvd, south of I-40, inside fence perimeter		
WEATHER (wind/temp/ppt): 15-20mph/60 F/<5%		
OTHER NOTABLE FIELD CONDITIONS: DO wavers between 5 and 0, other parameters stable		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
3.8 gal	34.2 ft	13.5-33.5 ft
RECOMMENDED PUMP SETTINGS		
30 psi, 3.5 sec on, 40 sec off, 113 mL/min		
BESST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A	ACTUAL FIELD PUMP SETTINGS
30 psi, 5 sec on, 22 off		
WATER: Discharged to evaporation pond USED: Horiba U-52		

[illegible]

SAMPLE DATE:	4/14/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	J. Nance, D. Esparza				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump	SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement		
SAMPLE ID(s):	BGMW02042016	DUPLICATE/BLANK SAMPLE ID(s):	BGMW02042016MS		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):			BGMW02042016MSD		

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
BGMW02-042016	1240	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
BGMW02042016MS		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		2	1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
BGMW02042016MSD		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel JDN

LOCATION
Northern Area Alluvial

Initials of sampling personnel RW CWV

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

GROUNDWATER SAMPLING FIELD DATA SHEET

FORT WINGATE DEPOT ACTIVITY

OTHER NOTABLE FIELD CONDITIONS:

RECOMMENDED PUMP SETTINGS	
	Start 145hz. end ~200hz

ACTUAL FIELD PUMP SETTINGS

MONITORING EQUIPMENT USED: Horiba U-52

Well Purging Information

[illegible]

Sample Information

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.): 4" casing diameter

Sample ID	Sample Time	Sample Containers	Preservatives	Analytical Method		Laboratory
		No. Volume/Type	(ice, acids, bases, others)			
FW31042016	0930	3 40-ml VOAs	HCL	EPA 8260C	VOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2 1-L Amber glass	Ice	8270D	SVOC	Test America-Denver
		2 1-L Amber glass	ice	8081A	Pesticides	Test America-Denver

Initials of sampling personnel LH, WK

[illegible]

Initials of sampling personnel

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID MW01	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION:		
WEATHER (wind/temp/ppt): 10-15mph / 60F / >5%		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
10.4 gal	54.80 ft btoc	34-54 ft btoc
Casing volume / bailer	INITIAL ORGANIC VAPOR METER READINGS: N/A	RECOMMENDED PUMP SETTINGS
WATER: Discharged to evaporation pond		HAND BAIL
USED: Horiba U-52		ACTUAL FIELD PUMP SETTINGS

[illegible]

SAMPLE DATE:	4/6/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	GW	Groundwater
SAMPLING PERSONNEL:	R. Wortman, C. W-Vernon					
SAMPLING METHOD:	hand bail			SAMPLE TEMP/pH/EC/TURB/DO:	11:14	
SAMPLE ID(s):	MW01042016			DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):						

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
MW01042016	1046	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		3 40-ml glass VOA	HCl	EPA 8015C	TPH-GRO	Test America-Denver
		2 1-L Amber glass	ice	EPA 8015C	TPH-DRO	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2 1-L Amber glass	ice	8081A	Pesticides	Test America-Denver

Initials of sampling personnel RW, CWV

PROJECT NUMBER 662230.01.04.01	WELL ID MW02	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION: Flush Mount to the East of car port		
WEATHER (wind/temp/ppt): 0-5 mph / 55F / >5%		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
7.3 gal	49.45 ft btoc	39.5-49.5 ft btoc
Casing volume / bailer	INITIAL ORGANIC VAPOR METER READINGS: N/A	RECOMMENDED PUMP SETTINGS
WATER: Discharged to evaporation pond		HAND BAIL
USED: Horiba U-52		ACTUAL FIELD PUMP SETTINGS

[illegible]

SAMPLE DATE: 4/6/2016 and 4/7/2016		SAMPLE TYPE: grab composite		SAMPLE MATRIX: GW		Groundwater	
SAMPLING PERSONNEL: R. Wortman, C. W-Vernon							
SAMPLING METHOD: hand bail		SAMPLE TEMP/pH/EC/TURB/DO:		See last measurement			
SAMPLE ID(s): MW02042016		DUPLICATE/BLANK SAMPLE ID(s):					
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):		clear then cloudy					

Initials of sampling personnel RW, CWV

PROJECT NUMBER 662230.01.04.01	WELL ID MW03	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION: stick-up North of tennis court admin area		
WEATHER (wind/temp/ppt):		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
2.81 gal	55.11 ft btoc	45.1-55.1 ft btoc
BESST Low-Flow	INITIAL ORGANIC VAPOR METER READINGS: N/A	RECOMMENDED PUMP SETTINGS
WATER: Discharged to evaporation pond		40psi, 6 sec on, 50 sec off, 100 mL/min
USED: Horiba U-52		ACTUAL FIELD PUMP SETTINGS

[illegible]

SAMPLE DATE: 4/12/2016		SAMPLE TYPE: grab composite		SAMPLE MATRIX: Groundwater	
SAMPLING PERSONNEL: R. Wortman, C. W-Vernon					
SAMPLING METHOD: Low-flow by dedicated Blatypus pneumatic pump			SAMPLE TEMP/pH/EC/TURB/DO: See last measurement		
SAMPLE ID(s): MW03042016			DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
MW03042016	1045	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		3 40-ml glass VOA	HCl	EPA 8015C	TPH-GRO	Test America-Denver
		2 1-L Amber glass	ice	EPA 8015C	TPH-DRO	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel RW CWV

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID MW18D	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION: South of well TMW33		
WEATHER (wind/temp/ppt): 0-3 mph / 45 F / >40%		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
4.71 gal	59.9 ft btoc	49.3-59.3 ft btoc
Casing volume / grundfos	INITIAL ORGANIC VAPOR METER READINGS: N/A	RECOMMENDED PUMP SETTINGS
DISCHARGE WATER: Discharged to evaporation pond		6 sec on, 54 off, 30psi, 40 mL/min
PUMP USED: Horiba U-52		ACTUAL FIELD PUMP SETTINGS

[illegible]

SAMPLE DATE:	4/12/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL: RW, CWV					
SAMPLING METHOD:	Hand Bail	SAMPLE TEMP/pH/EC/TURB/DO:		See last measurement	
SAMPLE ID(s):	MW18D042016	DUPLICATE/BLANK SAMPLE ID(s):			
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
MW18D-042016	1350	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		3 40-ml glass VOA	HCl	EPA 8015C	TPH-GRO	Test America-Denver
		2 1-L Amber glass	ice	EPA 8015C	TPH-DRO	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel RW, CWV

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID MW20	LOCATION Northern Area Alluvial	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION: Southwest of MW18 S&D			
WEATHER (wind/temp/ppt):			
OTHER NOTABLE FIELD CONDITIONS:			
PURGE VOLUME CALCULATION: 4.1 gal	TOTAL DEPTH OF WELL: 59.40 ft btoc	SCREENED INTERVAL: 48.9-58.9 ft btoc	RECOMMENDED PUMP SETTINGS 40 psi, 6 sec on, 54 off, 100 mL/min
BESST Low-Flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
DISCHARGE WATER: Discharged to evaporation pond			
TESTED: Hydrolab Quanta water quality meter, HF Scientific turbidity meter			

[illegible]

SAMPLE DATE:	4/11/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	R. Wortman, C. W-Vernon				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump	SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement		
SAMPLE ID(s):	MW20042016	DUPLICATE/BLANK SAMPLE ID(s):			
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers	Preservatives			
		No. Volume/Type	(ice, acids, bases, others)	Analytical Method		Laboratory
MW20042016	1159	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		3 40-ml glass VOA	HCl	EPA 8015C	TPH-GRO	Test America-Denver
		2 1-L Amber glass	ice	EPA 8015C	TPH-DRO	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2 1-L Amber glass	ice	8270D	SVOC	Test America-Denver
		2 1-L Amber glass	ice	8081A	Pesticides	Test America-Denver

Initials of sampling personnel RW, CWV

PROJECT NUMBER 662230.01.04.01	WELL ID MW22D	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION: North of Well TMW33		
WEATHER (wind/temp/ppt): 0-3 mph / 50F / >50%		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
4.7 gal	58.70 ft btoc	48 - 58 ft btoc
BESST Low-Flow	INITIAL ORGANIC VAPOR METER READINGS: 0.0 ppm	RECOMMENDED PUMP SETTINGS
WATER: Discharged to evaporation pond		4 sec on, 26 off, 27psi, 200 mL/min
USED: Horiba U-52	ACTUAL FIELD PUMP SETTINGS	
		8 sec on, 15 off, 30psi, 200 mL/min

[illegible]

SAMPLE DATE:	4/11/2016	SAMPLE TYPE:	composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	J. Nance, D. Esparza				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump	SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement		
SAMPLE ID(s):	MW22D042016	DUPLICATE/BLANK SAMPLE ID(s):	MW22D042016MS		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):			MW22D042016MSD		

Sample ID	Sample Time	Sample Containers	Preservatives			
		No. Volume/Type	(ice, acids, bases, others)	Analytical Method		Laboratory
MW22D042016	1010	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		3 40-ml glass VOA	HCl	EPA 8015C	TPH-GRO	Test America-Denver
		2 1-L Amber glass	ice	EPA 8015C	TPH-DRO	Test America-Denver
MW22D042016 MS		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
MW22D042016 MSD		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2 1-L Amber glass	ice	8270D	SVOC	Test America-Denver
		2 1-L Amber glass	ice	8081A	Pesticides	Test America-Denver

Initials of sampling personnel JDN DE

PROJECT NUMBER 662230.01.04.01	WELL ID MW22S	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION: West of Bldg. 5		
WEATHER (wind/temp/ppt):		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
0.82 gal	43.5 ft btoc	31 - 41 ft btoc
Casing volume / bailer	INITIAL ORGANIC VAPOR METER READINGS: 0.0 ppm	
RECOMMENDED PUMP SETTINGS		
HAND BAIL		
ACTUAL FIELD PUMP SETTINGS		
WATER: Discharged to evaporation pond		
SED: Horiba U-52		

[illegible]

SAMPLE DATE: multiple	SAMPLE TYPE: grab composite	SAMPLE MATRIX: Groundwater
SAMPLING PERSONNEL: John David Nance		
SAMPLING METHOD: hand bail	SAMPLE TEMP/pH/EC/TURB/DO: from 4/6/16	
SAMPLE ID(s): MW22S042016	DUPLICATE/BLANK SAMPLE ID(s):	
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):	Need to recommend that this well be considered dry	

Initials of sampling personnel JDN

 Sundance Consulting Inc.	PROJECT NUMBER 662230.01.04.01		WELL ID MW23		LOCATION Northern Area Alluvial				
	GROUNDWATER SAMPLING FIELD DATA SHEET								
	FORT WINGATE DEPOT ACTIVITY								
	LOCATION DESCRIPTION: East, past wash, south of I-40 (~50 meters)								
WEATHER (wind/temp/ppt): 0-3 ph / ~50F / 0%									
OTHER NOTABLE FIELD CONDITIONS:									
INITIAL DEPTH TO WATER:		PURGE VOLUME CALCULATION:		TOTAL DEPTH OF WELL:		SCREENED INTERVAL:		RECOMMENDED PUMP SETTINGS	
15.36 ft btoc		104.6 gal		134 ft		65.5-135.5 ft		50-70 psi, 1gpm	
METHOD OF PURGING: Casing volume / Bennett				INITIAL ORGANIC VAPOR METER READINGS: N/A				ACTUAL FIELD PUMP SETTINGS	
DISPOSITION OF DISCHARGE WATER: Discharged to evaporation pond								60-85 psi, 1 gpm	
MONITORING EQUIPMENT USED: Hydrolab Quanta water quality meter, HF Scientific turbidity meter									
Well Purging Information									
Date 4/5/2016 Time	Total volume (gal)	± 10% Temp (°C)	± 0.5 pH	± 10% Conductivity (mS/cm)	± 10% or <1 Turbidity (NTU)	± 10% or <1.0 DO (mg/L)	DTW (ft)	± 10 ORP (mV)	Remarks (color, odor, sheen, sediment, etc.)
1445	8.25	13.17	7.39	1.77	4.2	0.68	53.01	-188	0.846 gal/min
1455	16.71	13.10	7.42	1.73	17.3	0.00	75.44	-187	
1505	25.17	13.13	7.45	1.71	20.4	0.00	79.89	-166	
1515	33.63	13.09	7.40	1.74	57.0	0.00	100+	-149	
1525	42.09	13.15	7.44	1.74	71.8	0.10	100+	-139	
1535	50.55	13.27	7.71	1.81	39.8	2.72	100+	-109	
1545	59.01	13.30	7.79	1.14	365	1.02	100+	-35	
1550	67.47	-	-	-	-	-	-	-	Dry
4/6/16									
0900	-	-	-	-	-	-	16.50	-	
0910	75.93	12.75	7.66	1.72	125	1.31	67.65	39	
0920	84.39	17.71	7.66	1.73	118	1.9	79.99	-64	
0930	92.85	12.72	7.71	1.75	73	10.7	100+	-61	
0940	101.31	12.73	7.85	1.75	136	12.4	100+	-61	
0955	109.77	12.84	8.01	1.77	426	92.6	100+	79	
0956	113.15	-	-	-	-	-	-	-	Dry
4/7/16									
0835							16.56		
0845	121.55	12.73	7.58	1.86	10.5	6.4	52.44	104	
0855	129.95	12.72	7.59	1.84	35.2	0.05	72.06	-67	
0905	138.35	12.73	7.56	1.81	52.2	0.90	99.76	-97	
0915	146.55	12.70	7.51	1.82	53.1	0.90	100+	-48	
0925	154.95	12.72	7.68	1.83	20.1	13.0	100+	-67	
0935	163.35	12.78	7.70	1.79	92.0	23.8	-	13	
0942	169.23	-	-	-	-	-	-	-	Sample
Sample Information									
SAMPLE DATE: 4/7/2016		SAMPLE TYPE: <u>grab</u> composite		SAMPLE MATRIX: Groundwater					
SAMPLING PERSONNEL: J. Nance, D. Esparza									
SAMPLING METHOD: Dedicated Bennett Pump				SAMPLE TEMP/pH/EC/TURB/DO: 4/7/16 at 9:05					
SAMPLE ID(s): MW23042016				DUPLICATE/BLANK SAMPLE ID(s): DMW23042016					
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):				MW23042016MS					
				MW23042016MSD					
Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method					Laboratory
MW23042016	0950	3 40-ml glass VOA	HCl	EPA8260C	VOCs				Test America-Denver
		2 1-L Amber glass	ice	EPA 8270D	SVOCs				Test America-Denver
DMW23042016		2 500-ml Amber glass	ice	EPA 8330B	Explosives				Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3				Test America-Denver
MW23042016 MS		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate				Test America-Denver
		2 1-L Amber glass	ice	EPA 8081A	Pesticides				Test America-Denver
MW23042016 MSD		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals				Test America-Denver
		1 500-ml Poly	HNO3-Field Filter	6010C/6020A/7470A	Dis. Metals				Test America-Denver

Initials of sampling personnel JDN

PROJECT NUMBER 662230.01.04.01	WELL ID MW24	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION: ~50" South of north boundary fence, 25' north of large rock		
WEATHER (wind/temp/ppt): 0-3 mph / 60F / 0%		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
42.8 gal	68.5 ft btoc	19 - 69 ft btoc
ing volume / Bennett		RECOMMENDED PUMP SETTINGS
INITIAL ORGANIC VAPOR METER READINGS: N/A		50 psi, 2gpm
ACTUAL FIELD PUMP SETTINGS		
WATER: Discharged to evaporation pond		50 ps, 1gpm
ED: Hydrolab Quanta water quality meter, HF Scientific turbidity meter		

[illegible]

SAMPLE DATE:	4/6/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	J. Nance, D. Esparza				
SAMPLING METHOD:	Dedicated Bennett Pump	SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement		
SAMPLE ID(s):	MW24042016	DUPLICATE/BLANK SAMPLE ID(s):	DMW24042016		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
MW24042016	1150	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		2 1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel JDN

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Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID SMW01	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION:		
WEATHER (wind/temp/ppt): ~5 mph / 40F / <40%		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
6.1 gal	52.15 ft btoc	32.1-52.1 ft btoc
BESST Low-Flow		RECOMMENDED PUMP SETTINGS
INITIAL ORGANIC VAPOR METER READINGS: N/A		35 psi, 5 sec on, 55 sec off, 130 mL/min
E WATER: Discharged to evaporation pond		ACTUAL FIELD PUMP SETTINGS
SED: Hydrolab Quanta water quality meter, HF Scientific turbidity meter		40 psi, 4 on, 60 off, 108 mL/min

[illegible]

SAMPLE DATE:	4/8/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	John Nance				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump		SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement	
SAMPLE ID(s):	SMW01042016		DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
SMW01042016	1140	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2 1-L Amber glass	ice	EPA 8270D	SVOC's	Test America-Denver

Initials of sampling personnel JDN

Sundance
Consulting Inc.

[illegible]

Initials of sampling personnel LH, WK

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW03	LOCATION Northern Area Alluvial	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION: Field to East of bldg 33			
WEATHER (wind/temp/ppt): 50s F, rain clouds			
OTHER NOTABLE FIELD CONDITIONS: Large animal hole by well			
PURGE VOLUME CALCULATION: 4.3 gal	TOTAL DEPTH OF WELL: 72 btoc	SCREENED INTERVAL: 51.8-71.8 ft	RECOMMENDED PUMP SETTINGS 30 psi, 8 sec on, 22 sec off, 110 mL/min
TEST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
DISCHARGE WATER: Discharged to evaporation pond			
EQUIPMENT USED: Horiba U-52			

[illegible]

SAMPLE DATE:	4/8/2016	SAMPLE TYPE:	grab	composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL: W.Kite, L. Hill						
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump			SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement	
SAMPLE ID(s):	TMW03042016			DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):						

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW03042016	1220	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2	1-L Amber glass	ice	EPA8270D	SVOC's	Test America-Denver

Initials of sampling personnel WK, LH

 Sundance Consulting Inc.	PROJECT NUMBER 662230.01.04.01		WELL ID TMW04		LOCATION Northern Area Alluvial				
	GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY								
	LOCATION DESCRIPTION: Open field east of Bldg 33								
	WEATHER (wind/temp/ppt):								
OTHER NOTABLE FIELD CONDITIONS:									
INITIAL DEPTH TO WATER:		PURGE VOLUME CALCULATION:		TOTAL DEPTH OF WELL:		SCREENED INTERVAL:		RECOMMENDED PUMP SETTINGS	
56.69 ft btoc		4.6 gal		72.4 ft btoc		51.8-71.8 ft btoc		30psi, 8 sec on, 22 sec off, 76 mL/min	
METHOD OF PURGING: BESST low-flow;				INITIAL ORGANIC VAPOR METER READINGS: N/A			ACTUAL FIELD PUMP SETTINGS		
DISPOSITION OF DISCHARGE WATER: Discharged to evaporation pond									
MONITORING EQUIPMENT USED: Horiba U-52									
Well Purging Information									
Date 4/13/2016 Time	Total volume (L)	± 10% Temp (°C)	± 0.5 pH	± 10% Conductivity (mS/cm)	± 10% or <1 Turbidity (NTU)	± 10% or <1.0 DO (mg/L)	DTW (ft)	± 10 ORP (mV)	Remarks (color, odor, sheen, sediment, etc.)
1125	0.50	17.23	8.28	3.61	0.0	8.12	56.80	102	85 mL/min
1130	1.00	15.69	8.37	3.78	0.0	4.18	56.80	98	
1135	1.50	16.04	8.24	3.84	0.0	2.37	56.80	95	
1140	2.00	16.09	8.18	3.86	0.0	2.11	56.80	90	
1145	2.50	16.00	8.20	3.89	0.0	1.90	56.80	85	
1150	3.00	16.06	8.19	3.87	0.0	1.78	56.80	81	
1155	3.50	16.28	8.18	3.88	0.0	1.69	56.80	77	
1200	4.00	16.58	8.20	3.83	0.0	1.45	56.80	73	
1205	4.50	16.75	8.18	3.86	0.0	1.46	56.80	71	
1210	5.00	16.93	8.20	3.82	0.0	1.33	56.80	69	
1220	6.00	16.94	8.20	3.81	0.0	1.08	56.80	70	
1225	6.50	16.69	8.19	3.80	0.0	0.98	56.80	71	
1230	7.00	16.97	8.14	3.81	0.0	0.98	56.80	73	
1235	7.50	16.70	8.15	3.83	0.0	0.99	56.80	76	
Sample Information									
SAMPLE DATE: 4/13/2016		SAMPLE TYPE: grab		composite		SAMPLE MATRIX: Groundwater			
SAMPLING PERSONNEL: R. Wortman, C. W-Vernon									
SAMPLING METHOD: Low-flow by dedicated Blatypus pneumatic pump				SAMPLE TEMP/pH/EC/TURB/DO: See last measurement					
SAMPLE ID(s): TMW04042016				DUPLICATE/BLANK SAMPLE ID(s):					
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):									
Sample ID	Sample Time	Sample Containers No.	Sample Containers Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method				Laboratory
TMW04042016	1245	3	40-ml glass VOA	HCl	EPA8260C	VOCs			Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives			Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3			Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate			Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals			Test America-Denver
		1	500-ml Poly	HNO3-Field Filter	6010C/6020A/7470A	Dis. Metals			Test America-Denver
		2	1-L Amber glass	ice	EPA8270D	SVOC's			Test America-Denver

 Initials of sampling personnel RW CWV

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW06	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION:		
WEATHER (wind/temp/ppt): 0-5mph / 55F / ~20%		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
2.9 gal	57.2 ft btoc	46.8-56.8 ft btoc
TEST Low-Flow		RECOMMENDED PUMP SETTINGS
INITIAL ORGANIC VAPOR METER READINGS: N/A		27 psi, 7 sec on, 23 sec off, 125 mL/min
ACTUAL WATER:		ACTUAL FIELD PUMP SETTINGS
Discharged to evaporation pond		30psi, 7 on, 36 off, 137 mL/min
EQUIPMENT USED: Hydrolab Quanta water quality meter, HF Scientific turbidity meter		

[illegible]

SAMPLE DATE:	4/12/2016	SAMPLE TYPE:	grab	composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL: J. Nance, D. Esparza						
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump			SAMPLE TEMP/pH/EC/TURB/DO:	see last measurement	
SAMPLE ID(s):	TMW06042016			DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):						

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW06042016	1225	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3-Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2 1-L Amber glass	ice	EPA8270D	SVOC's	Test America-Denver

Initials of sampling personnel JDN

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

GROUNDWATER SAMPLING FIELD DATA SHEET

FORT WINGATE DEPOT ACTIVITY

LOCATION DESCRIPTION:

WEATHER (wind/temp/ppt): Clear, 60s-70s F

OTHER NOTABLE FIELD CONDITIONS:

INITIAL DEPTH TO WATER:
46.95 ft btoc

PURGE VOLUME CALCULATION:	
6.0 gal	

TOTAL DEPTH OF WELL:	67.4 ft boc
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SCREENED INTERVAL:	
	ft btoc

RECOMMENDED PUMP SETTINGS
Start @ 175hz. end 207hz

METHOD OF PURGING: Casing volume / grundfos

INITIAL ORGANIC VAPOR METER READINGS: N/A

ACTUAL FIELD PUMP SETTINGS

DISPOSITION OF DISCHARGE WATER: Discharged to evaporation pond

MONITORING EQUIPMENT USED: Horiba U-52

Well Purging Information

[illegible]

Sample Information

SAMPLE DATE: 4/8/2016 SAMPLE TYPE: grab composite SAMPLE MATRIX: Groundwater

SAMPLING PERSONNEL: R. Wortman, C. W-Vernon

SAMPLING METHOD: Hand Bail SAMPLE TEMP/pH/EC/TURB/DO: See last measurement

SAMPLE ID(s): TMW07042016 DUPLICATE/BLANK SAMPLE ID(s):

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW07042016	0956	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3-Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2 1-L Amber glass	ice	EPA 8270D	SVOC's	Test America-Denver

Initials of sampling personnel RW CWV

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW08	LOCATION Northern Area Alluvial	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION: N. of tree grove of main road			
WEATHER (wind/temp/ppt):			
OTHER NOTABLE FIELD CONDITIONS: Water very turbid, Brown			
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
7.4 gal	62.4 ft	31.9-61.9 ft	6 sec on, 20 sec off, 40 psi, 200 mL/min
BESST Low-Flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond			
ED: Horiba U-52			

[illegible]

SAMPLE DATE:	4/12/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	R. Wortman, C. W-Vernon				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump		SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement	
SAMPLE ID(s):	TMW08042016		DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW08042016	0852	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		3 40-ml glass VOA	HCl	EPA 8015C	TPH-GRO	Test America-Denver
		2 1-L Amber glass	ice	EPA8081A	Pesticides	Test America-Denver
		2 1-L Amber glass	ice	EPA 8015C	TPH-DRO	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel RW CWV

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

INITIAL DEPTH TO WATER:	PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
38.16 ft btoc	7.0 gal	61.8 ft btoc	31.2-61.2 ft btoc	6 sec on, 30 sec off, 40 psi
METHOD OF PURGING: BESST low-flow		INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
DISPOSITION OF DISCHARGE WATER: Discharged to evaporation pond				
MONITORING EQUIPMENT USED: Horiba U-52				

[illegible]

SAMPLE DATE:	4/12/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	R. Wortman, C. W-Vernon				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump		SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement	
SAMPLE ID(s):	TMW10042016		DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers	Preservatives	Analytical Method		Laboratory
		No. Volume/Type	(ice, acids, bases, others)			
TMW10042016	1304	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel RW, CWV

Sundance
Consulting Inc.

[illegible]

Initials of sampling personnel LH, TC

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW13	LOCATION Northern Area Alluvial	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION: Field to SE of Bldg 33			
WEATHER (wind/temp/ppt): Partly cloud, 50s F			
OTHER NOTABLE FIELD CONDITIONS:			
PURGE VOLUME CALCULATION: 3.8 gal	TOTAL DEPTH OF WELL: 73.8 ft btoc	SCREENED INTERVAL: 63.1-73.1 ft btoc	RECOMMENDED PUMP SETTINGS 35 psi, 6 sec on, 24 secs off, 700 mL/min
BESST Low-Flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond			
USED: Horiba U-52			

[illegible]

SAMPLE DATE:	4/12/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	L. Hill, T. Charley				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump		SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement	
SAMPLE ID(s):	TMW13042016		DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW13042016	1120	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH, TC

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW15	LOCATION Northern Area Alluvial	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION:			
WEATHER (wind/temp/ppt): 0 mph / 40 F / <30%			
OTHER NOTABLE FIELD CONDITIONS:			
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
3.3 gal	76.65	53.0-71.0 ft btoc	6 sec on, 24 sec off, 40 psi, 104 mL/min
BESST Low-Flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
DISCHARGE WATER:	Discharged to evaporation pond		7 on, 24 off, 47 mL/min
TEST EQUIPMENT USED:	Horiba U-52		

[illegible]

SAMPLE DATE:	4/13/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	J. Nance, D. Esparza				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump	SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement		
SAMPLE ID(s):	TMW15042016	DUPLICATE/BLANK SAMPLE ID(s):	DTW15042016		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW15042016	0915	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
DTW15042016		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2 1-L Amber glass	ice	EPA8270D	SVOC's	Test America-Denver

Initials of sampling personnel JDN

LOCATION
Northern Area Alluvial

Initials of sampling personnel LH, TC

LOCATION
Northern Area Alluvial

OTHER NOTABLE FIELD CONDITIONS:

RECOMMENDED PUMP SETTINGS

Grundfos; 168 Hz

ACTUAL FIELD PUMP SETTINGS

MONITORING EQUIPMENT USED: Horiba U-52

[illegible]

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW22042016	1031	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2	1-L Amber glass	ice	EPA8270D	SVOC's	Test America-Denver

Initials of sampling personnel RWC, CWV

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

GROUNDWATER SAMPLING FIELD DATA SHEET

FORT WINGATE DEPOT ACTIVITY

LOCATION DESCRIPTION:

WEATHER (wind/temp/ppt): clear, 60s - 70s F

OTHER NOTABLE FIELD CONDITIONS:

INITIAL DEPTH TO WATER:	45.55 ft btoc
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PURGE VOLUME CALCULATION:	
12.4 gal	

TOTAL DEPTH OF WELL:	59.6 ft btoc
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SCREENED INTERVAL:	48.8-58.8 ft btoc
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RECOMMENDED PUMP SETTINGS

176 Hz

METHOD OF PURGING: Casing volume / grundfos

INITIAL ORGANIC VAPOR METER READINGS: N/A

ACTUAL FIELD PUMP SETTINGS

DISPOSITION OF DISCHARGE WATER: Discharged to evaporation pond

MONITORING EQUIPMENT USED: Horiba U-52

Well Purging Information

[illegible]

Sample Information

SAMPLE DATE: 4/18/2016 SAMPLE TYPE: grab composite SAMPLE MATRIX: Groundwater

SAMPLING PERSONNEL: R. Wortman, C. W-Vernon

SAMPLING METHOD: hand bail SAMPLE TEMP/pH/EC/TURB/DO: See last measurement

SAMPLE ID(s): TMW23042016 DUPLICATE/BLANK SAMPLE ID(s):

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW23042016	1059	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2	1-L Amber glass	ice	8081A	Pesticides	Test America-Denver

Initials of sampling personnel RW, CWV

LOCATION
Northern Area Alluvial

Initials of sampling personnel LH, TC

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

OTHER NOTABLE FIELD CONDITIONS:

RECOMMENDED PUMP SETTINGS

ACTUAL FIELD PUMP SETTINGS

MONITORING EQUIPMENT USED: Horiba U-52

[illegible]

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW25042016	1250	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3-Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH, TC

LOCATION
Northern Area Alluvial

Initials of sampling personnel JN

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW27	LOCATION Northern Area Alluvial	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION: NW part of facility			
WEATHER (wind/temp/ppt): 5-10 mph / 45F / >30%			
OTHER NOTABLE FIELD CONDITIONS:			
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
13.2 gal	73.3 ft btoc	62.8 - 72.8 ft btoc	4 sec on, 26 sec off, 40 psi, 110 mL/min
BESST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
WATER:	Discharged to evaporation pond		4 sec on, 30 sec off, 40 psi, 148 mL/min
D:	Horiba U-52		

[illegible]

SAMPLE DATE:	4/8/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	J. Nance, D. Esparza				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump	SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement		
SAMPLE ID(s):	TMW27042016	DUPLICATE/BLANK SAMPLE ID(s):			
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW27042016	1315	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel JDN

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

GROUNDWATER SAMPLING FIELD DATA SHEET

FORT WINGATE DEPOT ACTIVITY

OTHER NOTABLE FIELD CONDITIONS:

5 sec on, 25 sec off, 25 psi, 125 mL/min

ACTUAL FIELD PUMP SETTINGS

MONITORING EQUIPMENT USED: Horiba U-52

Well Purging Information

[illegible]

Sample Information

DUPLICATE/BLANK SAMPLE ID(s):

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW28042016	1300	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3-Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH, TC

LOCATION
Northern Area Alluvial

Initials of sampling personnel RW, CWV

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW31S	LOCATION Northern Area Alluvial	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION:			
WEATHER (wind/temp/ppt):		clear, 60s-70s F	
OTHER NOTABLE FIELD CONDITIONS:			
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
20.9 gal	62.9 ft btoc	51.2 - 61.2 ft btoc	170 Hz, Finish 196 hz
Casing volume / grundfos	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond			
EQUIPMENT: Horiba U-52			

[illegible]

SAMPLE DATE:	4/6/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	L. Hill, W. Kite				
SAMPLING METHOD:	hand bail	SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement		
SAMPLE ID(s):	TMW31S042016	DUPLICATE/BLANK SAMPLE ID(s):	none		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW31S04201 6	1050	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 1-L Amber glass	ice	EPA8270D	SVOC's	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		2 1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH, WK

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

GROUNDWATER SAMPLING FIELD DATA SHEET

FORT WINGATE DEPOT ACTIVITY

OTHER NOTABLE FIELD CONDITIONS:

RECOMMENDED PUMP SETTINGS

ACTUAL FIELD PUMP SETTINGS

Well Purging Information

[illegible]

Sample Information

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Sample ID	Sample Time	Sample Containers		Preservatives			Laboratory
		No.	Volume/Type	(ice, acids, bases, others)	Analytical Method		
TMW33042016	1140	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	1-L Amber glass	ice	8270D	SVOCs	Test America-Denver
		3	40-ml glass VOA	HCl	EPA 8015C	TPH-GRO	Test America-Denver
		2	1-L Amber glass	ice	EPA 8015C	TPH-DRO	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3-Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH, WK

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

GROUNDWATER SAMPLING FIELD DATA SHEET

FORT WINGATE DEPOT ACTIVITY

OTHER NOTABLE FIELD CONDITIONS:

RECOMMENDED PUMP SETTINGS

ACTUAL FIELD PUMP SETTINGS

Well Purging Information

[illegible]

Sample Information

SAMPLE MATRIX: Groundwater

SAMPLE ID(s): TMW34042016 DUPLICATE/BLANK SAMPLE ID(s): DTW34042016

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW34042016	1020	3	40-ml glass VOA	HCl	EPA8260c	VOCs	Test America-Denver
		3	40-ml glass VOA	HCl	EPA 8015C	TPH-GRO	Test America-Denver
DTW34042016		2	1-L Amber glass	ice	EPA 8015C	TPH-DRO	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel JN

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

GROUNDWATER SAMPLING FIELD DATA SHEET

FORT WINGATE DEPOT ACTIVITY

OTHER NOTABLE FIELD CONDITIONS:

RECOMMENDED PUMP SETTINGS

ACTUAL FIELD PUMP SETTINGS

MONITORING EQUIPMENT USED: Horiba U-52

Well Purging Information

[illegible]

Sample Information

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW35042016	0945	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	1-L Amber glass	ice	EPA8270D	SVOCs	Test America-Denver
		2	1-L Amber glass	ice	EPA8081A	Pesticides	Test America-Denver
		1	125-ml Poly w/syringe	ice Field Filter	EPA6860	Perchlorate	Test America-Denver
		3	40-ml glass VOA	HCl	EPA 8015C	TPH-GRO	Test America-Denver
		2	1-L Amber glass	ice	EPA 8015C	TPH-DRO	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel RW, CWV

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW39S	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION:		
WEATHER (wind/temp/ppt): Clear, 50s-70s F		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
16.7 gal	55.5 ft btoc	34.6 to 54.6 ft btoc
RECOMMENDED PUMP SETTINGS		175 Hz
Casing volume / grundfos	INITIAL ORGANIC VAPOR METER READINGS: N/A	ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond		
D: Horiba U-52		

[illegible]

SAMPLE DATE:	4/6/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	W. Kite, L. Hill				
SAMPLING METHOD:	hand bail	SAMPLE TEMP/pH/EC/TURB/DO:	See 12:35		
SAMPLE ID(s):	TMW39S042016	DUPLICATE/BLANK SAMPLE ID(s):			
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW39S042016	1130	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		2 1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH, WK

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

GROUNDWATER SAMPLING FIELD DATA SHEET

FORT WINGATE DEPOT ACTIVITY

OTHER NOTABLE FIELD CONDITIONS:

RECOMMENDED PUMP SETTINGS

HAND BAIL

ACTUAL FIELD PUMP SETTINGS

Well Purging Information

[illegible]

Sample Information

DUPLICATE/BLANK SAMPLE ID(s):

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW40S042016 4/11/2016	1305	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
	1305	2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
	1020	1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
4/7/2016	1305	1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
4/11/2016	1020	1 1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
4/8/2016	0821	1 1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
4/8/2016	0821	1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH, RW, CWV

	PROJECT NUMBER 662230.01.04.01		WELL ID TMW41		LOCATION Northern Area Alluvial						
	GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY										
	LOCATION DESCRIPTION:										
	WEATHER (wind/temp/ppt): Clear, 60s-70sF										
OTHER NOTABLE FIELD CONDITIONS:											
INITIAL DEPTH TO WATER:	PURGE VOLUME CALCULATION:		TOTAL DEPTH OF WELL:		SCREENED INTERVAL:		RECOMMENDED PUMP SETTINGS				
41.74 ft btoc	23.0 gal		67.8 ft btoc		57.7 to 67.7 ft btoc		Grundfos; 190 Hz				
METHOD OF PURGING:		Casing volume / grundfos		INITIAL ORGANIC VAPOR METER READINGS: N/A			ACTUAL FIELD PUMP SETTINGS				
DISPOSITION OF DISCHARGE WATER:		Discharged to evaporation pond									
MONITORING EQUIPMENT USED:		Horiba U-52									
Well Purging Information											
Date 4/5/2016 Time	Total volume (L)	± 10% Temp (°C)	± 0.5 pH	± 10% Conductivity (mS/cm)	± 10% or <1 Turbidity (NTU)	± 10% or <1.0 DO (mg/L)	DTW (ft)	± 10 ORP (mV)	Remarks (color, odor, sheen, sediment, etc.)		
1311	~0.1	14.84	8.09	3.85	17.1	7.48	47.85	77			
1313	~2.25	13.85	8.12	3.70	15.6	7.07	52.31	78			
1315	~4.50	13.97	8.10	3.74	26.4	2.89	56.55	79			
1317	~6.75	13.68	8.06	3.76	28.2	5.86	58.01	76			
1320	~9.00	13.57	8.08	3.63	30.1	5.57	59.99	71			
1322	~11.25	13.42	8.06	3.77	25.3	5.40	-	70	WL meter failed to measure		
1324	~13.50	12.93	8.06	3.87	23.0	5.30	-	69	beyond ~60' bgs.		
1326	~15.75	12.97	8.06	3.84	21.6	5.09	-	68			
1327	~18.00	13.01	8.04	3.82	20.3	4.95	-	68	TMW-41 purged dry		
4/7/16											
1045	Return	to	sample	-	-	-	42.60				
1050	-	16.10	7.95	3.62	0.0	12.56		68			
Sample Information											
SAMPLE DATE:		4/7/2016		SAMPLE TYPE:		(grab) composite		SAMPLE MATRIX:		Groundwater	
SAMPLING PERSONNEL:		L. Hill, W. Kite									
SAMPLING METHOD:		hand bail		SAMPLE TEMP/pH/EC/TURB/DO:		See last measurement					
SAMPLE ID(s):		TMW41042016		DUPLICATE/BLANK SAMPLE ID(s):							
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):											
Sample ID	Sample Time	Sample Containers No. Volume/Type		Preservatives (ice, acids, bases, others)		Analytical Method				Laboratory	
TMW41042016	1050	3	40-ml glass VOA	HCl		EPA8260C	VOCs	Test America-Denver			
		2	1-L Amber glass	ice		EPA 8270D	SVOCs	Test America-Denver			
		2	500-ml Amber glass	ice		EPA 8330B	Explosives	Test America-Denver			
		1	500-ml Poly	ice		EPA 9056	NO2/NO3	Test America-Denver			
		1	125-ml Poly w/Syringe	ice Field Filter		EPA 6860	Perchlorate	Test America-Denver			
		2	1-L Amber glass	ice		EPA 8081A	Pesticides	Test America-Denver			
		1	500-ml Poly	HNO3		6010C/6020A/7470A	Tot. Metals	Test America-Denver			
		1	500-ml Poly	HNO3-Field Filter		6010C/6020A/7470A	Dis. Metals	Test America-Denver			

Initials of sampling personnel LH, WK

[illegible]

Initials of sampling personnel RW

Sundance
Consulting Inc.

LOCATION
Northern Area Alluvial

GROUNDWATER SAMPLING FIELD DATA SHEET

FORT WINGATE DEPOT ACTIVITY

OTHER NOTABLE FIELD CONDITIONS:

RECOMMENDED PUMP SETTINGS

Grundfos: 190 Hz

ACTUAL FIELD PUMP SETTINGS

MONITORING EQUIPMENT USED: Horiba U-52

Well Purging Information

[illegible]

Sample Information

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW44042016	0845	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		2 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1 1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel RW, CWV

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW45	LOCATION Northern Area Alluvial
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION: East of bldg 1 (no ballards, new orange paint)		
WEATHER (wind/temp/ppt): 20-30mph / 55F / <10%		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION: 4.3 gal	TOTAL DEPTH OF WELL: 61.8 ft btoc	SCREENED INTERVAL: 40 - 60 ft btoc
RECOMMENDED PUMP SETTINGS 40 psi, 7 sec on, 53 sec off, 80 mL/min		
BESST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A	ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond		
D: Hydrolab Quanta water quality meter, HF Scientific turbidity meter		

[illegible]

SAMPLE DATE:	4/14/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	J. Nance, D. Esparza				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump		SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement	
SAMPLE ID(s):	TMW45042016		DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW45042016	1115	3 40-ml glass VOA	HCl	EP48260C	VOCs	Test America-Denver
		2 1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		2 1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel JDN

	PROJECT NUMBER 662230.01.04.01		WELL ID TMW47		LOCATION Northern Area Alluvial				
	GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY								
	LOCATION DESCRIPTION: To east of power lines + bldg 31 in open area								
	WEATHER (wind/temp/ppt):								
OTHER NOTABLE FIELD CONDITIONS:									
INITIAL DEPTH TO WATER:		PURGE VOLUME CALCULATION:		TOTAL DEPTH OF WELL:		SCREENED INTERVAL:		RECOMMENDED PUMP SETTINGS	
46.69 ft btoc		17.3 gal		105.6 ft btoc		82.5-102.5 ft btoc		6 sec on, 35 sec off, 35 psi, 86 mL/min	
METHOD OF PURGING:		BESST low-flow		INITIAL ORGANIC VAPOR METER READINGS: N/A				ACTUAL FIELD PUMP SETTINGS	
DISPOSITION OF DISCHARGE WATER:		Discharged to evaporation pond							
MONITORING EQUIPMENT USED:		Horiba U-52							
Well Purging Information									
Date 4/14/2016 Time	Total volume (L)	± 10% Temp (°C)	± 0.5 pH	± 10% Conductivity (mS/cm)	± 10% or <1 Turbidity (NTU)	± 10% or <1.0 DO (mg/L)	DTW (ft)	± 10 ORP (mV)	Remarks (color, odor, sheen, sediment, etc.)
0856		10.79	9.03	2.29	0.0	5.97	46.95	-129	25 mL/min
0901	0.08	11.76	8.93	2.29	0.0	3.87		-125	
0906	0.20	12.04	8.86	2.30	0.0	3.25		-136	
0911	0.33	13.06	8.81	2.28	0.0	2.96		-139	
0916	0.45	13.40	8.92	2.29	0.0	2.33		-146	
0921	0.58	13.84	8.96	2.30	0.0	1.92		-146	
0926	0.70	14.34	8.99	2.28	0.0	1.83		-145	
0931	0.83	15.11	9.00	2.28	0.0	1.66		-143	
0936	0.95	15.33	9.03	2.28	0.0	1.47		-141	
0941	1.08	16.94	9.01	2.28	0.0	1.37		-138	
0956	1.20	16.83	9.03	2.28	0.0	4.37		-125	
1001	1.33	17.17	9.09	2.29	0.0	4.23		-122	
1005	1.45	17.40	9.13	2.29	0.0	4.14		-117	
Sample Information									
SAMPLE DATE: 4/14/2016		SAMPLE TYPE: <u>grab</u> composite		SAMPLE MATRIX: Groundwater					
SAMPLING PERSONNEL: R. Wortman, C. W-Vernon									
SAMPLING METHOD: Low-flow by dedicated Blatypus pneumatic pump		SAMPLE TEMP/pH/EC/TURB/DO: See last measurement							
SAMPLE ID(s): TMW47042016		DUPLICATE/BLANK SAMPLE ID(s):							
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):									
Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory			
TMW47042016	1005	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver			
		2 1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver			
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver			
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver			
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver			
		2 1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver			
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver			
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver			

Initials of sampling personnel CWV, RW

Sundance
Consulting Inc.

[illegible]

Initials of sampling personnel JDN

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW14A	LOCATION Northern Area Bedrock	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION:			
WEATHER (wind/temp/ppt):		Clear, 60s F	
OTHER NOTABLE FIELD CONDITIONS:		Pump not easily moved, stuck in place	
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
13.8 gal	112.1 ft btoc	96.2 - 111.2 ft btoc	40 psi, 9 sec on, 51 sec off, 56 mL/min
BESST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond			
PUMP: Horiba U-52			

[illegible]

SAMPLE DATE:	4/14/2016	SAMPLE TYPE:	Grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	L. Hill, T. Charley				
SAMPLING METHOD:	Low flow by dedicated ZIST sample system		SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement	
SAMPLE ID(s):	TMW14A042016		DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW14A042016	1200	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3-Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH, TC

Sundance
Consulting Inc.

LOCATION
Northern Area Bedrock

GROUNDWATER SAMPLING FIELD DATA SHEET

FORT WINGATE DEPOT ACTIVITY

OTHER NOTABLE FIELD CONDITIONS:

RECOMMENDED PUMP SETTINGS

60-80 psi

ACTUAL FIELD PUMP SETTINGS

[illegible]

SAMPLE DATE:	4/7/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	R. Wortman, C. W-Vernon				
SAMPLING METHOD:	Casing volume by dedicated Bennett Pump	SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement		
SAMPLE ID(s):	TMW16042016	DUPLICATE/BLANK SAMPLE ID(s):			
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW16042016	1130	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel	RWC, CWV
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	PROJECT NUMBER 662230.01.04.01		WELL ID TMW17		LOCATION Northern Area Bedrock				
	GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY								
	LOCATION DESCRIPTION:								
	WEATHER (wind/temp/ppt): 15-20 mph / 52F / clear								
OTHER NOTABLE FIELD CONDITIONS:									
INITIAL DEPTH TO WATER:	PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS					
63.9 ft btoc	19.6 gal	130.5 ft btoc	114.4 - 129.4 ft btoc	40 psi, 5 sec on, 65 sec off, 24 mL/min					
METHOD OF PURGING:	BESST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A			ACTUAL FIELD PUMP SETTINGS				
DISPOSITION OF DISCHARGE WATER:		Discharged to evaporation pond			40 psi, 5 on, 55 off, 25 mL/min				
MONITORING EQUIPMENT USED:		Horiba U-52							
Well Purging Information									
Date 4/15/2016 Time	Total volume (L)	± 10% Temp (°C)	± 0.5 pH	± 10% Conductivity (mS/cm)	± 10% or <1 Turbidity (NTU)	± 10% or <1.0 DO (mg/L)	DTW (ft)	± 10 ORP (mV)	Remarks (color, odor, sheen, sediment, etc.)
0810		9.86	5.88	1.89	0.0	10.39	64.15	75	
0815		9.62	7.75	1.89	0.0	5.45		-91	
0820		9.59	8.25	1.87	0.0	4.61		-125	
-	-	-	-	-	-	-	-	-	
									Restart
4/15/2016									
0905							63.8		
0915	0.125	11.10	7.94	3.44	2.1	6.01	63.8	-125	
0920	0.250	11.11	8.01	3.33	1.2	5.26	63.8	-137	
0925	0.375	11.25	8.13	3.09	0.7	4.61	63.8	-151	
0930	0.500	11.44	8.19	2.85	1.0	3.90	63.8	-159	
0935	0.625	11.51	8.24	2.72	0.2	3.42	63.8	-167	
0940	0.750	11.65	8.31	2.59	0.0	3.15	63.8	-171	
0945	0.875	11.69	8.38	2.50	0.0	2.66		-176	
0955	1.125	11.84	8.56	2.31	0.0	2.59		-179	
1000	1.240	11.88	8.60	2.29	0.0	2.44	63.8	-179	Sample
Sample Information									
SAMPLE DATE:		4/15/2016		SAMPLE TYPE: <u>grab</u> composite		SAMPLE MATRIX:		Groundwater	
SAMPLING PERSONNEL:		J. Nance, D. Esparza							
SAMPLING METHOD:				low flow by dedicated ZIST sample system		SAMPLE TEMP/pH/EC/TURB/DO: See last measurement			
SAMPLE ID(s):				TMW17042016		DUPLICATE/BLANK SAMPLE ID(s):			
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):									
Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method					Laboratory
TMW17042016	1010	3 40-ml glass VOA	HCl	EPA8260C	VOCs				Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3				Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate				Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals				Test America-Denver
		1 500-ml Poly	HNO3-Field Filter	6010C/6020A/7470A	Dis. Metals				Test America-Denver

 Initials of sampling personnel JDN, DE

	PROJECT NUMBER 662230.01.04.01		WELL ID TMW18		LOCATION Northern Area Bedrock					
	GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY									
	LOCATION DESCRIPTION:									
	WEATHER (wind/temp/ppt): 21 mph / 70F / 13%									
	OTHER NOTABLE FIELD CONDITIONS:									
INITIAL DEPTH TO WATER: 56.02 ft btoc		PURGE VOLUME CALCULATION: 92.3 gal		TOTAL DEPTH OF WELL: 160.7 ft btoc		SCREENED INTERVAL: 149.8 - 159.8 ft btoc		RECOMMENDED PUMP SETTINGS 80-100 psi		
METHOD OF PURGING: Casing volume / Bennett				INITIAL ORGANIC VAPOR METER READINGS: N/A				ACTUAL FIELD PUMP SETTINGS 60 psi		
DISPOSITION OF DISCHARGE WATER: Discharged to evaporation pond										
MONITORING EQUIPMENT USED: Horiba U-52										
Well Purging Information										
Date 4/4/2016 Time	Total volume (gal)	± 10% Temp (°C)	± 0.5 pH	± 10% Conductivity (mS/cm)	± 10% or <1 Turbidity (NTU)	± 10% or <1.0 DO (mg/L)	DTW (ft)	± 10 ORP (mV)	Remarks (color, odor, sheen, sediment, etc.)	
1508	0.5	13.11	9.44	2.43	0.0	2.16	60.75	-55	3 L/min, 60 psi	
1512	4.5	12.78	10.02	2.47	0.0	0.00	85.70	-222		
1517	7.5	12.67	10.06	2.46	0.0	0.00	101.90	-235		
1522	10	12.69	10.03	2.46	0.0	0.00	115.78	-241	70 psi	
1527	11	12.71	10.01	2.45	0.0	0.00	128.00	-238		
1532	13	12.67	10.07	2.44	0.0	0.09	136.87	-235		
1537	15	12.65	9.96	2.43	1.1	0.22	148.00	-227		
1542	17	12.61	10.21	2.43	1.3	0.31	157.15	-234		
1544	19	-	-	-	-	-	-	-	well dry	
4/7/2016										
0956		12.50	4.87	2.61	0.5	5.70	125.71	49		
Sample Information										
SAMPLE DATE: 4/7/2016		SAMPLE TYPE: grab Composite				SAMPLE MATRIX: Groundwater				
SAMPLING PERSONNEL: R. Wortman, C. W-Vernon										
SAMPLING METHOD: Casing volume by dedicated Bennett Pump				SAMPLE TEMP/pH/EC/TURB/DO: See last measurement						
SAMPLE ID(s): TMW18042016				DUPLICATE/BLANK SAMPLE ID(s):						
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):										
Sample ID	Sample Time	No.	Sample Containers Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory			
TMW18042016	956	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver			
		2	1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver			
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver			
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver			
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver			
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver			
		1	500-ml Poly	HNO3-Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver			
Initials of sampling personnel		RW, CWV								

Sundance
Consulting Inc.

LOCATION
Northern Area Bedrock

INITIAL DEPTH TO WATER:	PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
43.73 ft btoc	127.1 gal	188 ft btoc	172 - 187 ft btoc	80 to 100psi
METHOD OF PURGING: Casing volume / Bennett		INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
DISPOSITION OF DISCHARGE WATER: Discharged to evaporation pond				80 si
MONITORING EQUIPMENT USED:		Horiba U-52		

[illegible]

SAMPLE DATE:	4/7/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	R. Wortman, C. W-Vernon				
SAMPLING METHOD:	Casing volume by dedicated Bennett Pump	SAMPLE TEMP/pH/EC/TURB/DO:	See last measurement		
SAMPLE ID(s):	TMW19042016	DUPLICATE/BLANK SAMPLE ID(s):			
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW19042016	1035	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel	RW, CWV
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Initials of sampling personnel LH, WK

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW32	LOCATION Northern Area Bedrock
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION: Southeast of Gate 51		
WEATHER (wind/temp/ppt): Clear, 50sF		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION: 28.7 gal	TOTAL DEPTH OF WELL: 139.1 ft btoc	SCREENED INTERVAL: 118.4 - 138.4 ft btoc
RECOMMENDED PUMP SETTINGS 45 psi, 5 sec on 25 sec off, 120 mL/min		
BEST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A	ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond		
D: Horiba U-52		

[illegible]

SAMPLE DATE:	4/13/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	L.Hill, T. Charley				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump	SAMPLE TEMP/pH/EC/TURB/DO:	see last measurement		
SAMPLE ID(s):	TMW32042016	DUPLICATE/BLANK SAMPLE ID(s):			
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW32042016	1045	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver
		2	1-L Amber glass	ice	8270D	SVOCs	Test America-Denver
		2	1-L Amber glass	ice	8081A	Pesticides	Test America-Denver

Initials of sampling personnel LH, TC

 Sundance Consulting Inc.	PROJECT NUMBER 662230.01.04.01		WELL ID TMW36		LOCATION Northern Area Bedrock				
	GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY								
	LOCATION DESCRIPTION:								
	WEATHER (wind/temp/ppt): 4 mph / 39F / 28%								
OTHER NOTABLE FIELD CONDITIONS:									
INITIAL DEPTH TO WATER:		PURGE VOLUME CALCULATION:		TOTAL DEPTH OF WELL:		SCREENED INTERVAL:		RECOMMENDED PUMP SETTINGS	
29.26 ft btoc		110.3 gal		154.3 ft btoc		132 - 152 ft btoc		75 psi	
METHOD OF PURGING: Casing volume / Bennett				INITIAL ORGANIC VAPOR METER READINGS: N/A				ACTUAL FIELD PUMP SETTINGS	
DISPOSITION OF DISCHARGE WATER: Discharged to evaporation pond								60 psi to 75 psi	
MONITORING EQUIPMENT USED: Horiba U-52									
Well Purging Information									
Date 4/5/2016 Time	Total volume (gal)	± 10% Temp (°C)	± 0.5 pH	± 10% Conductivity (mS/cm)	± 10% or <1 Turbidity (NTU)	± 10% or <1.0 DO (mg/L)	DTW (ft)	± 10 ORP (mV)	Remarks (color, odor, sheen, sediment, etc.)
0902	4	12.11	7.59	2.58	6.2	0.65	48.93	-98	2.7 L/min
0910	4.5	12.17	7.94	2.52	6.1	0.57	53.75	-26	
0915	7	12.18	8.19	2.49	2.6	0.47	65.66	-159	
0920	8.5	12.20	8.29	2.47	1.3	0.37	76.25	-171	
0925	11	12.23	8.31	2.45	1.4	0.25	87.55	-194	
0930	13	12.23	8.31	2.44	3.2	0.16	99.83	-203	
0935	16	12.23	8.31	2.44	3.2	0.16	115.60	-210	
0940	18.5	12.29	8.30	2.42	2.8	0.00	124.90	-212	
0945	21	12.31	8.31	2.40	15.6	0.00	135.35	-219	2.0 L/min, 75 psi
0950	23.5	12.36	8.34	2.40	20.1	0.00	140.39	-225	
0955	26	12.50	8.45	2.41	28.1	0.00	147.45	-229	well dry
1000	28								
4/7/2016									
0810	28	8.70	7.78	2.83	9.9	4.27	47.19	128	
Sample Information									
SAMPLE DATE: 4/7/2016		SAMPLE TYPE: <u>grab</u> composite		SAMPLE MATRIX: Groundwater					
SAMPLING PERSONNEL: R. Wortman, C. W-Vernon									
SAMPLING METHOD: Casing volume by dedicated Bennett Pump				SAMPLE TEMP/pH/EC/TURB/DO: see last measurement					
SAMPLE ID(s): TMW36042016				DUPLICATE/BLANK SAMPLE ID(s):					
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):									
Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory			
TMW36042016	810	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver			
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver			
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver			
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver			
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver			
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver			
		2 1-L Amber glass	ice	EPA8270D	SVOCs	Test America-Denver			
		2 1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver			
Initials of sampling personnel <u>RW, CWV</u>									

 Sundance Consulting Inc.	PROJECT NUMBER 662230.01.04.01		WELL ID TMW37		LOCATION Northern Area Bedrock				
	GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY								
	LOCATION DESCRIPTION:								
	WEATHER (wind/temp/ppt): 4 mph / 39F / 28%								
OTHER NOTABLE FIELD CONDITIONS:									
INITIAL DEPTH TO WATER:	PURGE VOLUME CALCULATION:		TOTAL DEPTH OF WELL:		SCREENED INTERVAL:		RECOMMENDED PUMP SETTINGS		
47.12 ft btoc	56.0 gal		110.7 ft btoc		90.2 - 110.2 ft btoc		75 psi		
METHOD OF PURGING: Casing volume / Bennett			INITIAL ORGANIC VAPOR METER READINGS: N/A				ACTUAL FIELD PUMP SETTINGS		
DISPOSITION OF DISCHARGE WATER: Discharged to evaporation pond			65 psi						
MONITORING EQUIPMENT USED: Horiba U-52									
Well Purging Information									
Date 4/5/16 Time	Total volume (gal)	± 10% Temp (°C)	± 0.5 pH	± 10% Conductivity (mS/cm)	± 10% or <1 Turbidity (NTU)	± 10% or <1.0 DO (mg/L)	DTW (ft)	± 10 ORP (mV)	Remarks (color, odor, sheen, sediment, etc.)
1050	1	12.68	9.03	2.45	8.8	0.00	59.80	-74	2 L/min
1053	2.5	12.64	9.21	2.12	3.9	0.00	63.10	-173	
1058	5	12.59	9.16	1.98	3.1	0.00	72.24	-194	
1103	7	12.51	9.01	1.96	27.1	0.00	85.25	-189	
1108	8.5	12.53	8.79	1.95	18.9	0.00	92.89	-179	
1113	10.5	12.54	8.72	1.95	37.6	0.00	95.81	-182	
1118	13	12.50	8.81	2.00	25.5	0.00	101.25	-183	
1123	15	12.46	8.87	2.18	12.4	0.00	107.43	-185	
1126	17	-	-	-	-	-	-	-	Well dry
4/7/16									
0905	17	11.07	8.13	1.67	47	1.77	53.82	-4	
Sample Information									
SAMPLE DATE: 4/7/2016		SAMPLE TYPE: <u>grab</u> composite		SAMPLE MATRIX: Groundwater					
SAMPLING PERSONNEL: R. Wortman, C. W-Vernon									
SAMPLING METHOD: Casing volume by dedicated Bennett Pump				SAMPLE TEMP/pH/EC/TURB/DO: see last measurement					
SAMPLE ID(s): TMW37042016				DUPLICATE/BLANK SAMPLE ID(s):					
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):									
Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method			Laboratory		
TMW37042016	905	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver			
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver			
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver			
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver			
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver			
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver			
		2 1-L Amber glass	ice	8270D	SVOCs	Test America-Denver			
		2 1-L Amber glass	ice	8081A	Pesticides	Test America-Denver			
Initials of sampling personnel <u>RW, CWV</u>									

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW38	LOCATION Northern Area Bedrock	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION: Southeast of Gate 51			
WEATHER (wind/temp/ppt): clear, 36F			
OTHER NOTABLE FIELD CONDITIONS:			
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
19.7 gal	115 ft btoc	121.4 - 161.4 ft btoc	30psi, 4 sec on, 64 sec off, 28 mL/min
BESST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond			
D: Horiba U-52			

[illegible]

SAMPLE DATE:	4/14/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	L. Hill, T. Charley				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump		SAMPLE TEMP/pH/EC/TURB/DO:	see last measurement	
SAMPLE ID(s):	TMW38042016		DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW38042016	1015	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		2	1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH, TC

OTHER NOTABLE FIELD CONDITIONS:

RECOMMENDED PUMP SETTINGS

ACTUAL FIELD PUMP SETTINGS

iment, etc.)

NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):

Initials of sampling personnel	LH
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Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW40D	LOCATION Northern Area Bedrock
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY		
LOCATION DESCRIPTION: East of gate 51		
WEATHER (wind/temp/ppt): Partly cloudy, 40s - 50s F		
OTHER NOTABLE FIELD CONDITIONS:		
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:
36.4 gal	158.1 ft btoc	137.3 - 157.3 ft btoc
BESST low-flow		RECOMMENDED PUMP SETTINGS
INITIAL ORGANIC VAPOR METER READINGS: N/A		40psi, 9 sec on, 11 sec off, 170 mL/min
WATER: Discharged to evaporation pond		ACTUAL FIELD PUMP SETTINGS
D: Horiba U-52		

[illegible]

SAMPLE DATE:	4/12/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	L. Hill				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump		SAMPLE TEMP/pH/EC/TURB/DO:	see last measurement	
SAMPLE ID(s):	TMW40D042016		DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW40D0420 16	1010	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		2	1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH

Sundance
Consulting Inc.

PROJECT NUMBER	WELL ID	LOCATION	
662230.01.04.01	TMW48	Northern Area Bedrock	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION:			
WEATHER (wind/temp/ppt): Partly cloudy, 50scF			
OTHER NOTABLE FIELD CONDITIONS:			
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
16.4 gal	93.5 ft btoc	73 - 93 ft btoc	10 sec on, 10 sec off, 30 psi, 222 mL/min
BESST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond			
D:	Horiba U-52		

[illegible]

SAMPLE DATE:	4/12/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	L. Hill, T. Charley				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump		SAMPLE TEMP/pH/EC/TURB/DO:	see last measurement	
SAMPLE ID(s):	TMW48042016		DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers No. Volume/Type	Preservatives (ice, acids, bases, others)	Analytical Method		Laboratory
TMW48042016	1210	3 40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2 1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2 500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1 500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1 125-ml Poly w/Syringe	ice Field Filter	EPA 6860	Perchlorate	Test America-Denver
		2 1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
		1 500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1 500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel LH, TC

Sundance
Consulting Inc.

PROJECT NUMBER 662230.01.04.01	WELL ID TMW49	LOCATION Northern Area Bedrock	
GROUNDWATER SAMPLING FIELD DATA SHEET FORT WINGATE DEPOT ACTIVITY			
LOCATION DESCRIPTION:		Southern part of northern area	
WEATHER (wind/temp/ppt):		10-15 mph / 45F / <30%	
OTHER NOTABLE FIELD CONDITIONS:			
PURGE VOLUME CALCULATION:	TOTAL DEPTH OF WELL:	SCREENED INTERVAL:	RECOMMENDED PUMP SETTINGS
4.8 gal	63 ft btoc	42.5 - 62.5 ft btoc	35 psi, 4 sec on, 26 sec off, 100 mL/min
BESST low-flow	INITIAL ORGANIC VAPOR METER READINGS: N/A		ACTUAL FIELD PUMP SETTINGS
WATER: Discharged to evaporation pond			
ID: Hydrolab Quanta water quality meter, HF Scientific turbidity meter			

[illegible]

SAMPLE DATE:	4/14/2016	SAMPLE TYPE:	grab composite	SAMPLE MATRIX:	Groundwater
SAMPLING PERSONNEL:	D. Esparza, J. Nance				
SAMPLING METHOD:	Low-flow by dedicated Blatypus pneumatic pump		SAMPLE TEMP/pH/EC/TURB/DO:	see last measurement	
SAMPLE ID(s):	TMW49042016		DUPLICATE/BLANK SAMPLE ID(s):		
NOTABLE OBSERVATIONS (color, odor, sand, headspace, etc.):					

Sample ID	Sample Time	Sample Containers		Preservatives	Analytical Method		Laboratory
		No.	Volume/Type	(ice, acids, bases, others)			
TMW49042016	0925	3	40-ml glass VOA	HCl	EPA8260C	VOCs	Test America-Denver
		2	1-L Amber glass	ice	EPA 8270D	SVOCs	Test America-Denver
		2	500-ml Amber glass	ice	EPA 8330B	Explosives	Test America-Denver
		1	500-ml Poly	ice	EPA 9056	NO2/NO3	Test America-Denver
		1	125-ml Poly w/Syringe	ice Field Form	EPA 6860	Perchlorate	Test America-Denver
		2	1-L Amber glass	ice	EPA 8081A	Pesticides	Test America-Denver
		1	500-ml Poly	HNO3	6010C/6020A/7470A	Tot. Metals	Test America-Denver
		1	500-ml Poly	HNO3- Field Filter	6010C/6020A/7470A	Dis. Metals	Test America-Denver

Initials of sampling personnel	JDN
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TestAmerica
LABORATORIES, INC.
 10000 W. 16th Ave., Suite 100, Denver, CO 80202
TestAmerica Laboratories, Inc.

[illegible]

4.9, 4.1-0.2 IR#7 Transferred by DLW 4/5/16

280-81614 Chain of Custody

Americo
IN ENVIRONMENTAL TESTING
Laboratories, Inc.

[illegible]

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

phone 303-736-0100 fax 303-431-7171

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: John Nance		Site Contact: John Nance 505 321 7260		Date: 4/7/2016		COC No: FWDAAPR16-03													
John Nance		Tel: 505 835 7660		Lab Contact: Michelle Johnston		Carrier: Federal Express		1 of 2 COCs													
8210 Louisiana Blvd. NE Suite C		Analysis Turnaround Time		Filtered Sample Explosives 8330B Nitrate Nitrite 9056 Perchlorate 6860 TAL Metal6010C/6020A/7470A Total TAL Metal6010C/6020A/7470A Diss. Organochlorine Pesticides 8081A Volatile Organic Compounds 8280C Semivolatile Organics 8270D TPH-DRO 8015C C10-C28 TPH-GRO 8015C C6-C10		Job No. SDG No.		Sample Specific Notes:													
Albuquerque, NM 87113		Calendar (C) or Work Days (W) W																			
505 835 7660 PHONE		TAT if different from Below 15																			
Project Name: Fort Wingate		☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day																			
Site: Fort Wingate, New Mexico																					
P O #																					
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Explosives 8330B	Nitrate Nitrite 9056	Perchlorate 6860	TAL Metal6010C/6020A/7470A Total	TAL Metal6010C/6020A/7470A Diss.	Organochlorine Pesticides 8081A	Volatile Organic Compounds 8280C	Semivolatile Organics 8270D	TPH-DRO 8015C C10-C28	TPH-GRO 8015C C6-C10					
TB-05-042016	4/7/2016	0800	Grab	GW	1	N							X					Trip Blank			
TB-06-042016	4/7/2016	0800	Grab	GW	1	N									X			Trip Blank			
FW042016EQ002	4/7/2016	0830	Grab	GW	18	Y	X	X	X	X	X	X	X	X	X	X					
FW31042016	4/7/2016	0930	Grab	GW	12	Y	X	X		X	X	X	X	X							
TMW30042016	4/7/2016	1015	Grab	GW	13	Y	X	X	X	X	X	X	X	X							
TMW41042016	4/7/2016	1050	Grab	GW	13	Y	X	X	X	X	X	X	X	X							
TMW33042016	4/7/2016	1140	Grab	GW	13	Y		X		X	X		X	X	X	X					
TMW46042016	4/7/2016	1240	Grab	GW	13	Y	X	X	X	X	X	X	X	X							
MW23042016	4/7/2016	0950	Grab	GW	13	Y	X	X	X	X	X	X	X	X							
MW22S042016	4/7/2016	1220	Grab	GW	4	N		X							X			Partial			
MW02042016	4/7/2016	1230	Grab	GW	2	N								X				Complete			
MW23042016MS	4/7/2016	0950	Grab	GW	13	Y	X	X	X	X	X	X	X	X							
MW23042016MSD	4/7/2016	0950	Grab	GW	13	Y	X	X	X	X	X	X	X	X							
DMW23042016	4/7/2016	0950	Grab	GW	13	Y	X	X	X	X	X	X	X	X							
TMW36042016	4/7/2016	0810	Grab	GW	13	Y	X	X	X	X	X	X	X	X							
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other																					
Possible Hazard Identification										Sample Disposal											
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown										☐ Return To Client ☒ Disposal By Lab ☒ Store For 60 days after invoice											
Special Instructions/QC Requirements & Comments:																					
Relinquished by: L. Hill		Company: CH2M HILL		Date/Time: 4/7/2016 16:00		Received by: [Signature]		Company: TAD		Date/Time: 4/8/16 0935		1,8,1,1,3,9,1,6,1,4,1,4,0,9,1,8,1,5,1,3,1,1,0,7,1,4,0,7,0,6,0,2 IR#7 Transferred by DW 4/8/16									
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:											
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:											

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Chain of Custody Record

TestAmerica
A COMMITMENT TO EXCELLENCE
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TestAmerica Laboratories, Inc.

Client Contact		Project Manager: John Nance		Site Contact: John Nance 505 321 7260		Date: 4/8/2016		COC No: FWDAAPR16-04											
John Nance		Tel: 505 835 7660		Lab Contact: Michelle Johnston		Carrier: Federal Express		1 of 1 COCs											
8210 Louisiana Blvd. NE Suite C		Analysis Turnaround Time		Filtered Sample Explosives 8330B Nitrate Nitrite 9056 Perchlorate 6860 TAL Metal6010C/6020A/7470A Total TAL Metal6010C/6020A/7470A Diss. Organochlorine Pesticides 8081A Volatile Organic Compounds 8260C Semivolatile Organics 8270D TPH-DRO 8015C C10-C28 TPH-GRO 8015C C6-C10		Job No.													
Albuquerque, NM 87113		Calendar (C) or Work Days (W) W				SDG No.													
505 835 7660 PHONE		TAT if different from Below 15																	
Project Name: Fort Wingate		☐ 2 weeks																	
Site: Fort Wingate, New Mexico		☐ 1 week																	
P O #		☐ 2 days																	
		☐ 1 day																	
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Sample Specific Notes:													
TB-07-042016	4/8/2016	0800	Grab	GW	1	N													Trip Blank
TB-08-042016	4/8/2016	0800	Grab	GW	1	N													Trip Blank
TMW01042016	4/8/2016	1020	Grab	GW	9	Y	X	X	X	X	X	X	X						
TMW03042016	4/8/2016	1220	Grab	GW	11	Y	X	X	X	X	X	X	X	X					
TMW40S042016	4/8/2016	0821	Grab	GW	3	N				X	X								Partial
TMW44042016	4/8/2016	0845	Grab	GW	13	Y	X	X	X	X	X	X	X	X	X				
TMW07042016	4/8/2016	0956	Grab	GW	10	Y	X	X		X	X		X	X					
TMW22042016	4/8/2016	1031	Grab	GW	11	Y	X	X	X	X	X		X	X					
TMW23042016	4/8/2016	1059	Grab	GW	11	Y	X	X	X	X	X	X	X						
BGMW03042016	4/8/2016	1206	Grab	GW	13	Y	X	X	X	X	X	X	X	X					
TMW26042016	4/8/2016	0940	Grab	GW	9	Y	X	X	X	X	X		X						
DMW26042016	4/8/2016	0940	Grab	GW	9	Y	X	X	X	X	X		X						
SMW01042016	4/8/2016	1140	Grab	GW	11	Y	X	X	X	X	X		X	X					
TMW27042016	4/8/2016	1315	Grab	GW	6	Y			X	X	X		X						
MW22S042016	4/8/2016	1425	Grab	GW	1								X						Partial
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other																			
Possible Hazard Identification										Sample Disposal									
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown										☐ Return To Client ☒ Disposal By Lab ☒ Archive For 60 days after invoice									
Special Instructions/QC Requirements & Comments:																			
Relinquished by: L. Hill		Company: CH2M HILL		Date/Time: 4/8/2016 1600		Received by: [Signature]		Company: JAD		Date/Time: 4/9/16 0855									
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:									
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:									



280-81707 Chain of Custody

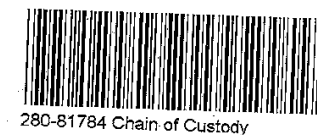
5.5, 2.6, 1.8, 0.8, 3.9, 5.7, 1.2, 0.3-0.2 IR#7 transferred by BW 4/9/16

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Chain of Custody Record

TestAmerica
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TestAmerica Laboratories, Inc.

Client Contact		Project Manager: John Nance		Site Contact: John Nance 505 321 7260		Date: 4/11/2016		COC No: FWDAAPR16-05										
John Nance		Tel: 505 835 7660		Lab Contact: Michelle Johnston		Carrier: Federal Express		1 of 1 COCs										
8210 Louisiana Blvd, NE Suite C		Analysis Turnaround Time		Filtered Sample Explosives 8330B Nitrate Nitrite 9056 Perchlorate 6880 TAL Metal6010C/6020A/7470A Total TAL Metal6010C/6020A/7470A Diss. Organochlorine Pesticides 8081A Volatile Organic Compounds 8260C Semi-volatile Organics 8270D TPH-DRO 8015C C10-C28 TPH-GRO 8015C C6-C10		Job No.												
Albuquerque, NM 87113		Calendar (C) or Work Days (W) W				SDG No.												
505 835 7660 PHONE		TAT if different from Below 15																
Project Name: Fort Wingate		☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day																
Site: Fort Wingate, New Mexico																		
PO#																		
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.											Sample Specific Notes:		
TB-09-042016	4/11/2016	0800	Grab	GW	1	N												Trip Blank
TB-10-042016	4/11/2016	0800	Grab	GW	1	N												Trip Blank
TMW21042016	4/11/2016	0930	Grab	GW	9	Y	X	X	X	X	X		X					
TMW408042016	4/11/2016	1020	Grab	GW	4	Y			X	X			X					Sample Complete
TMW11042016	4/11/2016	1150	Grab	GW	9	Y	X	X	X	X	X		X					
TMW28042016	4/11/2016	1300	Grab	GW	5	Y				X	X		X					
MW22S042016	4/11/2016	0945	Grab	GW	2	N	X											Partial
MW22S042016	4/11/2016	1125	Grab	GW	1	Y			X									Partial
MW22D042016	4/11/2016	1010	Grab	GW	18	Y	X	X	X	X	X	X	X	X	X	X		
MW22D042016MS	4/11/2016	1010	Grab	GW	18	Y	X	X	X	X	X	X	X	X	X	X		
MW22D042016MSD	4/11/2016	1010	Grab	GW	18	Y	X	X	X	X	X	X	X	X	X	X		
TMW35042016	4/11/2016	0945	Grab	GW	16	Y		X	X	X	X	X	X	X	X	X		
MW20042016	4/11/2016	1159	Grab	GW	18	Y	X	X	X	X	X	X	X	X	X	X		
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown Sample Disposal ☐ Return To Client ☒ Disposal By Lab ☐ Archive For 60 days after invoice Special Instructions/QC Requirements & Comments: 0.3, 1.8, 0.8, 2.4, 0.6, 4.1, 4.8 + -0.2 IL#7 transferred by JT 04/12/16																		
Relinquished by:	Company: CH2M HILL		Date/Time: 4/11/2016 16:00		Received by:		Company: TAD		Date/Time: 04/12/16 0925									
Relinquished by:	Company:		Date/Time:		Received by:		Company:		Date/Time:									
Relinquished by:	Company:		Date/Time:		Received by:		Company:		Date/Time:									



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Chain of Custody Record

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TestAmerica Laboratories, Inc.

Client Contact		Project Manager: John Nance		Site Contact: John Nance 505 321 7260		Date: 4/12/2016		COC No: FWDAAPR16-06									
John Nance		Tel: 505 835 7660		Lab Contact: Michelle Johnston		Carrier: Federal Express		1 of 1 COCs									
8210 Louisiana Blvd. NE Suite C		Analysis Turnaround Time		Filtered Sample Explosives 8330B Nitrate Nitrite 9056 Perchlorate 6860 TAL Metal6010C/6020A/7470A Total TAL Metal6010C/6020A/7470A Diss. Organochlorine Pesticides 8081A Volatile Organic Compounds 8250C Semi-volatile Organics 8270D TPH-DRO 8015C C10-C28 TPH-GRO 8015C C6-C10		Job No.											
Albuquerque, NM 87113		Calendar (C) or Work Days (W) W				SDG No.											
505 835 7660 PHONE		TAT if different from Below 15															
		☐ 2 weeks															
		☐ 1 week															
Project Name: Fort Wingate		☐ 2 days															
Site: Fort Wingate, New Mexico		☐ 1 day															
PO#																	
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Explosives 8330B	Nitrate Nitrite 9056	Perchlorate 6860	TAL Metal6010C/6020A/7470A Total	TAL Metal6010C/6020A/7470A Diss.	Organochlorine Pesticides 8081A	Volatile Organic Compounds 8250C	Semi-volatile Organics 8270D	TPH-DRO 8015C C10-C28	TPH-GRO 8015C C6-C10	Sample Specific Notes:
TB-11-042016	4/12/2016	0800	Grab	GW	1	N							X				Trip Blank
TB-12-042016	4/12/2016	0800	Grab	GW	1	N									X		Trip Blank
TMW39D042016	4/12/2016	0900	Grab	GW	13	Y	X	X	X	X	X	X	X				
TMW40D042016	4/12/2016	1010	Grab	GW	13	Y	X	X	X	X	X	X	X				
TMW13042016	4/12/2016	1120	Grab	GW	7	Y		X	X	X	X		X				
TMW48042016	4/12/2016	1210	Grab	GW	13	Y	X	X	X	X	X	X	X				
MW22S042016	4/12/2016	0825	Grab	GW	1	N				X							Partial
TMW34042016	4/12/2016	1020	Grab	GW	12	Y		X	X	X	X		X	X	X	X	
DTW34042016	4/12/2016	1020	Grab	GW	12	Y		X	X	X	X		X	X	X	X	
TMW06042016	4/12/2016	1225	Grab	GW	10	Y	X	X		X	X		X	X			
TMW08042016	4/12/2016	0852	Grab	GW	14	Y		X	X	X	X	X	X	X	X	X	
MW03042016	4/12/2016	1045	Grab	GW	14	Y	X	X	X	X	X		X	X	X	X	
TMW10042016	4/12/2016	1304	Grab	GW	9	Y	X	X	X	X	X		X				
MW18D042016	4/12/2016	1350	Grab	GW	14	Y	X	X	X	X	X		X	X			
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown Sample Disposal ☐ Return To Client ☒ Disposal By Lab ☒ Archive For 60 days after invoice Special Instructions/QC Requirements & Comments: 5.5, 10, 8, 2, 1, 3, 4, 1, 4, 6 + 0.2 IR#7 transferred by JT 04/13/16																	
Relinquished by: L. Hill	Company: CH2M HILL		Date/Time: 4/12/2016 16:00		Received by: <i>[Signature]</i>		Company: TAD		Date/Time: 04/13/16 0915								
Relinquished by:	Company:		Date/Time:		Received by:		Company:		Date/Time:								
Relinquished by:	Company:		Date/Time:		Received by:		Company:		Date/Time:								

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Chain of Custody Record

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Client Contact		Project Manager: John Nance		Site Contact: John Nance 505 321 7260		Date: 4/13/2016		COC No: FWDAAPR16-07												
John Nance		Tel: 505 835 7660		Lab Contact: Michelle Johnston		Carrier: Federal Express		1 of 1 COCs												
8210 Louisiana Blvd. NE Suite C		Analysis Turnaround Time		Filtered Sample Explosives 8330B Nitrate Nitrite 9056 Perchlorate 6880 TAL Metal6010C/6020A/7470A Total TAL Metal6010C/6020A/7470A Diss. Organochlorine Pesticides 8081A Volatile Organic Compounds 8260C Semi-volatile Organics 8270D TPH-DRO 8015C C10-C28 TPH-GRO 8015C C6-C10		 280-81933 Chain of Custody		Job No.												
Albuquerque, NM 87113		Calendar (C) or Work Days (W) W																		
505 835 7660 PHONE		TAT if different from Below 15																		
Project Name: Fort Wingate		☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day																		
Site: Fort Wingate, New Mexico																				
PO#																				
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.															Sample Specific Notes:
TB-13-042016	4/13/2016	0800	Grab	GW	1	N													Trip Blank	
TB-14-042016	4/13/2016	0800	Grab	GW	1	N													Trip Blank	
TMW31D042016	4/13/2016	0900	Grab	GW	13	Y	X	X	X	X	X	X	X	X	X					
DTW31D042016	4/13/2016	0900	Grab	GW	13	Y	X	X	X	X	X	X	X	X	X					
TMW32042016	4/13/2016	1045	Grab	GW	13	Y	X	X	X	X	X	X	X	X	X					
TMW25042016	4/13/2016	1250	Grab	GW	8	Y	X	X		X	X		X							
MW22S042016	4/13/2016	0800	Grab	GW	1	Y					X								Partial	
TMW15042016	4/13/2016	0915	Grab	GW	9	Y	X	X	X	X	X		X	X					Only one VOC bottle	
DTW15042016	4/13/2016	0915	Grab	GW	11	Y	X	X	X	X	X		X	X						
TMW02042016	4/13/2016	1215	Grab	GW	9	Y	X	X	X	X	X		X							
TMW43042016	4/13/2016	0850	Grab	GW	13	Y	X	X	X	X	X	X	X	X						
DTW43042016	4/13/2016	0850	Grab	GW	13	Y	X	X	X	X	X	X	X	X						
TMW43042016MS	4/13/2016	0850	Grab	GW	13	Y	X	X	X	X	X	X	X	X						
TMW43042016MSD	4/13/2016	0850	Grab	GW	13	Y	X	X	X	X	X	X	X	X						
TMW04042016	4/13/2016	1245	Grab	GW	11	Y	X	X	X	X	X		X	X						
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other																				
Possible Hazard Identification										Sample Disposal										
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown										☐ Return To Client ☒ Disposal By Lab ☒ Archive For 60 days after invoice										
Special Instructions/QC Requirements & Comments:																				
Relinquished by: L. Hill		Company: CH2M HILL		Date/Time: 4/13/2016 16:00		Received by: [Signature]		Company: TAD		Date/Time: 4/14/16 0945										
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:										
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:										

0.5, 1.3, 2.2, 1.3, 0.4, 1.5, 0.8, 2.3, 3.5, 2.0-0.2 IR#7 Transferred by DLO 4/14/16

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Chain of Custody Record

TestAmerica
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Client Contact		Project Manager: John Nance		Site Contact: John Nance 505 321 7260		Date: 4/14/2016		COC No: FWDAAPR16-08								
John Nance		Tel: 505 835 7660		Lab Contact: Michelle Johnston		Carrier: Federal Express		1 of 1 COCs								
8210 Louisiana Blvd. NE Suite C		Analysis Turnaround Time		Filtered Sample Explosives 8330B Nitrate Nitrite 9056 Perchlorate 6860 TAL Metal/ID10C/6020A/7470A Total TAL Metal/ID10C/6020A/7470A Diss. Organochlorine Pesticides 8081A Volatile Organic Compounds 8260C Semi-volatile Organics 8270D TPH-DRO 8015C C10-C28 TPH-GRO 8015C C6-C10		Job No. SDG No.		Sample Specific Notes:								
Albuquerque, NM 87113		Calendar (C) or Work Days (W) W														
505 835 7660 PHONE		TAT if different from Below 15														
Project Name: Fort Wingate		☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day														
Site: Fort Wingate, New Mexico																
PO#																
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Explosives 8330B	Nitrate Nitrite 9056	Perchlorate 6860	TAL Metal/ID10C/6020A/7470A Total	TAL Metal/ID10C/6020A/7470A Diss.	Organochlorine Pesticides 8081A	Volatile Organic Compounds 8260C	Semi-volatile Organics 8270D	TPH-DRO 8015C C10-C28	TPH-GRO 8015C C6-C10	Sample Specific Notes:
TB-15-042016	4/14/2016	0800	Grab	GW	1	N						X				Trip Blank
TB-16-042016	4/14/2016	0800	Grab	GW	1	N								X		Trip Blank
TMW38042016	4/14/2016	1015	Grab	GW	13	Y	X	X	X	X	X	X	X			
TMW14A042016	4/14/2016	1200	Grab	GW	10	Y	X	X	X	X	X	X	X			
TMW47042016	4/14/2016	1005	Grab	GW	13	Y	X	X	X	X	X	X	X			
TMW49042016	4/14/2016	0925	Grab	GW	13	Y	X	X	X	X	X	X	X			
TMW45042016	4/14/2016	1115	Grab	GW	13	Y	X	X	X	X	X	X	X			
BGMW02042016	4/14/2016	1240	Grab	GW	13	Y	X	X	X	X	X	X	X			
BGMW02042016MS	4/14/2016	1240	Grab	GW	13	Y	X	X	X	X	X	X	X			
BGMW02042016MSD	4/14/2016	1240	Grab	GW	13	Y	X	X	X	X	X	X	X			
MW225042016	4/14/2016	1430	Grab	GW	1	N						X				Partial
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other																
Possible Hazard Identification										Sample Disposal						
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown										☐ Return To Client ☒ Disposal By Lab ☐ Archive For 60 days after invoice						
Special Instructions/QC Requirements & Comments:																
2.2, 2.4, 3.2, 4.3, 2.1, 1.4, 4.6, 2.1 GRA7-0.2 Transferred by 2P 4-15-16																
Relinquished by: L. Hill	Company: CH2M HILL	Date/Time: 4/14/2016 16:00	Received by: [Signature]	Company: TAD	Date/Time: 4-15-16 0930											
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:											
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:											

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Chain of Custody Record

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[illegible]

2.0, 2.6-0.2 DR#7 Transferred by DOW 4/16/16

APPENDIX C

Laboratory Analytical Data Quality Evaluation

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1 Acronyms and Abbreviations

2	ADR	Automated Data Review
3	COC	chain of custody
4	DL	detection limit
5	DOD	U.S. Department of Defense
6	DRO	diesel-range organics
7	EB	equipment blank
8	ELAP	Environmental Laboratory Accreditation Program
9	EPA	U.S. Environmental Protection Agency
10	FD	field duplicate
11	GRO	gasoline-range organics
12	ID	identification
13	J	analyte detected but less than the limit of quantitation (LOQ)
14	LCS	laboratory control sample
15	LOD	limit of detection
16	LOQ	limit of quantitation
17	MS	matrix spike
18	MSD	matrix spike duplicate
19	PARCC	precision, accuracy, representativeness, comparability, and completeness
20	QA	quality assurance
21	QC	quality control
22	R	analyte has been rejected and is unusable for project objectives
23	RPD	relative percent difference
24	SDG	sample delivery group
25	SVOC	semivolatile organic compound
26	TA	TestAmerica Laboratories, Inc.
27	TB	trip blank
28	TPH	total petroleum hydrocarbons
29	U	non-detected result at the limit of detection (LOD)
30	UJ	estimated non-detected result at the limit of detection (LOD)
31	VOC	volatile organic compound

Data Quality Evaluation Report

This appendix contains the Data Quality Evaluation Report for groundwater samples collected as part of the Periodic Groundwater Monitoring Program at Fort Wingate Depot Activity, New Mexico. This report evaluates whether the analytical data obtained in the investigation are of sufficient quality and quantity to accomplish the project objectives.

Introduction

The analytical work was conducted in accordance with the approved *2015 Interim Measures Facility-Wide Groundwater Monitoring Plan, Version 8, Fort Wingate Depot Activity, McKinley County, New Mexico* (Innovar Environmental, Inc., 2015).

TestAmerica Laboratories, Inc. (TA) in Arvada, Colorado, performed all analyses with the exception of some gasoline range organic (GRO) analyses that were sent to TA in Savannah, Georgia, due to required instrument repairs at TA in Arvada. After collection, samples were packed and shipped by overnight carrier to TA for analysis. The following analytical methods were used for sample analysis:

- o Total petroleum hydrocarbons, diesel-range organics (TPH-DRO) by U.S. Environmental Protection Agency (EPA) Method SW8015C
- o TPH gasoline-range organics (GRO) by EPA Method SW8015C
- o Volatile organic compounds (VOCs) by EPA Method SW8260B
- o Semivolatile organic compounds (SVOCs) by EPA Method SW8270D
- o Organochlorine pesticides by EPA Method SW8081A
- o Explosives by EPA Method SW8330B
- o Total and dissolved metals by EPA Methods SW6010C and SW6020A
- o Mercury by EPA Method SW7470A
- o Perchlorate by EPA Method SW6860
- o Nitrate and nitrite by EPA Method 9056

Nine sample delivery groups (SDGs) were evaluated for data quality. SDGs may have been delivered with a Part 1 and a Part 2 file. The Part 2 file contains data for caprolactam and was delivered separately by the laboratory because TA lacks U.S. Department of Defense (DOD) Environmental Laboratory Accreditation Program (ELAP) certification for it and did not want it included in a report of other compounds with applicable DOD ELAP certification. The Part 1 file contains all other data. Table 1 lists the sample identifiers, collection dates, and analyses associated with the project samples. (All tables are presented at the end of this appendix.)

Field Sample Collection

The fieldwork for this monitoring event was conducted between April 4, 2016, and April 15, 2016. The following data quality sample quantities/types were collected and analyzed: 61 groundwater samples, seven field duplicate (FD) samples, and four planned matrix spike/matrix spike duplicates (MS/MSDs) with additional MS/MSDs included as part of the laboratory-selected quality assurance/quality control (QA/QC) process.

Other QC samples including 17 trip blanks (TBs) and two equipment blanks (EBs) were collected and analyzed in accordance with the Work Plan. No QA sample splits were collected during this event.

Data Review and Validation Process

Data Validation Definition

All analytical data from the spring 2016 sample collection were evaluated in accordance with the procedures described in the Work Plan. One hundred percent of the analytical results were validated using the Automated Data Review (ADR) software. The assessment of data included a review of the following laboratory information based on the electronic data received from the laboratory in ADR file format containing only files A1 and A3:

- o Holding time
- o Shipping cooler temperatures
- o QC sample frequencies
- o Method and field blanks
- o Laboratory control samples (LCSs)
- o Surrogate spikes
- o MS/MSDs
- o FD precision
- o Case narrative review and flagging based on discussions provided

In addition, as defined in the Work Plan, 10 percent of the sample results required additional, more detailed data validation as a Stage 3 data review, which included the following:

- o All aspects of the review using the ADR software
- o Calibration review including initial calibration, second source checks, continuing calibration, and calibration blanks
- o Internal standards review
- o Instrument tune review
- o Confirmation data, where applicable
- o Post spikes and serial dilutions
- o Limited recalculation check of results from raw data and transcription check

The Stage 3 data review was completed for SDG J81784. This SDG consists of nine groundwater samples, two TBs, and one MS/MSD pair. The samples were analyzed using the analytical methods identified in Table 1. The field sample numbers and corresponding laboratory numbers are presented in Table 2.

Data flags for both the ADR software and the additional Stage 3 data review were assigned using the QC acceptance limits and procedures defined in the Work Plan. Data flags and the reason for each flag were entered into an electronic database and are available to data users. Although multiple flags were routinely applied to a specific sample method/matrix/analyte combination, only one final flag was applied to the data according to the most conservative of the validation flags.

Overall Data Validation Findings

An overall summary of qualified sample results and the reason each result was flagged is presented in Table 3.

Attachment 1 of this appendix contains multiple files for each of the 10 SDGs and presents the output files from the ADR software. The file types vary for each SDG based on what type of out-of-control details were noted in each SDG. The file types define all samples within the SDG, the methods reviewed, the specifics of the data qualifiers applied, and how each sample was flagged. The electronic (PDF) TA laboratory data files are included as Attachment 2 of this appendix.

Only out-of-control conditions noted during the data validation are presented in Table 3. The sections below provide overviews of the data validation findings from the ADR software. Specific issues identified during the Stage 3 data review are also described.

Results Detected Between the Limit of Quantitation

Analytes detected at concentrations greater than the detection limit (DL), but less than the limit of quantitation (LOQ), were qualified as “J” to reflect the uncertainty associated with concentrations of analytical data between the DL and the LOQ. Non-detected sample results were reported to the limit of detection (LOD).

Holding Time

Five GRO samples were reanalyzed out of hold time due to failed instrument QC in the initial runs. The samples were flagged “J” or “UJ” due to the holding time failure.

In addition, 13 nitrate and nitrite results were qualified as an estimated concentration and flagged “J” or “UJ” for exceeding the holding time by less than twice the allowable limit. The sample required re-analysis over the holding time due to dilution.

For two VOC samples (MW18D1042016 and TMW22042016), the samples were listed as preserved in accordance with the method upon laboratory receipt; however, the actual pH was found to be greater than 2. The samples were analyzed more than 7 days after collection, but within 14 days, as required by the method for a preserved sample. All VOC and GRO data for these samples were flagged “J” or “UJ” and are considered to be estimated concentrations.

No additional holding time exceedances were noted in the Stage 3 data review. All holding time exceedances were flagged as estimated concentrations and are usable for project objectives. Holding time-related issues are presented in Table 3 and Attachment 1.

Shipping Temperatures, Preservation, and Sample Custody

No sample shipping temperature control issues were noted in the validation based on a review of sample chain of custody (COC) forms and the documentation of sample-received conditions. All samples were delivered with a completed sample COC form.

Sample preservation issues are discussed above in the Holding Time section.

The nitric acid preserved plastic 500-millimeter containers received for total and dissolved metals analyses for samples MW20042016 and MW18D042016 did not have sufficient preservation. The pH of the sample was greater than the method required pH 2. The containers were sent to the metals department for further preservation before analysis.

Some VOC sample vials were noted to contain bubbles larger than 6 millimeters in diameter. Sufficient vials without bubbles were available to complete the sample analysis.

Discrepancies between the sample time of collection on the bottle label and the COC and/or minor sample identification (ID) discrepancies were identified for a number of samples. In each case, the correct time or ID was resolved with the field team and laboratory staff.

In a number of cases, broken bottles or bottles that were not completely full due to well recharge issues were received at the laboratory; however, in all cases, enough of the sample remained to complete the work as requested. No action was taken.

No sample results were flagged due to custody or sample preservation issues.

Blank Contamination

The laboratory and field blanks were generally free of contamination at concentrations greater than one half of the LOQ. The analytes detected in blanks were generally consistent with normal laboratory and field operations and do not negatively affect the use of the data for project objectives. Qualified sample results from method blank contamination were predominantly associated with the metals and VOCs and to a lesser extent TPH-DRO and explosives (nitrobenzene). Seventy-four results were qualified in 51 samples.

Forty-two qualified sample results from EB contamination were predominantly related to nine compounds associated with metals, VOC, SVOC, and DRO results. From all the combined EB contamination, 17 samples were qualified for EB contamination.

Thirty-one results were qualified due to TB contamination in 28 samples in association with four VOC compounds.

Samples affected by blank contamination were qualified as non-detected results and flagged "U." Blank contamination-related issues are presented in Table 3 and Attachment 1.

The Stage 3 data review identified minor additional calibration blank contamination issues resulting in six qualified metals in four samples.

Laboratory Control Samples

Overall, the LCSs were within-control. The qualified LCS data are limited to 18 benzidine results. If an LCS was out-of-control with a high bias and the associated sample result did not detect that compound, the results were not flagged. All of the samples qualified for LCS recoveries were flagged as estimated non-detected concentrations and flagged "UJ." Benzidine is considered to be poor a responding compound.

The LCS relative percent difference (RPD) was within-control except for three SVOC results impacting one sample where all three results were flagged "UJ."

The Stage 3 data identified no LCS errors not already detected by the ADR software. LCS-related issues are presented in Table 3 and Attachment 1.

Surrogate Spikes

Overall, surrogate spikes were within-control. The qualified samples/target compounds due to out-of-control surrogate spikes are associated with one pesticide sample, nine explosives samples, and one VOC sample. In a small number of samples, the surrogate spike showed a high-bias or was diluted out. Diluted samples were not qualified, and high-bias surrogate recoveries associated with non-detected results were also not qualified. In a number of SVOC samples, only the Terphenyl D14 was out-of-control; therefore, no sample data were qualified for those samples. All samples qualified for surrogate spike recoveries were flagged "J" or "UJ" as estimated concentrations and are usable for project objectives.

The Stage 3 data review identified no surrogate out-of-control conditions not already detected by the ADR software. Surrogate spike-related issues are presented in Table 3 and Attachment 1.

Matrix Spike and Matrix Spike Duplicates

Overall, the MS/MSDs were within-control for accuracy. No results were flagged for out-of-control precision. The qualified sample results due to out-of-control MS/MSDs included 124 results in all, predominantly associated with the metals, SVOC, VOC, perchlorate, explosives, and nitrate. In cases where the concentrations of the parent samples were significantly greater than the spike concentrations, the recovery was not accurate and the results were not qualified. Samples were not qualified when they contained concentrations of target analytes greater than four times the spiked concentration added to the MS/MSD. Most of the qualified sample results are flagged as estimated concentrations, flagged “J” or “UJ,” and are usable for project objectives. Rejected results include benzidine and 3,3-dichlorobenzidine, four results in all.

Post-digestion spikes, serial dilutions, and interference check samples were evaluated from the case narrative notations as well as the Stage 3 data review. A review of the case narratives required the flagging of 11 dissolved silver results for post digestion spike out-of-control noted under the professional judgment flags.

The Stage 3 data review identified no MS/MSD out-of-control conditions, serial dilution, or post-digestion out-of-control conditions not previously detected by the ADR software. The MS/MSD-related issues are presented in Table 3 and Attachment 1.

Field Duplicates and Laboratory Precision

FDs and laboratory duplicates were evaluated as part of the review for ADR and also as part of the Stage 3 data review. All FDs were within-control. Laboratory duplicates were out-of-control for six nitrate results, flagged “J” or “UJ” as estimated concentrations.

Calibration

Initial, continuing, and second-source calibrations were reviewed as part of the Stage 3 data review on all methods and were noted to be within-control. Calibration flags were applied as part of the ADR case narrative review consisting of three metals (manganese, barium, and iron) where the low-level calibration check standard was out-of-control. Sixty-seven results in 34 samples were flagged “J” as estimated concentrations. In addition, four perchlorate results were found to be out-of-control in the continuing calibration check and the low-level calibration check. Results were flagged “J” and “UJ” as estimated concentrations.

Internal Standards

Internal standards were evaluated as part of the case narrative review for ADR and also as part of the Stage 3 data review. All internal standards were found to be within-control.

Confirmation

When the case narrative defined the RPD for confirmation results from explosives or pesticides above 40 percent, the associated compound was flagged as an estimated result in the ADR software. Detected results were flagged “J” as estimated concentrations. Confirmation-related data flags are limited to 19 explosive results and are noted in the “Professional Judgment” column in Table 3 and clarified in the manual changes file in Attachment 1.

The Stage 3 data review identified no confirmation out-of-control conditions not previously detected by the ADR software. Confirmation-related issues are presented in Table 3 and Attachment 1.

Calculation Verification

A limited recalculation check of results from the raw data was completed for all methods as part of the Stage 3 data review. No errors were identified.

Summary of Precision, Accuracy, Representativeness, Comparability, and Completeness

The quality of the field sampling efforts and laboratory results was evaluated for compliance with project data quality objectives through a review of overall precision, accuracy, representativeness, comparability, and completeness (PARCC). Procedures used to assess PARCC are in accordance with the respective analytical methods and the Work Plan requirements.

Precision

Matrix precision from MS/MSDs was within-control. Matrix precision was also evaluated through the results of FDs and laboratory duplicates. FDs were within-control. Although there were some out-of-control results from laboratory duplicates (nitrate), overall, the results of the precision indicators show that the field team adequately collected representative samples and that the laboratory was capable of evaluating the matrix consistently.

Laboratory precision is shown to be acceptable by the repeated overall within-control performance (accuracy) of the LCSs. In cases where an LCS duplicate may have been analyzed, results were acceptable.

All results qualified from out-of-control precision were qualified as estimated concentrations. The methods and matrix precision are acceptable.

Accuracy

Overall, matrix accuracy from the MS/MSDs and surrogate spikes was acceptable. The accuracy of LCSs was predominantly within-control. Eighteen benzidine results may have a low-bias based on the out-of-control LCS recoveries. In some cases, the benzidine may have been rejected due to no or very poor recovery of the MS/MSD. Some rejected results due to MS/MSD recoveries are also noted for 3,3-dichlorobenzidine. Calibrations were within-control overall; therefore, the laboratory and matrix-related accuracy is acceptable.

The results qualified from out-of-control accuracy are considered estimated concentrations.

Representativeness

The sample data were representative of the site conditions at the time of sample collection. All samples were properly stored and preserved. Holding time error was not significant, and the estimated sample results are usable for project objectives. The results of field and laboratory blanks were generally at concentrations less than one half of the LOQs. Overall, blank contamination was indicative of normal laboratory and field sampling operations.

Comparability

All samples were reported in industry-standard units. Analytical protocols for the methods were followed. Results obtained are comparable to industry standards in that collection and analytical techniques followed approved and documented procedures.

Completeness

Overall, the completeness objective of 95 percent for water samples was met. The exceptions were four rejected results overall. The unusable data is the result of MS/MSD failure for poor responding compounds as discussed in the MS/MSD section. Individually, the rejected compounds may not meet the 95 percent completeness goal. However, given the long-term collection plan for the project and the large amount of historical data available, the unusable data are not expected to present a data gap.

Conclusions

The data generated from groundwater sample analyses are of sufficient quality and quantity to accomplish the project objectives. The sample results accurately indicate the presence and/or absence of target analyte contamination at the sampled locations. All samples were collected and analyzed as specified in the Work Plan.

The sample results are believed to be representative of the site conditions at the time of collection. Results obtained are comparable to industry standards, in that collection and analytical techniques followed approved and documented procedures. All results were reported in industry-standard units. Although blank contamination occurred, the concentrations were generally below one half of the LOQ and representative of normal laboratory procedures. In cases of elevated LOQs, LODs, and/or DLs due to matrix interference and/or high target analyte concentrations, the results obtained for the associated samples/analyses reflect the best achievable data for the site-specific conditions.

Reference

Innovar Environmental, Inc., 2015. *2015 Interim Measures Facility-Wide Groundwater Monitoring Plan, Version 8, Fort Wingate Depot Activity, McKinley County, New Mexico*. Final. Prepared for the U.S. Army Corps of Engineers, Albuquerque District. March 6.

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TABLE C-1
Sample Chronology, Data Summary
Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

Sample Name	Date Collected	Sample Type	6010C	6020A	6860	7470A	8015C DRO	8015C GRO	8081A	8260B	8270D	8330B	9056
BGMW01042016	4/15/2016		X	X	X	X			X	X	X	X	X
BGMW02042016	4/14/2016		X	X	X	X			X	X	X	X	X
BGMW02042016MS	4/14/2016	MS	X	X	X	X			X	X	X	X	X
BGMW02042016MSD	4/14/2016	MSD	X	X	X	X			X	X	X	X	X
BGMW03042016	4/8/2016		X	X	X	X			X	X	X	X	X
FW31042016	4/7/2016		X	X		X			X	X	X	X	X
FW31042016MS	4/7/2016	MS											X
FW31042016MSD	4/7/2016	MSD											X
MW01042016	4/6/2016		X	X	X	X	X	X	X	X		X	X
MW02042016	4/6-7/2016		X	X	X	X	X	X	X	X		X	X
MW03042016	4/12/2016		X	X	X	X	X	X		X		X	X
MW18D042016	4/12/2016		X	X	X	X	X	X		X		X	X
MW20042016	4/11/2016		X	X	X	X	X	X	X	X	X	X	X
MW22D042016	4/11/2016		X	X	X	X	X	X	X	X	X	X	X
MW22D042016MS	4/11/2016	MS	X	X	X	X	X	X	X	X	X	X	X
MW22D042016MSD	4/11/2016	MSD	X	X	X	X	X	X	X	X	X	X	X
MW22S042016	4/6-15/2016		X	X	X	X	X	X		X	X	X	X
MW23042016	4/7/2016		X	X	X	X			X	X	X	X	X
MW23042016MS	4/7/2016	MS	X	X	X	X			X	X	X	X	X
MW23042016MSD	4/7/2016	MSD	X	X	X	X			X	X	X	X	X
DMW23042016	4/7/2016	FD	X	X	X	X			X	X	X	X	X
MW24042016	4/6/2016		X	X	X	X			X	X	X	X	X
DMW24042016	4/6/2016	FD	X	X	X	X			X	X	X	X	X
SMW01042016	4/8/2016		X	X	X	X				X	X	X	X
SMW01042016MS	4/8/2016	MS			X								
SMW01042016MSD	4/8/2016	MSD			X								
TMW01042016	4/8/2016		X	X	X	X				X		X	X
TMW01042016MS	4/8/2016	MS	X	X		X							
TMW01042016MSD	4/8/2016	MSD	X	X		X							
TMW02042016	4/13/2016		X	X	X	X				X		X	X
TMW03042016	4/8/2016		X	X	X	X				X	X	X	X
TMW03042016MS	4/8/2016	MS		X									X
TMW03042016MSD	4/8/2016	MSD		X									X
TMW04042016	4/13/2016		X	X	X	X				X	X	X	X
TMW06042016	4/12/2016		X	X		X				X	X	X	X
TMW07042016	4/8/2016		X	X		X				X	X	X	X
TMW07042016MS	4/8/2016	MS											X
TMW07042016MSD	4/8/2016	MSD											X
TMW08042016	4/12/2016		X	X	X	X	X	X	X	X			X
TMW10042016	4/12/2016		X	X	X	X				X		X	X
TMW11042016	4/11/2016		X	X	X	X				X		X	X
TMW13042016	4/12/2016		X	X	X	X				X			X

TABLE C-1
Sample Chronology, Data Summary
Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

Sample Name	Date Collected	Sample Type	6010C	6020A	6860	7470A	8015C DRO	8015C GRO	8081A	8260B	8270D	8330B	9056
TMW13042016MS	4/12/2016	MS											X
TMW13042016MSD	4/12/2016	MSD											X
TMW14A042016	4/14/2016		X	X		X				X	X	X	X
TMW15042016	4/13/2016		X	X	X	X				X	X	X	X
DTW15042016	4/13/2016	FD	X	X	X	X				X	X	X	X
TMW16042016	4/7/2016		X	X	X	X				X	X	X	
TMW17042016	4/15/2016		X	X	X	X				X			X
TMW18042016	4/7/2016		X	X	X	X				X	X	X	X
TMW19042016	4/7/2016		X	X	X	X				X	X	X	
TMW21042016	4/11/2016		X	X	X	X				X		X	X
TMW22042016	4/8/2016		X	X	X	X				X	X	X	X
TMW23042016	4/8/2016		X	X	X	X			X	X		X	X
TMW24042016	4/15/2016		X	X	X	X			X	X		X	X
TMW25042016	4/13/2016		X	X		X				X		X	X
TMW26042016	4/8/2016		X	X	X	X				X		X	X
DTW26042016	4/8/2016	FD	X	X	X	X				X		X	X
TMW27042016	4/8/2016		X	X	X	X				X			
TMW28042016	4/11/2016		X	X		X				X			
TMW29042016	4/7/2016		X	X	X	X				X		X	X
TMW30042016	4/7/2016		X	X	X	X			X	X	X	X	X
TMW31D042016	4/13/2016		X	X	X	X			X	X	X	X	X
DTW31D042016	4/13/2016	FD	X	X	X	X			X	X	X	X	X
TMW31S042016	4/6/2016		X	X	X	X			X	X	X	X	X
TMW31S042016MS	4/6/2016	MS	X										
TMW31S042016MSD	4/6/2016	MSD	X										
TMW32042016	4/13/2016		X	X	X	X			X	X	X	X	X
TMW33042016	4/7/2016		X	X		X	X	X		X	X		X
TMW34042016	4/12/2016		X	X	X	X		X		X			X
DTW34042016	4/12/2016	FD	X	X	X	X		X		X			X
TMW35042016	4/11/2016		X	X	X	X		X	X	X	X		X
TMW36042016	4/7/2016		X	X	X	X			X	X	X	X	X
TMW37042016	4/7/2016		X	X	X	X			X	X	X	X	X
TMW38042016	4/14/2016		X	X	X	X			X	X	X	X	X
TMW39D042016	4/12/2016		X	X	X	X			X	X	X	X	X
TMW39D042016MS	4/12/2016	MS	X										
TMW39D042016MSD	4/12/2016	MSD	X										
TMW39S042016	4/6/2016		X	X	X								
TMW40D042016	4/12/2016		X	X	X	X				X	X	X	X
TMW40D042016MS	4/12/2016	MS	X										
TMW40D042016MSD	4/12/2016	MSD	X										
TMW40S042016	4/7-11/2016		X	X	X	X			X		X	X	X
TMW41042016	4/7/2016		X	X	X	X			X	X	X	X	X

TABLE C-1
Sample Chronology, Data Summary
Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

Sample Name	Date Collected	Sample Type	6010C	6020A	6860	7470A	8015C DRO	8015C GRO	8081A	8260B	8270D	8330B	9056
TMW43042016	4/13/2016		X	X	X	X			X	X	X	X	X
TMW43042016MS	4/13/2016	MS	X	X	X	X			X	X	X	X	X
TMW43042016MSD	4/13/2016	MSD	X	X	X	X			X	X	X	X	X
DTW43042016	4/13/2016	FD	X	X	X	X			X	X	X	X	X
TMW44042016	4/8/2016		X	X	X	X			X	X	X	X	X
TMW45042016	4/14/2016		X	X	X	X			X	X	X	X	X
TMW46042016	4/7/2016		X	X	X	X			X	X	X	X	X
TMW47042016	4/14/2016		X	X	X	X			X	X	X	X	X
TMW48042016	4/12/2016		X	X	X	X			X	X	X	X	X
TMW49042016	4/14/2016		X	X	X	X			X	X	X	X	X

Notes:

DRO = diesel range organics

FD = field duplicate

GRO = gasoline range organics

MS = matrix spike

MSD = matrix spike duplicate

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TABLE C-2

Laboratory and Field Sample Identifiers for Stage 3 Data Review*Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity*

Field Sample ID	Laboratroy Sample ID
MW20042016	280-81784-11
MW22D042016	280-81784-9
MW22D042016MS	280-81784-9MS
MW22D042016MSD	280-81784-9MSD
MW22S042016	280-81784-7
MW22S042016	280-81784-8
TB-09-042016	280-81784-1
TB-10-042016	280-81784-2
TMW11042016	280-81784-5
TMW21042016	280-81784-3
TMW28042016	280-81784-6
TMW35042016	280-81784-10
TMW40S042016	280-81784-4

Notes:

ID = identifier

MS = matrix spike

MSD = matrix spike duplicate

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TABLE C-3

Summary of Data Qualifications by Reason

Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

[illegible]

TABLE C-3
Summary of Data Qualifications by Reason
Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

Sample ID	Method	Analyte	Laboratory Sample ID	Analysis Type	Holding Time	Method Blanks	Surrogate Recovery	MS Recovery	LCS Recovery	LCS RPD	Laboratroy Duplicate	Equipment Blank	Trip Blank	CCV	Professional Judgement
DTW34042016	8260B	METHYLENE CHLORIDE	280-81885-9			U									
DTW43042016	6010C	POTASSIUM	280-81933-12	Dissolved				J							
DTW43042016	6020A	MANGANESE	280-81933-12	Dissolved										J	
DTW43042016	6020A	MANGANESE	280-81933-12	Total										J	
DTW43042016	8260B	ACETONE	280-81933-12			U							U		
DTW43042016	8270D	BENZIDINE	280-81933-12						UJ						
DTW43042016	9056	NITRATE	280-81933-12	Total	J										
DTW43042016	9056	NITRITE	280-81933-12	Total	UJ										
FW31042016	6010C	ALUMINUM	280-81652-4	Total				J							
FW31042016	6010C	IRON	280-81652-4	Total				J							
FW31042016	6020A	ANTIMONY	280-81652-4	Dissolved								U			
FW31042016	6020A	BARIUM	280-81652-4	Dissolved										J	
FW31042016	6020A	BARIUM	280-81652-4	Total				J						J	
FW31042016	6020A	MANGANESE	280-81652-4	Dissolved								U			
FW31042016	6020A	THALLIUM	280-81652-4	Dissolved								U			
FW31042016	6020A	ZINC	280-81652-4	Dissolved								U			
FW31042016	6020A	ZINC	280-81652-4	Total								U			
MW01042016	6010C	ALUMINUM	280-81614-6	Total				J							
MW01042016	6010C	IRON	280-81614-6	Total				J							
MW01042016	6020A	MANGANESE	280-81614-6	Total										J	
MW01042016	6020A	MANGANESE	280-81614-6	Dissolved										J	
MW01042016	6020A	VANADIUM	280-81614-6	Total								U			
MW01042016	8015C DRO	DIESEL RANGE ORGANICS	280-81614-6									U			
MW01042016	8081A	4,4'-DDD	280-81614-6				UJ								
MW01042016	8081A	4,4'-DDE	280-81614-6				UJ								
MW01042016	8081A	4,4'-DDT	280-81614-6				UJ								
MW01042016	8081A	ALDRIN	280-81614-6				UJ								
MW01042016	8081A	ALPHA-BHC	280-81614-6				UJ								
MW01042016	8081A	ALPHA-CHLORDANE	280-81614-6				UJ								
MW01042016	8081A	BETA-BHC	280-81614-6				UJ								
MW01042016	8081A	DELTA-BHC	280-81614-6				UJ								
MW01042016	8081A	DIELDRIN	280-81614-6				UJ								
MW01042016	8081A	ENDOSULFAN I	280-81614-6				UJ								
MW01042016	8081A	ENDOSULFAN II	280-81614-6				UJ								
MW01042016	8081A	ENDOSULFAN SULFATE	280-81614-6				UJ								
MW01042016	8081A	ENDRIN	280-81614-6				UJ								
MW01042016	8081A	ENDRIN ALDEHYDE	280-81614-6				UJ								
MW01042016	8081A	ENDRIN KETONE	280-81614-6				UJ								
MW01042016	8081A	GAMMA-BHC	280-81614-6				UJ								
MW01042016	8081A	GAMMA-CHLORDANE	280-81614-6				UJ								
MW01042016	8081A	HEPTACHLOR	280-81614-6				UJ								
MW01042016	8081A	HEPTACHLOR EPOXIDE	280-81614-6				UJ								
MW01042016	8081A	METHOXYCHLOR	280-81614-6				UJ								
MW01042016	8081A	TOXAPHENE	280-81614-6				UJ								
MW02042016	6010C	ALUMINUM	280-81614-5	Total				J							

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Summary of Data Qualifications by Reason

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[illegible]

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Summary of Data Qualifications by Reason
Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

Sample ID	Method	Analyte	Laboratory Sample ID	Analysis Type	Holding Time	Method Blanks	Surrogate Recovery	MS Recovery	LCS Recovery	LCS RPD	Laboratroy Duplicate	Equipment Blank	Trip Blank	CCV	Professional Judgement
MW18D042016	8260B	CARBON TETRACHLORIDE	280-81885-14		UJ										
MW18D042016	8260B	CHLOROBENZENE	280-81885-14		UJ										
MW18D042016	8260B	CHLOROETHANE	280-81885-14		UJ										
MW18D042016	8260B	CHLOROFORM	280-81885-14		UJ										
MW18D042016	8260B	CHLOROMETHANE	280-81885-14		UJ										
MW18D042016	8260B	CIS-1,2-DICHLOROETHENE	280-81885-14		UJ										
MW18D042016	8260B	CIS-1,3-DICHLOROPROPENE	280-81885-14		UJ										
MW18D042016	8260B	CUMENE	280-81885-14		UJ										
MW18D042016	8260B	DIBROMOCHLOROMETHANE	280-81885-14		UJ										
MW18D042016	8260B	DIBROMOMETHANE	280-81885-14		UJ										
MW18D042016	8260B	DICHLORODIFLUOROMETHANE	280-81885-14		UJ										
MW18D042016	8260B	ETHYLBENZENE	280-81885-14		UJ										
MW18D042016	8260B	HEXACHLOROBUTADIENE	280-81885-14		UJ										
MW18D042016	8260B	m,p-Xylene	280-81885-14		UJ										
MW18D042016	8260B	METHYL ACETATE	280-81885-14		UJ										
MW18D042016	8260B	METHYL TERT-BUTYL ETHER	280-81885-14		UJ										
MW18D042016	8260B	Methylcyclohexane	280-81885-14		UJ										
MW18D042016	8260B	METHYLENE CHLORIDE	280-81885-14		UJ										
MW18D042016	8260B	NAPHTHALENE	280-81885-14		UJ										
MW18D042016	8260B	N-BUTYLBENZENE	280-81885-14		UJ										
MW18D042016	8260B	N-PROPYLBENZENE	280-81885-14		UJ										
MW18D042016	8260B	O-XYLENE	280-81885-14		UJ										
MW18D042016	8260B	P-ISOPROPYLTOLUENE	280-81885-14		UJ										
MW18D042016	8260B	SEC-BUTYLBENZENE	280-81885-14		UJ										
MW18D042016	8260B	STYRENE	280-81885-14		UJ										
MW18D042016	8260B	TERT-BUTYLBENZENE	280-81885-14		UJ										
MW18D042016	8260B	TETRACHLOROETHENE	280-81885-14		UJ										
MW18D042016	8260B	TOLUENE	280-81885-14		UJ										
MW18D042016	8260B	TRANS-1,2-DICHLOROETHENE	280-81885-14		UJ										
MW18D042016	8260B	TRANS-1,3-DICHLOROPROPENE	280-81885-14		UJ										
MW18D042016	8260B	TRICHLOROETHENE	280-81885-14		UJ										
MW18D042016	8260B	TRICHLOROFLUOROMETHANE	280-81885-14		UJ										
MW18D042016	8260B	VINYL CHLORIDE	280-81885-14		UJ										
MW18D042016	8330B	1,2-DINITROBENZENE	280-81885-14				J								
MW18D042016	8330B	1,3,5-TRINITROBENZENE	280-81885-14				UJ								
MW18D042016	8330B	1,3-DINITROBENZENE	280-81885-14				UJ								
MW18D042016	8330B	2,4,6-TRINITROTOLUENE	280-81885-14				UJ								
MW18D042016	8330B	2,4-DINITROTOLUENE	280-81885-14				UJ								
MW18D042016	8330B	2,6-DINITROTOLUENE	280-81885-14				UJ								
MW18D042016	8330B	2-AMINO-4,6-DINITROTOLUENE	280-81885-14				UJ								
MW18D042016	8330B	2-NITROTOLUENE	280-81885-14				UJ								
MW18D042016	8330B	3-NITROTOLUENE	280-81885-14				UJ								
MW18D042016	8330B	4-AMINO-2,6-DINITROTOLUENE	280-81885-14				UJ								
MW18D042016	8330B	4-NITROTOLUENE	280-81885-14				UJ								
MW18D042016	8330B	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	280-81885-14				UJ								

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MW18D042016	8330B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE	280-81885-14				UJ								
MW18D042016	8330B	NITROBENZENE	280-81885-14				UJ								
MW18D042016	8330B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	280-81885-14				UJ								
MW20042016	6010C	POTASSIUM	280-81784-11	Dissolved				J							
MW20042016	6010C	POTASSIUM	280-81784-11	Total				J							
MW20042016	6020A	BERYLLIUM	280-81784-11	Total		U									
MW20042016	6020A	VANADIUM	280-81784-11	Dissolved		U									
MW20042016	8270D	BENZIDINE	280-81784-11						UJ						
MW22D042016	6010C	POTASSIUM	280-81784-9	Dissolved				J							
MW22D042016	6010C	POTASSIUM	280-81784-9	Total				J							
MW22D042016	6020A	VANADIUM	280-81784-9	Dissolved		U									
MW22D042016	8270D	3,3'-DICHLOROBENZIDINE	280-81784-9					R							
MW22D042016	8270D	3-NITROANILINE	280-81784-9					UJ							
MW22D042016	8270D	BENZIDINE	280-81784-9					R	UJ						
MW22S042016	6010C	IRON	280-81933-7	Dissolved										J	
MW22S042016	6010C	POTASSIUM	280-81933-7	Dissolved				J							
MW22S042016	6020A	MANGANESE	280-81933-7	Dissolved										J	
MW22S042016	8015C DRO	DIESEL RANGE ORGANICS	280-82026-5			U									
MW22S042016	8270D	BENZIDINE	280-81707-15						UJ						
MW23042016	6010C	ALUMINUM	280-81652-9	Total				J							
MW23042016	6010C	IRON	280-81652-9	Total				J							
MW23042016	6020A	BARIUM	280-81652-9	Dissolved										J	
MW23042016	6020A	BARIUM	280-81652-9	Total				J						J	
MW23042016	6020A	ZINC	280-81652-9	Dissolved								U			
MW23042016	6020A	ZINC	280-81652-9	Total								U			
MW23042016	8270D	2-NITROANILINE	280-81652-9					UJ							
MW23042016	8270D	3,3'-DICHLOROBENZIDINE	280-81652-9					UJ							
MW23042016	8270D	3-NITROANILINE	280-81652-9					UJ							
MW23042016	8270D	4-CHLOROANILINE	280-81652-9					UJ							
MW23042016	8270D	4-NITROANILINE	280-81652-9					UJ							
MW23042016	8270D	BENZIDINE	280-81652-9					R							
MW23042016	8330B	2,6-DINITROTOLUENE	280-81652-9					UJ							
MW23042016	8330B	2-AMINO-4,6-DINITROTOLUENE	280-81652-9					UJ							
MW23042016	8330B	2-NITROTOLUENE	280-81652-9					UJ							
MW23042016	8330B	3-NITROTOLUENE	280-81652-9					UJ							
MW23042016	8330B	4-AMINO-2,6-DINITROTOLUENE	280-81652-9					UJ							
MW23042016	8330B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	280-81652-9					UJ							
MW23042016MS	8330B	1,2-DINITROBENZENE	280-81652-9MS				J								
MW24042016	6010C	ALUMINUM	280-81614-8	Total				J							
MW24042016	6010C	IRON	280-81614-8	Total				J							
MW24042016	6020A	MANGANESE	280-81614-8	Total										J	
MW24042016	6020A	MANGANESE	280-81614-8	Dissolved										J	
MW24042016	8260B	TOLUENE	280-81614-8										U		
SMW01042016	6010C	CALCIUM	280-81707-13	Total				J							
SMW01042016	6020A	SILVER	280-81707-13	Dissolved											UJ

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SMW01042016	9056	NITRATE	280-81707-13	Total							UJ				
TMW01042016	6010C	CALCIUM	280-81707-3	Total				J							
TMW01042016	6020A	BERYLLIUM	280-81707-3	Total		U									
TMW01042016	6020A	SILVER	280-81707-3	Dissolved											UJ
TMW01042016	6020A	THALLIUM	280-81707-3	Total		U									
TMW01042016	6860	PERCHLORATE	280-81707-3					J							
TMW01042016	8260B	METHYLENE CHLORIDE	280-81707-3			U							U		
TMW01042016	9056	NITRATE	280-81707-3	Total							J				
TMW02042016	6010C	POTASSIUM	280-81933-10	Dissolved				J							
TMW02042016	6020A	MANGANESE	280-81933-10	Total										J	
TMW02042016	8260B	ACETONE	280-81933-10			U							U		
TMW02042016	8330B	1,3-DINITROBENZENE	280-81933-10												J
TMW02042016	8330B	2-AMINO-4,6-DINITROTOLUENE	280-81933-10												J
TMW02042016	8330B	4-AMINO-2,6-DINITROTOLUENE	280-81933-10												J
TMW02042016	8330B	NITROBENZENE	280-81933-10			U									J
TMW02042016	8330B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	280-81933-10												J
TMW02042016	9056	NITRATE	280-81933-10	Total	J										
TMW02042016	9056	NITRITE	280-81933-10	Total	UJ										
TMW03042016	6010C	CALCIUM	280-81707-4	Total				J							
TMW03042016	6020A	BERYLLIUM	280-81707-4	Total		U									
TMW03042016	6020A	SILVER	280-81707-4	Dissolved											UJ
TMW03042016	6860	PERCHLORATE	280-81707-4					J							
TMW03042016	8260B	METHYLENE CHLORIDE	280-81707-4			U							U		
TMW03042016	8270D	BENZO(A)PYRENE	280-81707-4												
TMW03042016	8270D	BENZO(B)FLUORANTHENE	280-81707-4												
TMW03042016	8270D	BENZO(G,H,I)PERYLENE	280-81707-4												
TMW03042016	8270D	BENZO(K)FLUORANTHENE	280-81707-4												
TMW03042016	8270D	DIBENZ(A,H)ANTHRACENE	280-81707-4												
TMW03042016	8330B	1,2-DINITROBENZENE	280-81707-4				J								
TMW03042016	8330B	1,3-DINITROBENZENE	280-81707-4				UJ								
TMW03042016	8330B	2,4,6-TRINITROTOLUENE	280-81707-4				UJ								
TMW03042016	8330B	2,4-DINITROTOLUENE	280-81707-4				J								J
TMW03042016	8330B	2,6-DINITROTOLUENE	280-81707-4				UJ								
TMW03042016	8330B	2-AMINO-4,6-DINITROTOLUENE	280-81707-4				J								J
TMW03042016	8330B	2-NITROTOLUENE	280-81707-4				UJ								
TMW03042016	8330B	3-NITROTOLUENE	280-81707-4				UJ								
TMW03042016	8330B	4-AMINO-2,6-DINITROTOLUENE	280-81707-4				J								J
TMW03042016	8330B	4-NITROTOLUENE	280-81707-4				UJ								
TMW03042016	8330B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE	280-81707-4				UJ								
TMW03042016	8330B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	280-81707-4				J								
TMW03042016	9056	NITRATE	280-81707-4	Total	J			J							
TMW04042016	6010C	IRON	280-81933-13	Total										J	
TMW04042016	6010C	POTASSIUM	280-81933-13	Dissolved				J							
TMW04042016	6020A	MANGANESE	280-81933-13	Dissolved										J	
TMW04042016	6020A	MANGANESE	280-81933-13	Total										J	

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TMW04042016	8260B	ACETONE	280-81933-13			U							U		
TMW04042016	8270D	BENZIDINE	280-81933-13						UJ						
TMW04042016	8330B	4-AMINO-2,6-DINITROTOLUENE	280-81933-13												J
TMW04042016	9056	NITRATE	280-81933-13	Total	J										
TMW04042016	9056	NITRITE	280-81933-13	Total	UJ										
TMW06042016	6020A	ZINC	280-81885-10	Total		U									
TMW06042016	8270D	BENZIDINE	280-81885-10						UJ						
TMW06042016	8330B	1,2-DINITROBENZENE	280-81885-10				J								
TMW06042016	8330B	1,3,5-TRINITROBENZENE	280-81885-10				UJ								
TMW06042016	8330B	1,3-DINITROBENZENE	280-81885-10				UJ								
TMW06042016	8330B	2,4,6-TRINITROTOLUENE	280-81885-10				UJ								
TMW06042016	8330B	2,4-DINITROTOLUENE	280-81885-10				UJ								
TMW06042016	8330B	2,6-DINITROTOLUENE	280-81885-10				UJ								
TMW06042016	8330B	2-AMINO-4,6-DINITROTOLUENE	280-81885-10				UJ								
TMW06042016	8330B	2-NITROTOLUENE	280-81885-10				UJ								
TMW06042016	8330B	3-NITROTOLUENE	280-81885-10				UJ								
TMW06042016	8330B	4-AMINO-2,6-DINITROTOLUENE	280-81885-10				UJ								
TMW06042016	8330B	4-NITROTOLUENE	280-81885-10				UJ								
TMW06042016	8330B	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	280-81885-10				UJ								
TMW06042016	8330B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE	280-81885-10				UJ								
TMW06042016	8330B	NITROBENZENE	280-81885-10				UJ								
TMW06042016	8330B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	280-81885-10				UJ								
TMW07042016	6010C	CALCIUM	280-81707-7	Total				J							
TMW07042016	6020A	SILVER	280-81707-7	Dissolved											UJ
TMW07042016	8330B	1,3,5-TRINITROBENZENE	280-81707-7				UJ								
TMW07042016	8330B	1,3-DINITROBENZENE	280-81707-7				UJ								
TMW07042016	8330B	2,4,6-TRINITROTOLUENE	280-81707-7				UJ								
TMW07042016	8330B	2,4-DINITROTOLUENE	280-81707-7				UJ								
TMW07042016	8330B	2,6-DINITROTOLUENE	280-81707-7				UJ								
TMW07042016	8330B	2-AMINO-4,6-DINITROTOLUENE	280-81707-7				UJ								
TMW07042016	8330B	2-NITROTOLUENE	280-81707-7				UJ								
TMW07042016	8330B	3-NITROTOLUENE	280-81707-7				UJ								
TMW07042016	8330B	4-AMINO-2,6-DINITROTOLUENE	280-81707-7				UJ								
TMW07042016	8330B	4-NITROTOLUENE	280-81707-7				UJ								
TMW07042016	8330B	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	280-81707-7				UJ								
TMW07042016	8330B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE	280-81707-7				UJ								
TMW07042016	8330B	NITROBENZENE	280-81707-7				UJ								
TMW07042016	8330B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	280-81707-7				UJ								
TMW07042016	9056	NITRATE	280-81707-7	Total							J				
TMW08042016	6020A	ZINC	280-81885-11	Total		U									
TMW08042016	8015C DRO	DIESEL RANGE ORGANICS	280-81885-11			U									
TMW08042016	8015C GRO	GASOLINE RANGE ORGANICS	280-81885-11		UJ										
TMW10042016	6020A	ZINC	280-81885-13	Total		U									
TMW11042016	6010C	POTASSIUM	280-81784-5	Dissolved				J							
TMW11042016	6010C	POTASSIUM	280-81784-5	Total				J							

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TMW11042016	6020A	BERYLLIUM	280-81784-5	Total		U									
TMW11042016	6020A	VANADIUM	280-81784-5	Dissolved		U									
TMW13042016	6020A	THALLIUM	280-81885-5	Total		U									
TMW13042016	8260B	TOLUENE	280-81885-5										U		
TMW14A042016	6010C	IRON	280-81998-4	Total										J	
TMW14A042016	6010C	POTASSIUM	280-81998-4	Dissolved		U									
TMW15042016	6010C	POTASSIUM	280-81933-8	Dissolved				J							
TMW15042016	8260B	ACETONE	280-81933-8			U							U		
TMW15042016	8270D	BENZIDINE	280-81933-8						UJ						
TMW15042016	9056	NITRATE	280-81933-8	Total	J										
TMW15042016	9056	NITRITE	280-81933-8	Total	UJ										
TMW16042016	6010C	ALUMINUM	280-81652-17	Total				J							
TMW16042016	6010C	IRON	280-81652-17	Total				J							
TMW16042016	6020A	BARIUM	280-81652-17	Dissolved										J	
TMW16042016	6020A	BARIUM	280-81652-17	Total				J						J	
TMW16042016	6020A	ZINC	280-81652-17	Dissolved								U			
TMW16042016	8260B	METHYLENE CHLORIDE	280-81652-17			U						U	U		
TMW16042016	8260B	TOLUENE	280-81652-17										U		
TMW17042016	6010C	POTASSIUM	280-82026-4	Dissolved		U									
TMW17042016	6020A	SILVER	280-82026-4	Total		U									
TMW17042016	6020A	ZINC	280-82026-4	Dissolved		U									
TMW17042016	6860	PERCHLORATE	280-82026-4											UJ	
TMW18042016	6010C	ALUMINUM	280-81652-15	Total				J							
TMW18042016	6010C	IRON	280-81652-15	Total				J							
TMW18042016	6020A	BARIUM	280-81652-15	Dissolved										J	
TMW18042016	6020A	BARIUM	280-81652-15	Total				J						J	
TMW18042016	6020A	NICKEL	280-81652-15	Total								U			
TMW18042016	6020A	ZINC	280-81652-15	Dissolved								U			
TMW18042016	6020A	ZINC	280-81652-15	Total								U			
TMW18042016	8260B	METHYLENE CHLORIDE	280-81652-15			U						U	U		
TMW18042016	8270D	ACETOPHENONE	280-81652-15									U			
TMW19042016	6010C	ALUMINUM	280-81652-16	Total				J							
TMW19042016	6010C	IRON	280-81652-16	Total				J							
TMW19042016	6020A	BARIUM	280-81652-16	Dissolved										J	
TMW19042016	6020A	BARIUM	280-81652-16	Total				J						J	
TMW19042016	6020A	ZINC	280-81652-16	Total								U			
TMW19042016	8260B	METHYLENE CHLORIDE	280-81652-16			U						U	U		
TMW19042016	8260B	TOLUENE	280-81652-16										U		
TMW21042016	6010C	POTASSIUM	280-81784-3	Dissolved				J							
TMW21042016	6010C	POTASSIUM	280-81784-3	Total				J							
TMW21042016	6020A	VANADIUM	280-81784-3	Dissolved		U									
TMW22042016	6010C	CALCIUM	280-81707-8	Total				J							
TMW22042016	6020A	SILVER	280-81707-8	Dissolved											UJ
TMW22042016	6860	PERCHLORATE	280-81707-8					J							
TMW22042016	8260B	1,1,1,2-TETRACHLOROETHANE	280-81707-8		UJ										

TABLE C-3

Summary of Data Qualifications by Reason

Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

Sample ID	Method	Analyte	Laboratory Sample ID	Analysis Type	Holding Time	Method Blanks	Surrogate Recovery	MS Recovery	LCS Recovery	LCS RPD	Laboratroy Duplicate	Equipment Blank	Trip Blank	CCV	Professional Judgement
TMW22042016	8260B	1,1,1-TRICHLOROETHANE	280-81707-8		UJ										
TMW22042016	8260B	1,1,2,2-TETRACHLOROETHANE	280-81707-8		UJ										
TMW22042016	8260B	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	280-81707-8		UJ										
TMW22042016	8260B	1,1,2-TRICHLOROETHANE	280-81707-8		UJ										
TMW22042016	8260B	1,1-DICHLOROETHANE	280-81707-8		UJ										
TMW22042016	8260B	1,1-DICHLOROETHENE	280-81707-8		UJ										
TMW22042016	8260B	1,1-DICHLOROPROPENE	280-81707-8		UJ										
TMW22042016	8260B	1,2,3-TRICHLOROBENZENE	280-81707-8		UJ										
TMW22042016	8260B	1,2,3-TRICHLOROPROPANE	280-81707-8		UJ										
TMW22042016	8260B	1,2,4-TRICHLOROBENZENE	280-81707-8		UJ										
TMW22042016	8260B	1,2,4-TRIMETHYLBENZENE	280-81707-8		UJ										
TMW22042016	8260B	1,2-DIBROMO-3-CHLOROPROPANE	280-81707-8		UJ										
TMW22042016	8260B	1,2-DIBROMOETHANE	280-81707-8		UJ										
TMW22042016	8260B	1,2-DICHLOROBENZENE	280-81707-8		UJ										
TMW22042016	8260B	1,2-DICHLOROETHANE	280-81707-8		UJ										
TMW22042016	8260B	1,2-DICHLOROPROPANE	280-81707-8		UJ										
TMW22042016	8260B	1,3,5-TRIMETHYLBENZENE	280-81707-8		UJ										
TMW22042016	8260B	1,3-DICHLOROBENZENE	280-81707-8		UJ										
TMW22042016	8260B	1,3-DICHLOROPROPANE	280-81707-8		UJ										
TMW22042016	8260B	1,4-DICHLOROBENZENE	280-81707-8		UJ										
TMW22042016	8260B	2,2-DICHLOROPROPANE	280-81707-8		UJ										
TMW22042016	8260B	2-BUTANONE	280-81707-8		UJ										
TMW22042016	8260B	2-CHLOROTOLUENE	280-81707-8		UJ										
TMW22042016	8260B	2-HEXANONE	280-81707-8		UJ										
TMW22042016	8260B	4-CHLOROTOLUENE	280-81707-8		UJ										
TMW22042016	8260B	4-METHYL-2-PENTANONE	280-81707-8		UJ										
TMW22042016	8260B	ACETONE	280-81707-8		UJ										
TMW22042016	8260B	BENZENE	280-81707-8		UJ										
TMW22042016	8260B	BROMOBENZENE	280-81707-8		UJ										
TMW22042016	8260B	BROMOCHLOROMETHANE	280-81707-8		UJ										
TMW22042016	8260B	BROMODICHLOROMETHANE	280-81707-8		UJ										
TMW22042016	8260B	BROMOFORM	280-81707-8		UJ										
TMW22042016	8260B	BROMOMETHANE	280-81707-8		UJ										
TMW22042016	8260B	CARBON DISULFIDE	280-81707-8		UJ										
TMW22042016	8260B	CARBON TETRACHLORIDE	280-81707-8		UJ										
TMW22042016	8260B	CHLOROBENZENE	280-81707-8		UJ										
TMW22042016	8260B	CHLOROETHANE	280-81707-8		UJ										
TMW22042016	8260B	CHLOROFORM	280-81707-8		UJ										
TMW22042016	8260B	CHLOROMETHANE	280-81707-8		UJ										
TMW22042016	8260B	CIS-1,2-DICHLOROETHENE	280-81707-8		UJ										
TMW22042016	8260B	CIS-1,3-DICHLOROPROPENE	280-81707-8		UJ										
TMW22042016	8260B	CUMENE	280-81707-8		UJ										
TMW22042016	8260B	DIBROMOCHLOROMETHANE	280-81707-8		UJ										
TMW22042016	8260B	DIBROMOMETHANE	280-81707-8		UJ										
TMW22042016	8260B	DICHLORODIFLUOROMETHANE	280-81707-8		UJ										

TABLE C-3

Summary of Data Qualifications by Reason

Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

[illegible]

TABLE C-3
Summary of Data Qualifications by Reason
Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

[illegible]

TABLE C-3

Summary of Data Qualifications by Reason

Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

Sample ID	Method	Analyte	Laboratory Sample ID	Analysis Type	Holding Time	Method Blanks	Surrogate Recovery	MS Recovery	LCS Recovery	LCS RPD	Laboratroy Duplicate	Equipment Blank	Trip Blank	CCV	Professional Judgement
TMW31S042016	6020A	MANGANESE	280-81614-3	Dissolved										J	
TMW32042016	6010C	POTASSIUM	280-81933-5	Dissolved				J							
TMW32042016	6020A	MANGANESE	280-81933-5	Dissolved										J	
TMW32042016	6020A	MANGANESE	280-81933-5	Total										J	
TMW32042016	8260B	ACETONE	280-81933-5			U							U		
TMW32042016	8270D	BENZIDINE	280-81933-5						UJ						
TMW32042016	9056	NITRATE	280-81933-5	Total	J										
TMW32042016	9056	NITRITE	280-81933-5	Total	J										
TMW33042016	6010C	ALUMINUM	280-81652-7	Total				J							
TMW33042016	6010C	IRON	280-81652-7	Total				J							
TMW33042016	6020A	BARIUM	280-81652-7	Dissolved										J	
TMW33042016	6020A	BARIUM	280-81652-7	Total				J						J	
TMW33042016	6020A	ZINC	280-81652-7	Dissolved								U			
TMW33042016	6020A	ZINC	280-81652-7	Total								U			
TMW33042016	8015C DRO	DIESEL RANGE ORGANICS	280-81652-7									U			
TMW33042016	8260B	METHYLENE CHLORIDE	280-81652-7			U						U	U		
TMW34042016	8015C GRO	GASOLINE RANGE ORGANICS	280-81885-8		UJ										
TMW35042016	6010C	POTASSIUM	280-81784-10	Dissolved				J							
TMW35042016	6010C	POTASSIUM	280-81784-10	Total				J							
TMW35042016	6020A	BERYLLIUM	280-81784-10	Total		U									
TMW35042016	6020A	VANADIUM	280-81784-10	Dissolved		U									
TMW35042016	8270D	BENZIDINE	280-81784-10						UJ						
TMW36042016	6010C	ALUMINUM	280-81652-13	Total				J							
TMW36042016	6010C	IRON	280-81652-13	Total				J							
TMW36042016	6020A	BARIUM	280-81652-13	Dissolved										J	
TMW36042016	6020A	BARIUM	280-81652-13	Total				J						J	
TMW36042016	6020A	ZINC	280-81652-13	Dissolved								U			
TMW36042016	8260B	TOLUENE	280-81652-13										U		
TMW37042016	6010C	ALUMINUM	280-81652-14	Total				J							
TMW37042016	6010C	IRON	280-81652-14	Total				J							
TMW37042016	6020A	BARIUM	280-81652-14	Dissolved										J	
TMW37042016	6020A	BARIUM	280-81652-14	Total				J						J	
TMW37042016	6020A	ZINC	280-81652-14	Dissolved								U			
TMW37042016	8260B	METHYLENE CHLORIDE	280-81652-14			U						U	U		
TMW37042016	8260B	TOLUENE	280-81652-14										U		
TMW38042016	6010C	IRON	280-81998-3	Dissolved		U								J	
TMW38042016	6010C	IRON	280-81998-3	Total										J	
TMW38042016	8260B	NAPHTHALENE	280-81998-3			U							U		
TMW39D042016	6020A	THALLIUM	280-81885-3	Total		U									
TMW39D042016	8270D	BENZIDINE	280-81885-3						UJ						
TMW39D042016	8330B	1,2-DINITROBENZENE	280-81885-3				J								
TMW39S042016	6010C	ALUMINUM	280-81614-4	Total				J							
TMW39S042016	6010C	IRON	280-81614-4	Total				J							
TMW39S042016	6020A	MANGANESE	280-81614-4	Total										J	
TMW39S042016	6020A	MANGANESE	280-81614-4	Dissolved										J	

TABLE C-3
Summary of Data Qualifications by Reason
Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

Sample ID	Method	Analyte	Laboratory Sample ID	Analysis Type	Holding Time	Method Blanks	Surrogate Recovery	MS Recovery	LCS Recovery	LCS RPD	Laboratroy Duplicate	Equipment Blank	Trip Blank	CCV	Professional Judgement
TMW40D042016	6020A	ZINC	280-81885-4	Total		U									
TMW40D042016	8270D	BENZIDINE	280-81885-4						UJ						
TMW40S042016	6010C	CALCIUM	280-81707-5	Total				J							
TMW40S042016	6010C	POTASSIUM	280-81784-4	Dissolved				J							
TMW40S042016	6020A	THALLIUM	280-81707-5	Total		U									
TMW40S042016	8260B	METHYLENE CHLORIDE	280-81652-19			U						U	U		
TMW40S042016	8270D	BENZIDINE	280-81784-4						UJ						
TMW40S042016	8330B	1,2-DINITROBENZENE	280-81652-19				J								
TMW40S042016	8330B	2,4,6-TRINITROTOLUENE	280-81652-19												J
TMW40S042016	8330B	2-AMINO-4,6-DINITROTOLUENE	280-81652-19				J								J
TMW40S042016	8330B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	280-81652-19				J								J
TMW41042016	6010C	ALUMINUM	280-81652-6	Total				J							
TMW41042016	6010C	IRON	280-81652-6	Total				J							
TMW41042016	6020A	BARIUM	280-81652-6	Dissolved										J	
TMW41042016	6020A	BARIUM	280-81652-6	Total				J						J	
TMW41042016	6020A	NICKEL	280-81652-6	Total								U			
TMW41042016	6020A	ZINC	280-81652-6	Dissolved								U			
TMW41042016	6020A	ZINC	280-81652-6	Total								U			
TMW43042016	6010C	POTASSIUM	280-81933-11	Dissolved				J							
TMW43042016	6020A	MANGANESE	280-81933-11	Dissolved										J	
TMW43042016	6020A	MANGANESE	280-81933-11	Total										J	
TMW43042016	8260B	ACETONE	280-81933-11			U							U		
TMW43042016	8260B	METHYLENE CHLORIDE	280-81933-11					UJ							
TMW43042016	8270D	3,3'-DICHLOROBENZIDINE	280-81933-11					UJ							
TMW43042016	8270D	BENZIDINE	280-81933-11					R	UJ						
TMW43042016	8330B	2,4-DINITROTOLUENE	280-81933-11					UJ							
TMW43042016	8330B	2-AMINO-4,6-DINITROTOLUENE	280-81933-11					UJ							
TMW43042016	8330B	2-NITROTOLUENE	280-81933-11					UJ							
TMW43042016	8330B	3-NITROTOLUENE	280-81933-11					UJ							
TMW43042016	8330B	4-AMINO-2,6-DINITROTOLUENE	280-81933-11					UJ							
TMW43042016	8330B	4-NITROTOLUENE	280-81933-11					UJ							
TMW43042016	8330B	NITROBENZENE	280-81933-11			U									
TMW43042016	8330B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	280-81933-11												J
TMW43042016	9056	NITRATE	280-81933-11	Total	J										
TMW44042016	6010C	CALCIUM	280-81707-6	Total				J							
TMW44042016	6020A	SILVER	280-81707-6	Dissolved											UJ
TMW44042016	6860	PERCHLORATE	280-81707-6					J							
TMW44042016	8330B	1,3,5-TRINITROBENZENE	280-81707-6				UJ								
TMW44042016	8330B	1,3-DINITROBENZENE	280-81707-6				UJ								
TMW44042016	8330B	2,4,6-TRINITROTOLUENE	280-81707-6				UJ								
TMW44042016	8330B	2,4-DINITROTOLUENE	280-81707-6				UJ								
TMW44042016	8330B	2,6-DINITROTOLUENE	280-81707-6				UJ								
TMW44042016	8330B	2-AMINO-4,6-DINITROTOLUENE	280-81707-6				UJ								
TMW44042016	8330B	2-NITROTOLUENE	280-81707-6				UJ								
TMW44042016	8330B	3-NITROTOLUENE	280-81707-6				UJ								

TABLE C-3
Summary of Data Qualifications by Reason
Groundwater Periodic Monitoring Report, Spring 2016 Sample Collections, Fort Wingate Depot Activity

Sample ID	Method	Analyte	Laboratory Sample ID	Analysis Type	Holding Time	Method Blanks	Surrogate Recovery	MS Recovery	LCS Recovery	LCS RPD	Laboratroy Duplicate	Equipment Blank	Trip Blank	CCV	Professional Judgement
TMW44042016	8330B	4-AMINO-2,6-DINITROTOLUENE	280-81707-6				UJ								
TMW44042016	8330B	4-NITROTOLUENE	280-81707-6				UJ								
TMW44042016	8330B	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	280-81707-6				UJ								
TMW44042016	8330B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE	280-81707-6				J								J
TMW44042016	8330B	NITROBENZENE	280-81707-6				UJ								
TMW44042016	8330B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	280-81707-6				J								J
TMW44042016	9056	NITRATE	280-81707-6	Total	J			J							
TMW45042016	6010C	IRON	280-81998-7	Total										J	
TMW45042016	6010C	POTASSIUM	280-81998-7	Dissolved		U									
TMW45042016	6020A	ZINC	280-81998-7	Dissolved		U									
TMW46042016	6010C	ALUMINUM	280-81652-8	Total				J							
TMW46042016	6010C	IRON	280-81652-8	Total				J							
TMW46042016	6020A	BARIUM	280-81652-8	Dissolved										J	
TMW46042016	6020A	BARIUM	280-81652-8	Total				J						J	
TMW46042016	6020A	ZINC	280-81652-8	Dissolved								U			
TMW46042016	6020A	ZINC	280-81652-8	Total								U			
TMW47042016	6010C	IRON	280-81998-5	Dissolved		U								J	
TMW47042016	6010C	IRON	280-81998-5	Total										J	
TMW47042016	6010C	POTASSIUM	280-81998-5	Dissolved		U									
TMW48042016	6020A	ZINC	280-81885-6	Total		U									
TMW48042016	8270D	BENZIDINE	280-81885-6						UJ						
TMW48042016	8330B	NITROBENZENE	280-81885-6												J
TMW49042016	6010C	IRON	280-81998-6	Total										J	
TMW49042016	6020A	SILVER	280-81998-6	Total		U									
TMW49042016	6020A	ZINC	280-81998-6	Dissolved		U									
TMW49042016	6860	PERCHLORATE	280-81998-6					J						J	

Notes:
ID = identification
CCV = continuing calibration verification
J = analyte was detected and is considered to be an estimated concentration
LCS = laboratroy control sample
MS = matrix spike
MSD = matrix spike duplicate
R = analyte has been rejected; it is unusable for project objectives.
RPD = relative percent difference
U = analyte was not detected above the reported sample limit of detection
UJ = analyte was not detected above the reported limit of detection; however, the reported value is considered an estimated concentration

Appendix C – Attachment 1
Automated Data Review (ADR) Reference Output Files by
Sample Delivery Group
(Provided as a separate file on the DVD included with this report)

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Appendix C – Attachment 2
TestAmerica Laboratory Data Output
(Provided as a separate file on the DVD included with this report)

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APPENDIX D

Historical Groundwater Analytical Data

(Provided as a separate file on the DVD included with this report)

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