

Army Draft

Groundwater Periodic Monitoring Report

July through December 2015

Fort Wingate Depot Activity

McKinley County, New Mexico

February 2016

Contract No. W9126G-12-D-0027

Task Order No. DM01

Prepared for:



**U.S. Army Corps
of Engineers®**

United States Army Corps of Engineers
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14. ABSTRACT This Groundwater Periodic Monitoring Report documents the activities conducted from July through December 2015 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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BRACD = U.S. Army Base Realignment and Closure Division

FWDA ARM = Fort Wingate Depot Activity Administrative Records Manager

FWDA BEC = Fort Wingate Depot Activity Base Realignment and Closure Environmental Coordinator

FWDA EIMS = Fort Wingate Depot Activity Environmental Information Management System

USACE SPA = U.S. Army Corps of Engineers, Albuquerque District

USACE SWF = U.S. Army Corps of Engineers, Fort Worth District

1 Contents

2	List of Acronyms and Abbreviations.....	iii
3	Executive Summary.....	ES-1
4	1.0 Introduction.....	1-1
5	1.1 Site Description and Activities.....	1-1
6	1.2 Hydrogeologic Setting.....	1-2
7	1.3 Regulatory Background.....	1-3
8	1.4 Document Organization.....	1-4
9	2.0 Scope of Services.....	2-1
10	2.1 Groundwater Elevation Measurements.....	2-1
11	2.2 Groundwater Sampling.....	2-1
12	2.3 Data Management and Validation.....	2-3
13	3.0 Regulatory Criteria.....	3-1
14	4.0 Groundwater Elevations.....	4-1
15	4.1 Northern Area Groundwater Elevations.....	4-1
16	4.1.1 Northern Area Alluvial Groundwater System.....	4-1
17	4.1.2 Northern Area Bedrock Groundwater System.....	4-2
18	4.2 OB/OD Area Groundwater Elevations.....	4-2
19	5.0 Groundwater Analytical Results.....	5-1
20	5.1 Northern Area Analytical Results.....	5-1
21	5.1.1 Water Quality Parameters.....	5-1
22	5.1.2 Nitrate and Nitrite.....	5-1
23	5.1.3 Explosive Compounds.....	5-2
24	5.1.4 Perchlorate.....	5-3
25	5.1.5 Volatile Organic Compounds.....	5-3
26	5.1.6 Other Organic Compounds.....	5-4
27	5.1.7 Metals.....	5-5
28	5.2 OB/OD Area Analytical Results.....	5-6
29	5.3 Field Variances from the Work Plan.....	5-6
30	5.4 New Findings.....	5-6
31	6.0 Summary and Recommendations.....	6-1
32	6.1 Summary.....	6-1
33	6.2 Recommendations.....	6-2
34	7.0 Works Cited.....	7-1

List of Appendices

35	A	Field Notes
36	B	Groundwater Sampling Field Data Sheets and Chain of Custody Forms
37	C	Laboratory Analytical Data Quality Evaluation
38	D	Historical Groundwater Analytical Data

Contents

1	List of Tables	
2	2-1	Fall 2015 Groundwater Sample Matrix.....2-5
3	4-1	Northern Area Groundwater Elevations (Wells Screened in Alluvial Sediments)4-3
4	4-2	Northern Area Groundwater Elevations (Wells Screened in Bedrock)4-7
5	5-1	Fall 2015 Stable Groundwater Parameters5-7
6	5-2	Summary of Nitrate-nitrogen and Nitrite-nitrogen Analytical Detections.....5-11
7	5-3	Summary of Total Explosives Analytical Detections.....5-17
8	5-4	Summary of Perchlorate Analytical Detections.....5-25
9	5-5	Summary of Volatile Organic Compound Analytical Detections5-31
10	5-6	Summary of Ethylene dibromide (EDB) Analytical Results.....5-37
11	5-7	Summary of Semivolatile Organic Compounds and Total Petroleum Hydrocarbons Analytical
12		Results.....5-39
13	5-8	Summary of Dissolved Metals Analytical Detections5-43
14	5-9	Summary of Total Metals Analytical Detections5-51
15	List of Figures	
16	1-1	Location Map1-5
17	1-2	Site Features1-7
18	4-1	July 2015 Northern Area Alluvial Groundwater Contour Map4-9
19	4-2	October 2015 Northern Area Alluvial Groundwater Contour Map.....4-11
20	4-3	July 2015 Northern Area Bedrock Groundwater Contour Map.....4-13
21	4-4	October 2015 Northern Area Bedrock Groundwater Contour Map4-15
22	5-1	Fall 2015 Northern Area Nitrate and Nitrite Concentrations in Alluvial Groundwater5-59
23	5-2	Fall 2015 Northern Area Nitrate Nitrite Concentrations in Bedrock Groundwater5-61
24	5-3	Fall 2015 Northern Area Explosives and Perchlorate Concentrations in Alluvial Groundwater5-63
25	5-4	Fall 2015 Northern Area Explosives and Perchlorate Concentrations in Bedrock Groundwater.....5-65
26	5-5	Fall 2015 Northern Area VOC, EDB, SVOC, and TPH Concentrations in Alluvial Groundwater5-67
27	5-6	Fall 2015 Northern Area VOC, SVOC and TPH Concentrations in Bedrock Groundwater5-69

List of Acronyms and Abbreviations

1	µg/L	microgram(s) per liter
2	µS/cm	microsiemen(s) per centimeter
3	ADR	Automated Data Review
4	AOC	area of concern
5	bgs	below ground surface
6	BRAC	Base Realignment and Closure
7	BOC	below top of casing
8	°C	degrees Celsius
9	CAS	Chemical Abstracts Service
10	CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act of 1980</i>
11	CFR	<i>Code of Federal Regulations</i>
12	DO	dissolved oxygen
13	DoD	U.S. Department of Defense
14	DOI	U.S. Department of the Interior
15	DQE	data quality evaluation
16	DRO	diesel range organics
17	DTW	depth to water
18	EDD	electronic data deliverable
19	EDMS	Electronic Data Management System
20	Eh	redox potential
21	EPA	U.S. Environmental Protection Agency
22	ERP	Environmental Restoration Program
23	ft/ft	foot per foot
24	FWDA	Fort Wingate Depot Activity
25	GPMP	Groundwater Periodic Monitoring Report
26	GRO	gasoline range organics
27	GWMP	Groundwater Monitoring Plan
28	HMX	octahydro-1.3.5.7-tetranitro-1.3.5.7-tetrazocine
29	HWMR	New Mexico Hazardous Waste Management Regulations
30	ID	identification
31	J	analyte was positively identified; reported value is estimated
32	MAROS	Monitoring and Remediation Optimization System
33	MCL	maximum contaminant level
34	MEPH	mephedrone
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	NAD88	North American Datum of 1988
44	NAVD88	North American Vertical Datum of 1988
45	NM	not measured
46	NMAC	New Mexico Administrative Code
47	NMED	New Mexico Environment Department

List of Acronyms and Abbreviations

1	NMHWHA	New Mexico Hazardous Waste Act
2	NMSA	New Mexico State Rules Act
3	NM WQCC	New Mexico Water Quality Control Commission
4	NS	not sampled
5	NTU	nephelometric turbidity unit
6	OB/OD	Open Burn/Open Detonation
7	ORP	oxidation-reduction potential
8	pH	scale used to measure the concentration of hydrogen atoms (acidity) of a sample
9	QA	quality assurance
10	QC	quality control
11	QSM	Quality Systems Manual
12	R	result is not usable for any purpose
13	RCRA	<i>Resource Conservation and Recovery Act</i>
14	RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine
15	RFI	Resource Conservation and Recovery Act (RCRA) Facility Investigation
16	RSL	Regional Screening Level
17	SVOC	semivolatile organic compound
18	SWMU	solid waste management unit
19	TAL	target analyte list
20	TCL	target compound list
21	TDS	total dissolved solids
22	TNT	trinitrotoluene
23	TOC	top of casing
24	TPH	total petroleum hydrocarbon
25	TPMC	TerranearPMC
26	U	non-detected result below the limit of detection
27	USACE	U.S. Army Corps of Engineers
28	VOC	volatile organic compound

Executive Summary

This Groundwater Periodic Monitoring Report (GPMR) documents groundwater monitoring activities conducted at Fort Wingate Depot Activity (FWDA) from July through December 2015 in accordance with the *Interim Facility-Wide Groundwater Monitoring Plan, Version 8* (Innovar Environmental Inc. [Innovar], 2015). Groundwater monitoring was performed by Sundance Consulting and CH2M HILL 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 EPA ID Number (No.) NM6213820974* for FWDA (NMED, 2005; NMED, 2014; NMED, 2015a). 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 July 21 and 22, 2015, and October 26, 2015. Depth to water was measured at 73 monitoring wells and piezometers; 2 wells were verified as dry during each monitoring event. The groundwater sampling event for the reporting period was performed from October 26 to November 6, 2015. 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 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, but extends upgradient from solid waste management unit (SWMU) 1 to the south. A portion of the bedrock nitrate

Executive Summary

1 plume is collocated with the bedrock perchlorate plume. The collocated perchlorate and nitrate plumes appear to
2 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 in the Workshop Area. Groundwater concentrations of explosive compounds (primarily RDX)
11 attenuate to levels below the screening level within 2,500 feet downgradient of the TNT Leaching Beds (SWMU 1).

12 One VOC was detected in groundwater samples at concentrations above regulatory cleanup standards. The
13 compound 1,2-dichloroethane was historically used as a gasoline additive and degreasing solvent. The
14 1,2-dichloroethane plume in the alluvial groundwater unit is limited to a group of wells near a former fueling
15 facility (SWMU 45, Building 6) in the Administration Area. Groundwater samples collected from three alluvial
16 monitoring wells had concentrations above the U.S. Environmental Protection Agency's maximum contaminant
17 level of 5 micrograms per liter. No other VOCs were detected above cleanup standards. As requested by NMED,
18 ten monitoring wells in the vicinity of SWMU 45, Building 6 were sampled for ethylene dibromide (EDB). All
19 sample analyses for EDB were non-detect. The SVOC bis(2-ethylhexyl) phthalate was detected at concentrations
20 above the regulatory cleanup standard. The detection of bis(2-ethylhexyl) phthalate is likely attributable to
21 sampling and laboratory contamination.

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

27 Additional delineation and investigation for groundwater plumes at FWDA are planned. A Supplemental RCRA
28 Facility Investigation Work Plan was submitted to NMED in February 2015 and is currently under revision to
29 address NMED comments. This document proposes locations for additional groundwater monitoring wells
30 necessary 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 July through December 2015 in accordance with the *Interim Facility-Wide Groundwater Monitoring Plan*, Version 8 (Innovar, 2015). Groundwater monitoring was performed by Sundance Consulting and CH2M HILL at FWDA under contract to the U.S. Army Corps of Engineers (USACE), Fort Worth District, as part of the Environmental Restoration Program (ERP). The 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 EPA ID No. NM6213820974 for FWDA (NMED, 2005; NMED, 2011; NMED, 2014; NMED 2015a).

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 (DOI), 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 of western New Mexico, approximately 7 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:

- 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.
- 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.
- 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).
- The Open Burn/Open Detonation (OB/OD) Area includes munitions disposal locations in the southwest 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,

1 1999). The current OB/OD Area was used from 1955 to 1993 and contains the hazardous waste management
2 unit identified in the RCRA Permit.

3 1.2 Hydrogeologic Setting

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

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

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

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

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

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

35 Groundwater flow in the San Andres-Glorieta aquifer is to the north beneath FWDA and is separated from the
36 shallow groundwater units by shales and claystones across much of FWDA (Anderson et al., 2003). The top of the
37 San Andres-Glorieta aquifer is approximately 1,100 feet below ground surface (bgs) near the Administration Area.
38 Recharge to both the regional aquifer and to shallow groundwater units is from precipitation and snowmelt
39 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.

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

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

11 The depth to water (DTW) under FWDA is generally between 10 and 100 feet bgs. Groundwater is present at
12 shallow depths in the alluvium along drainages, including the Rio Puerco, with DTW ranging from 13 to 68 feet bgs
13 in northern area alluvial wells. Groundwater in the northern area bedrock aquifer wells is also shallow with DTW
14 ranging from 28 to 65 feet bgs in the bedrock monitoring wells.

15 1.3 Regulatory Background

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

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

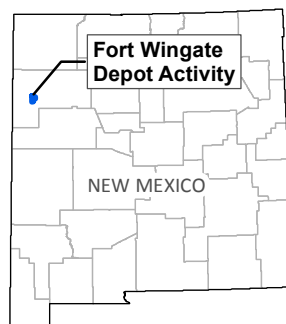
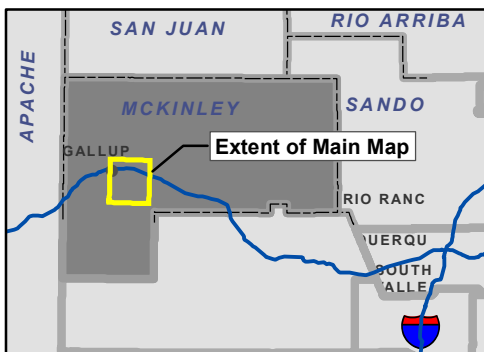
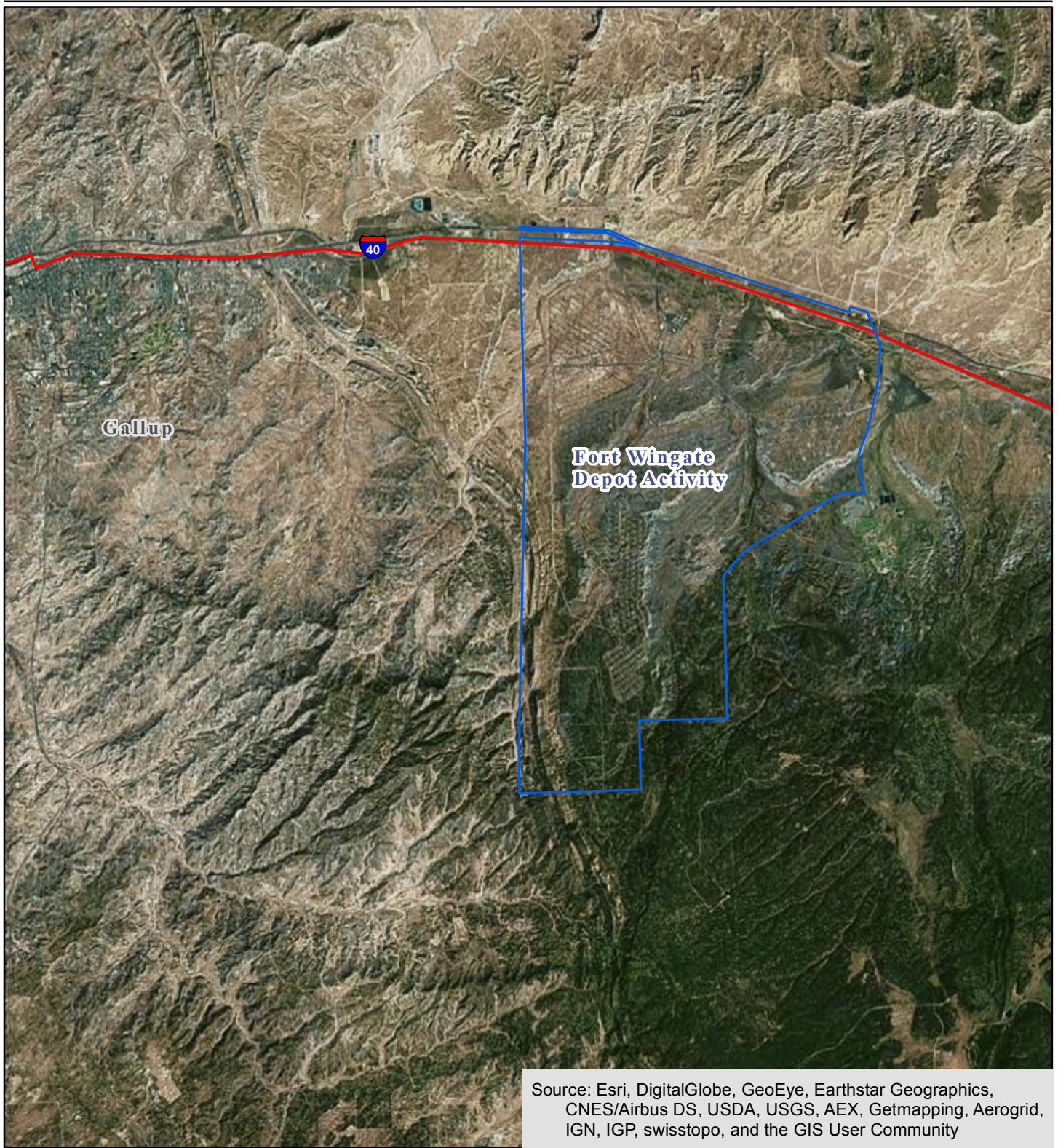
27 Since the 1980s, a number of groundwater investigations have been completed at FWDA. Groundwater
28 investigation efforts have primarily focused on five areas: the TNT Leaching Beds Area (SWMU 1 located within
29 Parcel 21); the Administration Area (multiple SWMUs and AOCs located in Parcels 6, 7,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

35 The Interim Facility-Wide Groundwater Monitoring Plan (GWMP) is required by Permit Section V.A and describes
36 the groundwater monitoring activities to be conducted as part of the ERP at FWDA. The current monitoring
37 network has been designed to evaluate the horizontal and vertical extent of chemical constituents in groundwater
38 and the transport of chemicals that originate from multiple sources. The current GWMP combines the original
39 2008 Plan, approved by NMED, and subsequent annual revisions. Revisions to the GWMP are based on an analysis
40 of historical groundwater monitoring data and a data quality objective assessment. Sampling under the NMED-
41 approved GWMP has been ongoing since 2008. The results of the monitoring activities are documented in
42 semiannual groundwater monitoring reports and submitted to NMED, tribes, and other stakeholders.

1 1.4 Document Organization

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

- 5 ○ Section 2 provides a discussion of the activities or scope of services performed during the July through
6 December 2015 reporting period.
- 7 ○ Section 3 presents the applicable regulatory criteria against which sample analytical results are compared for
8 FWDA.
- 9 ○ Section 4 presents the results of the quarterly groundwater elevation surveys.
- 10 ○ Section 5 presents the groundwater sample analytical data for the July through December 2015 monitoring
11 period.
- 12 ○ Section 6 presents a summary discussion of the groundwater monitoring results and provides
13 recommendations for future monitoring events.



**FIGURE 1-1
LOCATION MAP**

Groundwater Periodic Monitoring
Report for July to December 2015
*Fort Wingate Depot Activity,
McKinley County, New Mexico*



1 2.0 Scope of Services

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

7 2.1 Groundwater Elevation Measurements

8 Groundwater elevation surveys were performed at FWDA on July 21 and 22, 2015, and October 26, 2015. During
9 each of the elevation surveys, DTW was measured at 73 monitoring wells and piezometers; 2 wells were verified
10 as dry. Of the 71 monitoring locations with water, 45 locations were alluvial monitoring wells, 16 locations were
11 bedrock monitoring wells, and 10 locations were piezometers—all located in the Northern Area (Administration
12 and Workshop Areas). No access to the OB/OD Area has been permitted for groundwater monitoring since April
13 2013 due to explosive hazards associated with the excavation and removal of unexploded ordnance, munitions,
14 and explosives of concern. No groundwater elevation measurements were collected in the OB/OD Area during the
15 current monitoring period.

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

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

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

32 Historic monitoring wells Wingate89, Wingate90, and Wingate91 were abandoned in 2015 with prior approval of
33 the NMED. These monitoring locations have not been sampled recently and are not optimally located to provide
34 either groundwater elevation or groundwater plume data.

35 2.2 Groundwater Sampling

36 The groundwater sampling event for the reporting period was performed from October 26 to November 6, 2015.
37 Groundwater samples were collected from 61 of the 78 monitoring wells listed in the GWMP (Innovar, 2015). The
38 16 monitoring wells in the OB/OD Area were not sampled due to the explosive hazards associated with the
39 excavation and removal of unexploded ordnance and explosives of concern in the area. The groundwater samples
40 were analyzed for the constituents listed in Table 2-1. The sample analytical results are presented in Section 5 of
41 this report. Variances from the GWMP are also discussed in Section 5. Two field variances occurred during this
42 monitoring period. Alluvial monitoring well FW35 was dry and could not be purged or sampled this event. At the
43 request of NMED, alluvial monitoring well TMW 28 was sampled for nitrate/nitrite on December 1, 2015 to
44 supplement information provided in the Fort Wingate Groundwater Background Study.

2.0 Scope of Services

1 Monitoring well purging and sampling was performed using a variety of sampling techniques: dedicated low-flow
2 pneumatic pumps from BESST Products, dedicated pneumatic Bennett Sample Pumps, a non-dedicated Grundfos
3 Redi-Flo2 submersible pump, and disposable bailers. During well purging operations, the water quality
4 parameters of pH, temperature, specific conductance, dissolved oxygen, turbidity, and oxygen reduction potential
5 (ORP) were measured using Horiba Instruments Inc. Model U-52 water quality meters, and recorded on
6 groundwater sampling field data sheets. All water quality meters were calibrated daily according to manufacturer
7 specifications. The groundwater sampling field data sheets for each monitoring well are provided in Appendix B.

8 Monitoring wells equipped with dedicated low-flow pneumatic pumps were purged in accordance with the
9 GWMP and NMED's position paper *Use of Low-Flow and Other Non-Traditional Sampling Techniques for RCRA*
10 *Compliant Groundwater Monitoring* (NMED, 2001). Well purging was performed until water quality parameters
11 stabilized within the following ranges: temperature (± 10 percent), pH (± 0.5 standard units), specific conductance
12 (± 10 percent), dissolved oxygen (± 10 percent), turbidity (± 10 percent), and ORP (± 10 percent). In general,
13 drawdown was minimized during final parameter stabilization and during sampling to ensure that formation
14 water was being measured and sampled. Drawdown was minimized by slow purging of the wells; however, poor
15 groundwater production from the screened intervals resulted in greater than desired drawdown in some wells.
16 During the initial period of low-flow pumping prior to stabilization, drawdown in several wells was greater than
17 0.5 foot, but only greater than 1.0 foot in two wells during this monitoring event.

18 Monitoring wells not equipped with low-flow pumps were purged by pumping or bailing three well volumes of the
19 water standing in the well (including the saturated annular space). Water quality parameters were measured
20 during the well purging operations until they stabilized within the ranges presented above. If a monitoring well
21 was emptied prior to the purging of three well volumes due to a slow recharge rate, then the well was sampled
22 after it refilled with sufficient groundwater volume. This typically required the sample team to return to the well
23 location on the next day to collect the groundwater sample. A minimum of three water quality parameter
24 measurements were collected from wells that emptied during purging operations except at TMW 07, where only
25 two parameters were collected before the well went dry

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

28 The 18 wells not equipped with dedicated pumps were purged dry either by bailing or with a non-dedicated,
29 Grundfos Redi-Flow2 submersible electric pump. All samples from wells without dedicated pumps were collected
30 using disposable bailers. TMW 25 was pumped dry with the dedicated BESST pump.

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

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

46 Water was generated during well-purging activities as part of the sampling process. Decontamination fluids were
47 generated during the decontamination of non-dedicated sampling equipment and reusable monitoring
48 equipment. Purge water and decontamination fluids were contained in closable 5-gallon and 15-gallon containers

1 during sampling activities and emptied into the FWDA evaporation tank daily. Solid waste such as disposable
2 sampling equipment, personal protective equipment, and general refuse was placed in rented refuse containers.

3 **2.3 Data Management and Validation**

4 An electronic database was created to support the data management and tracking activities for the groundwater
5 sampling event. The database was used to prepare sample labels in advance of the sampling event, as well as to
6 prepare electronic chain of custody forms daily at FWDA during the sampling event. Sample identifiers were
7 assigned based on the convention described in the GWMP. Groundwater sample identifiers consisted of the well
8 identification (ID) and sample date. The QA and QC samples used the same ID number as the parent sample and
9 followed by MS (matrix spike) and MSD (matrix spike duplicate), as dictated by the work plan. Changes were made
10 to the sample identifiers for field duplicates so that these QC samples would be blind to the laboratory. The
11 duplicate naming convention was not used. The duplicates relating to normal samples are presented in Table 2-1.
12 Copies of the chain of custody forms were emailed to the project chemist daily to facilitate sample tracking and
13 laboratory interaction.

14 Sample analyses were performed by TestAmerica Laboratories in accordance with the *Department of Defense*
15 *Quality Systems Manual for Environmental Laboratories* (U.S. Department of Defense [DoD], 2013). Electronic
16 data deliverables (EDDs) of the analytical results for each sample delivery group were provided by TestAmerica
17 Laboratories for validation. The sample result EDDs were loaded into the Automated Data Review (ADR) software
18 for data validation. Results were subjected to 100 percent Stage 2a validation using the ADR software. An
19 additional 10 percent of the sample results were subjected to Stage 3 data validation by the project chemist. The
20 validated data output files from the ADR software were exported to the FWDA Electronic Data Management
21 System (EDMS) database. The EDMS database was used to prepare the validated data table output presented in
22 this GPMR. The overall data validation assessment found that data were of sufficient quality for evaluation of data
23 quality objectives. Information on the data validation process and the results is provided in Appendix C.
24 Attachments to data validation reports are provided in electronic format.
25

2.0 Scope of Services

TABLE 2-1

Fall 2015 Groundwater Sample Matrix (Page 1 of 3)

Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well ID	Sample ID	Total Explosives Method 8330B	EDB Method 8011	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	BGMW01102015	X		X	X	X	X	X	X	X		
BGMW02	BGMW02102015	X		X	X	X	X	X	X	X		
BGMW03	BGMW03102015	X		X	X	X	X	X	X	X		
FW31	FW31102015	X		X	X	X	X	X	X			
FW35	FW35102015	Well Dry - Not Sampled										
MW01	MW01102015	X	S	X		X	X	X	X	X	X	X
MW02	MW02102015	X	S	X		X	X	X	X	X	X	X
MW03	MW03102015	X	S	X			X	X	X	X	X	X
MW18D	MW18D102015	X	S	X			X	X	X	X	X	X
MW20	MW20102015	X	S	X	X	X	X	X	X	X	X	X
<i>Duplicate</i>	DMW20102015	X	S	X	X	X	X	X	X	X	X	X
<i>Matrix Spike</i>	MW20102015MS	X	S	X	X	X	X	X	X	X	X	X
	MW20102015MSD	X	S	X	X	X	X	X	X	X	X	X
MW22D	MW22D102015	X	S	X	X	X	X	X	X	X	X	X
MW22S	MW22S102015	X	S	X	X	X	X	X	X	X	X	X
MW23	MW23102015	X		X	X	X	X	X	X	X		
<i>Duplicate</i>	DMW23102015	X		X	X	X	X	X	X	X		
<i>Matrix Spike</i>	MW23102015MS	X		X	X	X	X	X	X	X		
	MW23102015MSD	X		X	X	X	X	X	X	X		
MW24	MW24102015	X		X	X	X	X	X	X	X		
SMW01	SMW01102015	X		X	X		X	X	X	X		
TMW01	TMW01102015	X		X			X	X	X	X		
TMW03	TMW03102015	X		X	X		X	X	X	X		
TMW04	TMW04102015	X		X	X		X	X	X	X		
TMW06	TMW06102015	X		X	X		X	X	X			
TMW07	TMW07102015	X		X	X		X	X	X			
TMW08	TMW08102015			X		X	X	X	X	X	X	X

TABLE 2-1

Fall 2015 Groundwater Sample Matrix (Page 2 of 3)

Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well ID	Sample ID	Total Explosives Method 8330B	EDB Method 8011	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 - Alluvial												
TMW10	TMW10102015	X		X			X	X	X	X		
TMW11	TMW11102015	X		X			X	X	X	X		
TMW13	TMW13102015			X			X	X	X	X		
TMW15	TMW15102015	X		X	X		X	X	X	X		
<i>Duplicate</i>	DTW15102015	X		X	X		X	X	X	X		
TMW21	TMW21102015	X		X			X	X	X	X		
TMW22	TMW22102015	X		X	X		X	X	X	X		
TMW23	TMW23102015	X		X		X	X	X	X	X		
TMW24	TMW24102015	X		X		X	X	X	X	X		
TMW25	TMW25102015	X		X			X	X	X			
TMW26	TMW26102015	X		X			X	X	X	X		
<i>Duplicate</i>	DTW26102015	X		X			X	X	X	X		
<i>Matrix Spike</i>	TMW26102015MS	X		X			X	X	X	X		
	TMW26102015MSD	X		X			X	X	X	X		
TMW27	TMW27102015			X			X	X		X		
TMW28	TMW28102015			X			X	X				
TMW29	TMW29102015	X		X			X	X	X	X		
TMW31S	TMW31S102015	X		X	X	X	X	X	X	X		
TMW33	TMW33102015		S	X	X		X	X	X		X	X
TMW34	TMW34102015		S	X			X	X	X	X	X	X
<i>Duplicate</i>	DTW34102015		S	X			X	X	X	X	X	X
TMW35	TMW35102015		S	X	X	X	X	X	X	X	X	X
TMW39S	TMW39S102015	X		X	X	X	X	X	X	X		
TMW40S	TMW40S102015	X		X	X	X	X	X	X	X		
TMW41	TMW41102015	X		X	X	X	X	X	X	X		
TMW43	TMW43102015	X		X	X	X	X	X	X	X		
<i>Duplicate</i>	DTW43102015	X		X	X	X	X	X	X	X		
<i>Matrix Spike</i>	TMW43102015MS	X		X	X	X	X	X	X	X		
	TMW43102015MSD	X		X	X	X	X	X	X	X		
TMW44	TMW44102015	X		X	X	X	X	X	X	X		
TMW45	TMW45102015	X		X	X	X	X	X	X	X		
TMW46	TMW46102015	X		X	X	X	X	X	X	X		
TMW47	TMW47102015	X		X	X	X	X	X	X	X		

2.0 Scope of Services

TABLE 2-1

Fall 2015 Groundwater Sample Matrix (Page 3 of 3)

Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well ID	Sample ID	Total Explosives Method 8330B	EDB Method 8011	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	TMW02102015	X		X			X	X	X	X		
TMW14A	TMW14A102015	X		X	X		X	X	X			
TMW16	TMW16102015	X		X	X		X	X		X		
TMW17	TMW17102015			X			X	X	X	X		
TMW18	TMW18102015	X		X	X		X	X	X	X		
TMW19	TMW19102015	X		X	X		X	X		X		
TMW30	TMW30102015	X		X	X	X	X	X	X	X		
TMW31D	TMW31D102015	X		X	X	X	X	X	X	X		
<i>Duplicate</i>	TMW31D102015	X		X	X	X	X	X	X	X		
TMW32	TMW32102015	X		X	X	X	X	X	X	X		
TMW36	TMW36102015	X		X	X	X	X	X	X	X		
TMW37	TMW37102015	X		X	X	X	X	X	X	X		
TMW38	TMW38102015	X		X	X	X	X	X	X	X		
TMW39D	TMW39D102015	X		X	X	X	X	X	X	X		
TMW40D	TMW40D102015	X		X	X	X	X	X	X	X		
TMW48	TMW48102015	X		X	X	X	X	X	X	X		
TMW49	TMW49102015	X		X	X	X	X	X	X	X		

Notes:

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

DRO = diesel range organics

GRO = gasoline range organics

ID = identification

NA = not analyzed due to breakage in transit

S = Supplemental samples collected at New Mexico Environment Department Request

SVOC = semivolatile organic compounds

TAL = target analyte list

TCL = target compound list

TPH = total petroleum hydrocarbon

VOC = volatile organic compound

X = samples collected according to work plan (Innovar, 2015)

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). A renewal of the FWDA RCRA permit is currently in progress. Until the renewal process is completed, all environmental activities at the installation will be conducted in accordance with the requirements of the 2005 RCRA Permit (NMED, 2005).

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 six times, with the revisions submitted to NMED in 2009, 2010, 2011, 2012, 2014, and 2015. 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):

- New Mexico Water Quality Control Commission (NM WQCC) standards in 20 NMAC § 6.2.4103.A and B
- U.S. Environmental Protection Agency (EPA) drinking water maximum contaminant level (MCL) under 40 CFR Parts 141 and 142
- No current NM WQCC or MCL standard exists for perchlorate. Pending NMED approval of a standard, a screening level of 6 micrograms per liter ($\mu\text{g}/\text{L}$) will be used for perchlorate as stated in the RCRA Permit.

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 within 60 days of receipt of validated groundwater chemical analytical results, 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* (Innovar, 2015; NMED, 2003).

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 July 21 and 22, 2015, and the second on October 26, 2015. 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 through 4-4 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 July and October 2015 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 Figure 4-3 and Figure 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 July and October 2015 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 July and October 2015 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 July and October 2015 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 1 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.

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 are conflict with the observed distribution of the nitrate and perchlorate groundwater contamination in the aquifer. In order to determine if 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 July through December 2015 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 3)
 Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well Identifier	TOC Elevation (feet)	13-Jan-14	7-Apr-14	15/16-July-14	20-Oct-14	20/21-Jan-15	30-Mar-15	21/22-July-15		26-Oct-15	
		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	6674.02	6674.00	6673.46	6673.41	6673.66	6673.73	19.42	6673.26	19.64	6673.04
BGMW02	6691.99	6671.30	6671.38	6670.82	6670.58	6670.86	6671.03	21.36	6670.63	21.81	6670.18
BGMW03	6680.57	6664.34	6664.66	6663.52	6663.42	6664.20	6664.48	16.97	6663.60	17.09	6663.48
FW26	6674.4	Dry	Dry	Dry	Dry	Dry	Dry	Abandoned		Abandoned	
FW31	6832.49	6790.22	6790.28	6790.09	6790.00	6790.08	6790.10	42.55	6789.94	42.66	6789.83
FW35	6711.11	6683.80	6684.33	6682.16	6680.82	6681.26	6681.60	30.99	6680.12	Dry	Dry
MW01	6685.94	6643.34	6643.35	6643.38	6643.31	6643.40	6643.25	42.63	6643.31	42.83	6643.11
MW02	6685.22	6644.97	6645.06	6644.89	6644.71	6644.51	6644.46	40.81	6644.41	40.95	6644.27
MW03	6689.53	6643.13	6643.14	6643.17	6643.18	6643.23	6643.11	46.43	6643.10	46.51	6643.02
MW18D	6686.32	6642.80	6642.85	6642.84	6642.77	6642.91	6642.71	43.50	6642.82	43.71	6642.61
MW18S	6686.61	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW20	6687.67	6642.34	6642.34	6642.34	6642.22	6642.35	6642.25	45.38	6642.29	45.56	6642.11
MW22D	6684.55	6642.30	6642.30	6642.28	6642.14	6642.30	6642.24	42.33	6642.22	42.57	6641.98
MW22S	6684.69	6642.54	6642.60	6642.52	6642.42	6642.51	6642.32	42.29	6642.40	42.53	6642.16
MW23	6654.5	6639.52	6639.66	6639.30	6638.97	6639.24	6639.75	14.68	6639.82	15.12	6639.38
MW24	6657.08	6637.71	6638.02	6637.22	6636.77	6637.37	6637.78	19.49	6637.59	21.53	6635.55
SMW01	6669.94	6639.16	6639.40	6639.09	6638.85	6639.22	6639.14	31.19	6638.75	31.45	6638.49
TMW01	6711.84	6673.44	6673.24	6673.13	6672.83	6672.83	6672.61	39.37	6672.47	39.62	6672.22
TMW03	6702.43	6645.30	6645.21	6645.28	6645.19	6645.25	6645.11	57.32	6645.11	57.39	6645.04
TMW04	6700.86	6644.37	6644.32	6644.41	6644.35	6644.44	6644.34	56.50	6644.36	56.54	6644.32
TMW06	6690.63	6643.38	6643.32	6643.44	6643.36	6643.53	6643.32	47.22	6643.41	47.33	6643.30
TMW07	6690.47	6643.02	6643.50	6643.06	6643.41	6643.22	6643.37	47.32	6643.15	47.04	6643.43
TMW08	6680.31	6643.17	6643.25	6643.38	6643.24	6643.37	6643.14	37.08	6643.23	37.20	6643.11
TMW10	6680.04	6642.21	6642.27	6642.26	6642.14	6642.29	6642.10	37.92	6642.12	38.07	6641.97
TMW11	6718.28	6650.91	6650.86	6650.70	6650.55	6650.48	6650.47	67.93	6650.35	68.10	6650.18
TMW13	6707.49	6647.22	6647.18	6647.12	6647.02	6647.03	6646.99	60.56	6646.93	60.66	6646.83
TMW15	6713.89	6649.14	6649.09	6648.95	6648.84	6648.81	6648.78	65.22	6648.67	65.35	6648.54
TMW21	6695.14	6644.33	6644.26	6644.29	6644.24	6644.32	6644.23	50.90	6644.24	50.88	6644.26
TMW22	6691.74	6642.92	6642.99	6643.02	6643.06	6643.22	6643.03	48.67	6643.07	48.71	6643.03

4.0 Groundwater Elevations

TABLE 4-1

Northern Area Groundwater Elevations (Wells Screened in Alluvial Sediments) (Page 2 of 3)
 Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well Identifier	TOC Elevation (feet)	13-Jan-14	7-Apr-14	15/16-July-14	20-Oct-14	20/21-Jan-15	30-Mar-15	21/22-July-15		26-Oct-15	
		Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	DTW (feet BTOC)	Elevation (feet)	DTW (feet BTOC)	Elevation (feet)
TMW23	6687.66	6642.11	6642.12	6642.22	6642.17	6642.34	6642.18	45.32	6642.34	45.43	6642.23
TMW24	6680.42	6641.95	6642.05	6642.15	6642.11	6642.30	6642.22	38.03	6642.39	38.15	6642.27
TMW25	6672.88	6633.69	6633.88	6633.96	6633.83	6634.02	6633.95	38.82	6634.06	39.00	6633.88
TMW26	6677.71	6652.26	6652.28	6651.16	6650.65	6650.58	6650.56	27.05	6650.66	27.48	6650.23
TMW27	6668.13	6640.02	6640.31	6640.09	6639.82	6639.93	6640.06	28.06	6640.07	28.44	6639.69
TMW28	6689.17	6671.06	6671.01	6670.21	6669.81	6670.15	6670.48	19.35	6669.82	19.83	6669.34
TMW29	6702.88	6645.47	6645.38	6645.43	6645.32	6645.37	6645.31	57.58	6645.30	57.62	6645.26
TMW31S	6710.2	6672.58	6672.45	6672.34	6672.07	6672.09	6671.85	38.50	6671.70	38.76	6671.44
TMW33	6686.6	6642.58	6642.62	6642.62	6642.53	6642.65	6642.50	44.05	6642.55	44.26	6642.34
TMW34	6687.29	6641.37	6641.38	6641.37	6641.25	6641.37	6641.30	45.95	6641.34	46.14	6641.15
TMW35	6686.52	6642.44	6642.46	6642.44	6642.33	6642.39	6642.27	44.20	6642.32	44.39	6642.13
TMW39S	6708.61	6673.18	6673.16	6672.91	6672.73	6672.66	6672.54	36.23	6672.38	36.37	6672.24
TMW40S	6706.4	6646.08	6646.06	6646.07	6646.00	6646.02	6645.98	60.44	6645.96	60.50	6645.90
TMW41	6705.21	6664.30	6664.31	6664.22	6664.11	6664.21	6663.93	41.35	6663.86	41.48	6663.73
TMW43	6698.63	6645.14	6645.06	6645.12	6645.04	6645.13	6645.04	53.58	6645.05	53.63	6645.00
TMW44	6697.31	6644.52	6644.47	6644.59	6644.55	6644.69	6644.49	52.78	6644.53	52.86	6644.45
TMW45	6689	6641.33	6641.32	6641.57	6641.51	6641.69	6641.61	47.23	6641.77	47.30	6641.70
TMW46	6680.98	6636.67	6636.82	6636.81	6636.57	6636.88	6636.93	44.10	6636.88	44.39	6636.59
TMW47	6701.88	6655.69	6655.70	6655.48	6655.47	6655.55	6655.56	46.59	6655.29	46.61	6655.27
Wingate89	6663.69	NM-flooded	6648.39	6648.22	NM-flooded	6648.08	6648.28	Abandoned		Abandoned	
Wingate90	6656.49	6643.01	6643.25	6642.96	6642.58	6642.87	6643.21	Abandoned		Abandoned	
Wingate91	6659.74	6645.57	6645.79	6645.49	6645.12	6645.37	6645.62	Abandoned		Abandoned	
PZ01	6677.29	6650.17	6650.39	6650.17	6650.39	6650.65	6650.49	26.80	6650.49	26.92	6650.37
PZ02	6674.95	6651.73	6651.69	6651.73	6651.69	6651.64	6651.70	23.28	6651.67	23.66	6651.29
PZ03	6679.44	6653.02	6653.16	6653.02	6653.16	6653.24	6653.24	26.13	6653.31	26.48	6652.96

TABLE 4-1
 Northern Area Groundwater Elevations (Wells Screened in Alluvial Sediments) (Page 3 of 3)
 Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well Identifier	TOC Elevation (feet)	13-Jan-14	7-Apr-14	15/16-July-14	20-Oct-14	20/21-Jan-15	30-Mar-15	21/22-July-15		26-Oct-15	
		Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	Elevation (feet)	DTW (feet BTOC)	Elevation (feet)	DTW (feet BTOC)	Elevation (feet)
PZ04	6676.68	6648.28	6648.66	6648.28	6648.66	6648.53	6648.44	28.26	6648.42	28.45	6648.23
PZ05	6674.15	6653.10	6653.54	6653.10	6653.54	6653.73	6653.88	20.76	6653.39	21.41	6652.74
PZ06	6676.04	6655.34	6656.88	6655.34	6656.88	6657.28	6657.58	20.02	6656.02	20.40	6655.64
PZ07	6684.53	6668.37	6672.51	6668.37	6672.51	6669.53	6670.39	15.45	6669.08	16.30	6668.23
PZ08	6686.81	6666.95	6671.71	6666.95	6671.71	6668.56	6669.67	18.88	6667.93	19.62	6667.19
PZ09	6653.61	6637.24	6638.27	6637.24	6638.27	6638.22	6638.69	15.62	6637.99	16.22	6637.39
PZ10	6657.27	6637.04	6638.08	6637.04	6638.08	6638.06	6638.51	19.49	6637.78	20.03	6637.24

Notes:

* Well was nearly dry and not sampled; water elevation may not be representative of the water table.

BTOC = below top of casing

DTW = depth to water

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

NM = not measured

TOC = top of casing

TABLE 4-2

Northern Area Groundwater Elevations (Wells Screened in Bedrock)

Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well Identifier	TOC Elevation (feet)	13-Jan-14	7-Apr-14	15/16-July-14	20-Oct-14	20/21-Jan-15	30-Mar-15	21/22-July-15		26-Oct-15	
		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	6649.63	6649.67	6649.59	6649.66	6649.53	55.85	6649.50	55.90	6649.45
TMW14A	6723.54	6658.88	6658.78	6658.67	6658.60	6658.47	6658.54	65.14	6658.40	65.17	6658.37
TMW16	6714.15	6657.82	6657.78	6657.57	6657.49	6657.47	6657.41	56.77	6657.38	57.03	6657.12
TMW17	6719.89	6656.90	6656.83	6656.67	6656.56	6656.57	6656.46	63.65	6656.24	63.7	6656.19
TMW18	6713.49	6658.31	6658.27	6658.05	6657.96	6657.93	6657.94	55.8	6657.69	55.85	6657.64
TMW19	6700.52	6657.62	6657.60	6657.36	6657.32	6657.38	6657.32	43.25	6657.27	43.54	6656.98
TMW30	6714.59	6674.26	6674.02	6673.99	6674.04	6674.03	6674.64	40.38	6674.21	40.38	6674.21
TMW31D	6710.44	6672.62	6672.46	6672.30	6672.03	6671.99	6671.79	38.81	6671.63	39.05	6671.39
TMW32	6709.31	6669.37	6669.25	6669.02	6668.82	6668.78	6668.62	40.92	6668.39	41.08	6668.23
TMW36	6699.04	6671.40	6671.33	6670.86	6670.78	6670.64	6670.55	28.7	6670.34	28.98	6670.06
TMW37	6713.09	6667.01	6666.94	6666.68	6666.58	6666.48	6666.34	46.65	6666.44	46.82	6666.27
TMW38	6706.79	6659.66	6659.60	6659.35	6659.28	6659.33	6659.24	47.86	6658.93	47.91	6658.88
TMW39D	6708.61	6673.47	6673.35	6673.21	6672.93	6672.89	6672.69	36.06	6672.55	36.31	6672.30
TMW40D	6706.15	6673.40	6673.26	6673.06	6672.80	6672.76	6672.57	33.76	6672.39	34.01	6672.14
TMW48	6709.84	6673.63	6673.40	6673.23	6672.95	6672.87	6672.74	37.28	6672.56	37.53	6672.31
TMW49	6714.71	6670.34	6670.15	6670.02	6669.74	6669.66	6669.49	45.34	6669.37	45.58	6669.13

Notes:

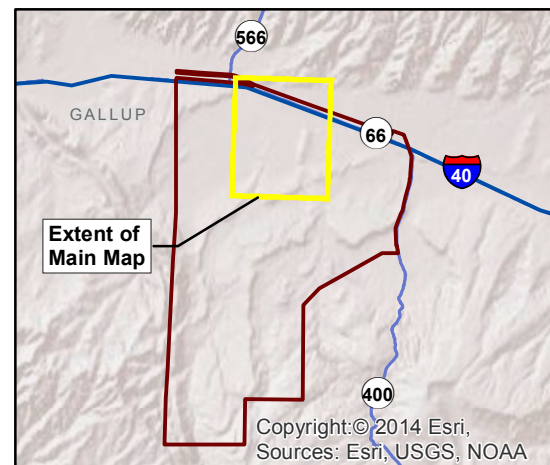
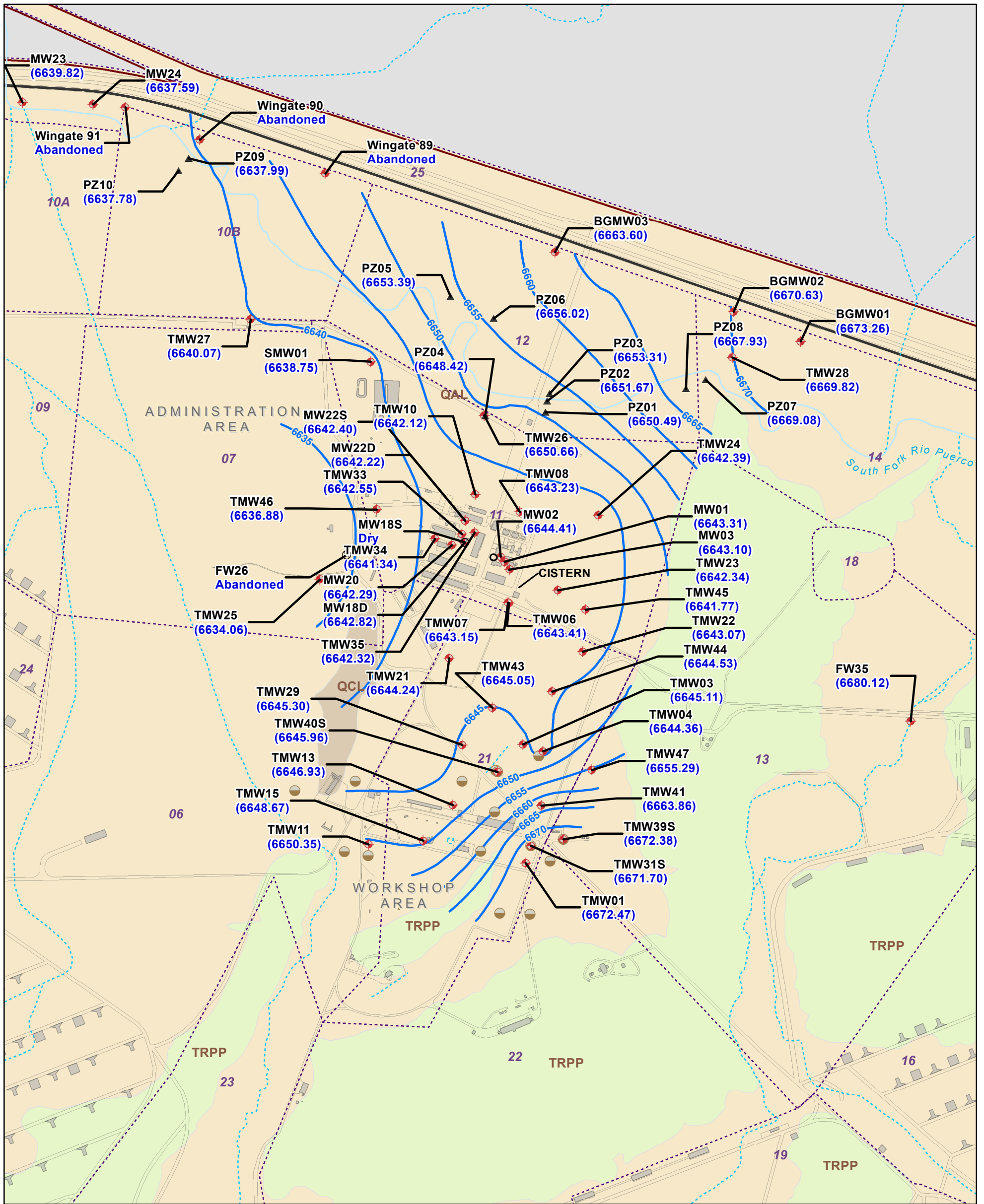
BTOC = below top of casing

DTW = depth to water

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

NM = not measured

TOC = top of casing



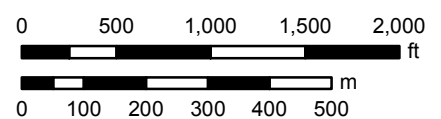
Legend

- ◆ Alluvial Monitoring Well
- Bedrock Monitoring Well
- ▲ Piezometer
- ⊗ Dry Well
- Water Supply Well 69
- TMW11 Well Label = Well ID (6651.15) (Groundwater Elevation in feet)
- 6635- Alluvial Groundwater Contours, July 2015
- Building
- 10A Property Transfer Parcel
- Fort Wingate Installation Boundary

Surface Geology

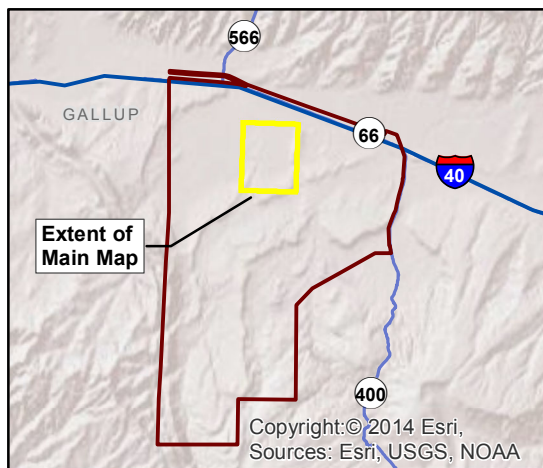
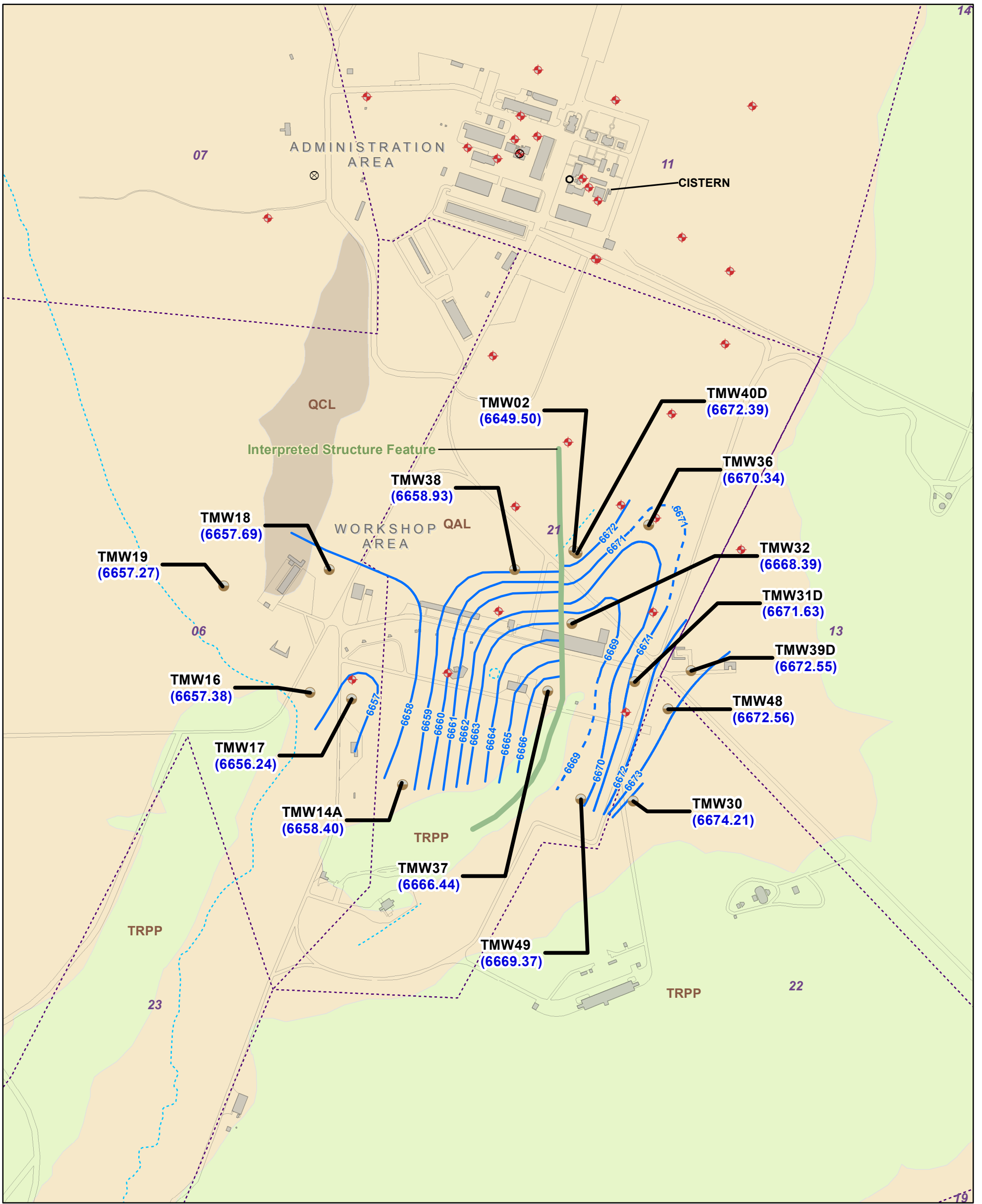
- QAL QAL - Quarternary Alluvial Deposits
- QCL QCL - Quaternary Colluvial and Gravel Deposits
- TRPP TRPP - Petrified Forest Formation, Painted Desert Member

FIGURE 4-1
July 2015 Northern Area Alluvial Groundwater Contour Map
 Groundwater Periodic Monitoring Report for July to December 2015
 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.



Legend

- ◆ Alluvial Monitoring Well
- Bedrock Monitoring Well
- ⊗ Dry Well
- Water Supply Well 69
- Well Label = Well ID (Groundwater Elevation in feet)
- - - Bedrock Groundwater Contours, January 2015 (Dashed where inferred)
- Building
- 10A Property Transfer Parcel
- Fort Wingate Installation Boundary
- - - Arroyo
- Road

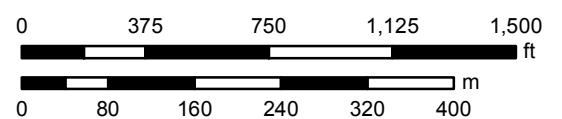
Surface Geology

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

FIGURE 4-3
July 2015 Northern Area Bedrock
Groundwater Contour Map

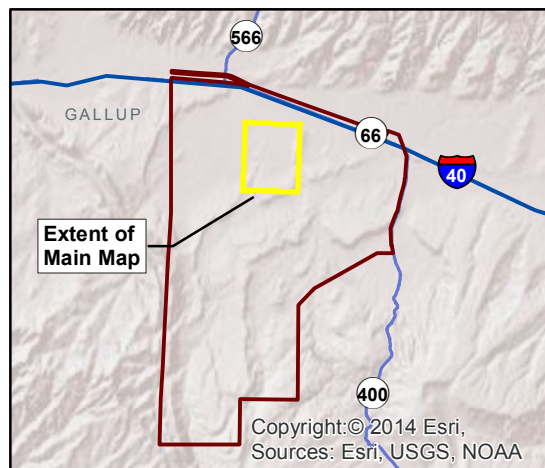
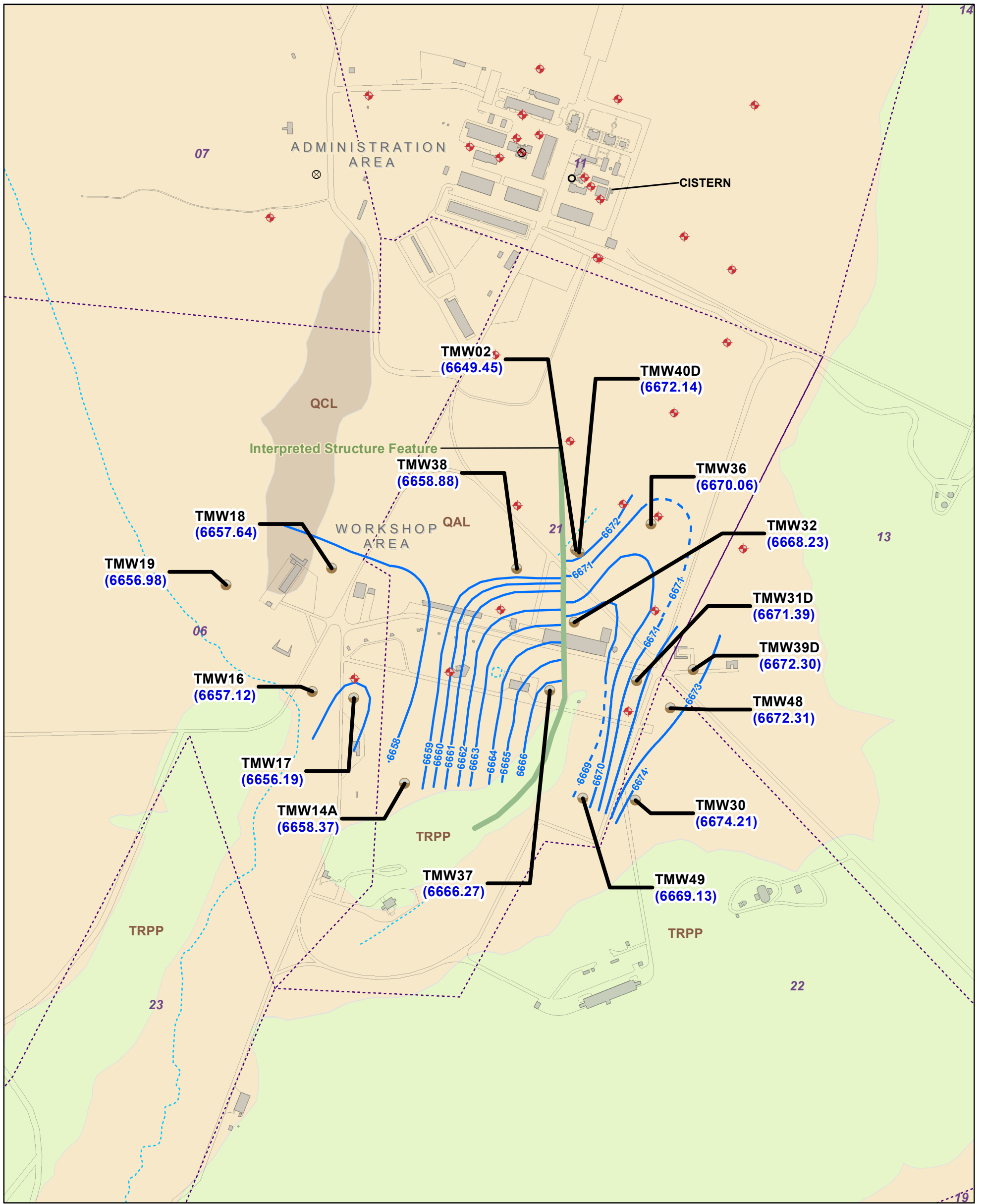
Groundwater Periodic Monitoring
 Report for July to December 2015
 Fort Wingate Depot Activity,
 McKinley County, New Mexico

Note: Elevation data from well TMW02 is not used to generate contours. Well screens for this well are not consistent with adjacent bedrock monitoring wells resulting in anomalous low water elevations.



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.

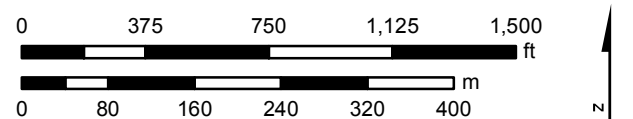


Legend

- ◆ Alluvial Monitoring Well
 - Bedrock Monitoring Well
 - ⊗ Dry Well
 - Water Supply Well 69
 - TMW11** Well Label = Well ID
(6650.94) (Groundwater Elevation in feet)
 - 6660 Bedrock Groundwater Contours, March 2015 (Dashed where inferred)
 - Building
 - 10A Property Transfer Parcel
 - Fort Wingate Installation Boundary
- Surface Geology**
- QAL QAL - Quaternary Alluvial Deposits
 - QCL QCL - Quaternary Colluvial and Gravel Deposits
 - TRPP TRPP - Petrified Forest Formation, Painted Desert Member

FIGURE 4-4
October 2015 Northern Area Bedrock Groundwater Contour Map
 Groundwater Periodic Monitoring Report for July to December 2015
 Fort Wingate Depot Activity, McKinley County, New Mexico

Note: Elevation data from well TMW02 is not used to generate contours. Well screens for this well are not consistent with adjacent bedrock monitoring wells resulting in anomalous low water elevations.



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.

5.0 Analytical Results

The groundwater quality parameters and laboratory analytical results for the Fall 2015 groundwater sampling event are presented in Tables 5-1 through 5-8. 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 (DQE) Report is provided in Appendix C. The historical groundwater monitoring data is provided in Appendix D.

5.1 Northern Area Analytical Results

5.1.1 Water Quality Parameters

The water quality parameter measurements 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 0.42 to 14.4 millisiemens per centimeter (mS/cm). Median values for groundwater from the Northern Area monitoring wells were 3.22 and 2.6 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 2,090 and 1,710 mg/L, respectively.

Groundwater pH measurements ranged from 6.09 to 9.06, with one data point above 9 in water from the Northern Area alluvial monitoring wells. Median pH values were 7.51 and 8.105 in the Northern Area alluvial and bedrock groundwater units, respectively.

Dissolved oxygen is a measure of aerobic and anaerobic conditions in the water-bearing units. Dissolved oxygen values ranged from 0.0 to 7.80 mg/L, with median values of 1.17 and 0.83 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 dissolved oxygen 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, 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 -46 to 461 millivolts (mV) across the monitoring area. Median values of Eh were 279 mV in water from alluvial aquifer wells and 164 mV in water from bedrock wells, respectively. Values of Eh below approximately 400 mV in neutral pH waters indicate that perchlorate is susceptible to chemical degradation (Takeno, 2005). Values of Eh below approximately 300 mV in neutral pH waters indicate that nitrate and some nitrogen-based explosive compounds are susceptible to chemical degradation (Takeno, 2005).

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

5.0 Analytical Results

1 systems. Nitrate and nitrite were analyzed by EPA Method 9056 and reported as nitrogen mass concentrations,
2 nitrate-nitrogen, and nitrite-nitrogen. A summary of the nitrate and nitrite analytical results is presented in
3 Table 5-2.

4 Nitrate was detected in samples from 36 alluvial monitoring wells in the Northern Area. Concentrations of nitrate
5 ranged from 0.077 J to 130 mg/L, and exceeded the EPA MCL of 10 mg/L in samples from 13 alluvial monitoring
6 wells in the Northern Area. Nitrite was detected in two samples from alluvial monitoring wells TMW40S and
7 MW20 in the Northern Area, at a concentrations of 2.1 J and 1.1 mg/L respectively, which exceeded the EPA MCL
8 of 1 mg/L. The highest nitrate concentrations in alluvial groundwater were found in the Workshop Area
9 immediately downgradient of the TNT Leaching Beds (monitoring wells TMW40S and TMW03). Groundwater
10 nitrate concentrations were also detected above the MCLs in multiple samples collected from wells in the
11 Administration Area. The extent of nitrate contamination downgradient (to the west) of the Administration Area
12 has not been defined. In addition, elevated nitrate concentrations are detected in samples from background
13 alluvial monitoring well BGMW02. Well BGMW02 is located on the FWDA boundary and upgradient of any
14 SWMUs or AOCs.

15 In order to verify that FWDA is not the source of nitrate detections at background well BGMW02, a supplemental
16 groundwater sample was collected and analyzed for nitrate and nitrite from a nearby well. On December 1, 2015
17 one sample was collected from TMW28. The TMW28 sample location was selected because it is positioned
18 between background wells and potential waste release sites in the Administration Area of FWDA. The
19 groundwater sample from TMW28 did not have detectable nitrate or nitrite concentrations. This data along with
20 the existing hydraulic gradient in this area confirm that the source of nitrate at BGMW02 does not originate from
21 FWDA. Figure 5-1 shows the groundwater nitrate and nitrite concentration data for the alluvial monitoring wells
22 in the Northern Area.

23 Nitrate was detected in samples from nine bedrock monitoring wells in the Northern Area. Groundwater nitrate
24 concentrations in samples from bedrock monitoring wells ranged from 0.16 J to 88 mg/L and exceeded the EPA
25 MCL in samples from four wells. Nitrite was not detected at concentrations exceeding the MCL in the bedrock
26 monitoring wells this sampling event. The highest groundwater nitrate concentrations in the bedrock
27 groundwater unit were found in the Workshop Area (samples from monitoring well TMW02) immediately
28 downgradient of the TNT Leaching Beds (SWMU 1). However, samples from three monitoring wells upgradient of
29 the TNT Leaching Beds also had nitrate concentrations that exceeded the EPA MCL. Figure 5-2 shows the
30 groundwater nitrate and nitrite concentration data for the bedrock monitoring wells in the Northern Area.

31 5.1.3 Explosive Compounds

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

37 The following explosive compounds were detected in groundwater samples from alluvial and bedrock monitoring
38 wells collected during the Fall 2015 groundwater sampling event (the maximum concentrations are shown in
39 parentheses):

- 40 ○ 1,3,5-Trinitrobenzene (2.2 J µg/L at alluvial monitoring well TMW40S)
- 41 ○ 1,3-Dinitrobenzene (0.20 J µg/L at bedrock monitoring well TMW02);
- 42 ○ 2,4,6-Trinitrotoluene (0.081 J µg/L at alluvial monitoring well TMW40S);
- 43 ○ 2,4-Dinitrotoluene (0.29 J µg/L at alluvial monitoring well TMW03);
- 44 ○ 2-Amino-4,6-dinitrotoluene (2.7 J µg/L at alluvial monitoring well TMW04); detected in samples from five
45 alluvial and one bedrock monitoring wells

- 1 ○ 4-Amino-2,6-dinitrotoluene (1.5 J µg/L at alluvial monitoring wells TMW03 and TMW04); detected in samples
2 from four alluvial and one bedrock monitoring wells
- 3 ○ 4-Nitrotoluene (1.9 J µg/L at alluvial monitoring well TMW04); detected in samples from two alluvial and no
4 bedrock monitoring wells
- 5 ○ Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) (1,000 µg/L at alluvial monitoring well TMW40S); detected in
6 samples from five alluvial and one bedrock monitoring wells
- 7 ○ Nitrobenzene (0.16 J µg/L at alluvial monitoring well TMW31S);
- 8 ○ Octahydro-1.3.5.7-tetranitro-1.3.5.7-tetrazocine (HMX) (14 J µg/L at alluvial monitoring well TMW40S);
9 detected in samples from three alluvial and no bedrock monitoring wells

10 Only RDX was detected above the screening level in groundwater samples from the Fall 2015 sampling event.

11 RDX is a recognized groundwater explosive compound of interest. The compound RDX is detected at
12 concentrations several orders of magnitude higher than the screening level in several samples from alluvial
13 monitoring wells. The highest concentrations of RDX were detected downgradient of the TNT Leaching Beds
14 (SWMU 1) in samples from monitoring wells TMW03 and TMW40S at concentrations of 490 and 1,000 µg/L,
15 respectively. The RDX plume is well-defined in the alluvial aquifer and is shown with other explosives detections
16 on Figures 5-3 and 5-4 for the alluvial and bedrock groundwater aquifers, respectively.

17 Other explosives analytes are occasionally detected in both the alluvial and bedrock aquifers. Detections occur
18 most frequently and at higher concentrations in the alluvial aquifer downgradient of the TNT Leaching Beds
19 (SWMU 1). No explosives compounds other than RDX were detected above the RSLs during this monitoring
20 period.

21 5.1.4 Perchlorate

22 Groundwater samples were analyzed for perchlorate by EPA Method 6860. A summary of analytical results is
23 presented in Table 5-4. Groundwater perchlorate-concentration data for the Northern Area are shown on
24 Figures 5-3 and 5-4. The regulatory screening level for perchlorate is 6 µg/L, as defined in the FWDA RCRA Permit.
25 The highest perchlorate concentrations were found in groundwater samples collected from the bedrock
26 monitoring wells in the Workshop Area. The extent of perchlorate groundwater contamination has not been
27 completely defined to date.

28 Perchlorate was detected in groundwater samples from 24 alluvial monitoring wells in the Northern Area with
29 concentrations ranging from 0.0086 J to 670 µg/L. Perchlorate was detected in groundwater samples from
30 10 bedrock wells with concentrations ranging from 0.0078 J to 1,500 µg/L. Overall, the regulatory screening level
31 was exceeded in groundwater samples collected from three alluvial and seven bedrock monitoring wells.

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

38 5.1.5 Volatile Organic Compounds

39 Groundwater contamination from VOCs at concentrations above screening levels is limited to a small number of
40 shallow alluvial monitoring wells in the Administration Area. The detected VOCs are primarily associated with
41 chlorinated solvents, petroleum fuels, and their degradation products. Groundwater samples were analyzed for
42 VOCs using EPA Method SW8260B. A summary of the VOC analytical results is presented in Table 5-5. Seven VOCs
43 were detected in one or more groundwater samples collected during the Fall 2015 groundwater sampling event.

5.0 Analytical Results

- 1 Figures 5-5 and 5-6 show the VOC data for samples collected in the Northern Area alluvial wells and bedrock
2 wells, respectively.
- 3 The following VOCs were detected in samples collected during the Fall 2015 groundwater sampling event in the
4 Northern Area (the maximum detected concentrations are shown in parentheses):
- 5 ○ 1,1,1-Trichloroethane (2.4 µg/L at alluvial monitoring well MW22S)
 - 6 ○ 1,1-Dichloroethane (0.46 µg/L at alluvial monitoring well MW22S)
 - 7 ○ 1,2,3-Trichloroethane (0.23 µg/L at alluvial monitoring well MW23);
 - 8 ○ 1,2-Dichloroethane (95 µg/L at alluvial monitoring well MW18D); detected in samples from five alluvial and
9 no bedrock monitoring wells
 - 10 ○ Acetone (6.2 µg/L at alluvial monitoring well TMW24);
 - 11 ○ Carbon disulfide (3.9 µg/L at bedrock monitoring well TMW17); detected in samples from one alluvial and
12 three bedrock monitoring wells
 - 13 ○ Toluene (0.38 µg/L at bedrock monitoring well TMW19); detected in samples from no alluvial and two
14 bedrock monitoring wells
- 15 The only VOC detected in groundwater samples at concentrations above regulatory screening levels was the
16 gasoline additive and chlorinated solvent 1,2-dichloroethane. Groundwater samples collected from three alluvial
17 monitoring wells in the vicinity of a former fueling facility had concentrations above the EPA MCL of 5 µg/L.
18 Samples collected from wells MW18D, MW20, and TMW33, had 1,2-dichloroethane concentrations of 95 µg/L, 8.4 µg/L,
19 and 39 µg/L, respectively. No other VOCs were detected in groundwater samples above screening levels.

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

22 Ethylene Dibromide

23 In response to the NMED *Approval with Modifications* Letter dated September 16, 2015, supplemental sampling
24 and analysis by EPA Method SW8011 was conducted (NMED, 2015b). Samples were analyzed for the compound
25 Ethylene Dibromide (also identified as EDB, or 1, 2-dibromoethane) to determine if historic fuel releases have
26 impacted FWDA groundwater with EDB. A total of 10 sample locations were selected at known fuel release sites.
27 Ethylene Dibromide was not detected in any of the groundwater samples from any location. These results indicate
28 that EDB is not a site COC and supplemental EDB sampling is not warranted. A summary of the sample results is
29 presented in Table 5-6 and Figure 5-5.

30 5.1.6 Other Organic Compounds

31 Detections of organic compounds other than VOCs in groundwater samples from FWDA are generally sporadic
32 and at concentrations below screening levels. A summary of the detected organic compounds other than VOCs is
33 presented in Table 5-7. No pesticides, as analyzed using EPA Method SW8081A, were detected in any
34 groundwater samples. Petroleum hydrocarbons were detected in the diesel and gasoline range, as analyzed using
35 EPA Method SW8015C, and SVOCs were analyzed using EPA Method SW8270D.

36 Detected concentrations of petroleum hydrocarbons and SVOCs detected in more than one sample are as follows
37 (the maximum detected concentrations are shown in parentheses):

- 38 ○ Diesel range organics (DRO) (510 µg/L at alluvial monitoring well MW18D); detected in samples from 5 alluvial
39 and no bedrock monitoring wells
- 40 ○ Gasoline range organics (GRO) (39 µg/L at alluvial monitoring well MW18D); detected in samples from two
41 alluvial and no bedrock monitoring wells

- 1 ○ 2,4-Dinitrophenol (28 J µg/L at alluvial monitoring well TMW03); detected in samples from three alluvial and
2 no bedrock monitoring wells
- 3 ○ Acetophenone (1.3 J µg/L at bedrock monitoring well TMW19); detected in samples from no alluvial and four
4 bedrock monitoring wells
- 5 ○ Benzoic acid (12 J µg/L at alluvial monitoring wells BGMW03, TMW22, and TMW41) ; detected in samples
6 from seven alluvial and one bedrock monitoring wells
- 7 ○ Benzoic alcohol (0.48 J µg/L at alluvial monitoring well MW23) ; detected in samples from three alluvial and
8 no bedrock monitoring wells
- 9 ○ Bis(2-ethylhexyl)phthalate (6.2 J µg/L at bedrock monitoring well TMW18); detected in samples from three
10 alluvial and one bedrock monitoring wells
- 11 ○ Diethyl phthalate (0.98 J µg/L at bedrock monitoring well TMW16); detected in samples from no alluvial and
12 two bedrock monitoring wells
- 13 ○ Dimethyl phthalate (0.26 J µg/L at alluvial monitoring well MW20); detected in samples from two alluvial and
14 no bedrock monitoring wells
- 15 ○ Fluoranthene (0.22 J µg/L at bedrock monitoring well MW20); detected in samples from two alluvial and no
16 bedrock monitoring wells
- 17 ○ Isophorone (0.28 J µg/L at alluvial monitoring well MW20); detected in samples from two alluvial and no
18 bedrock monitoring wells Phenathrene (0.26 J µg/L at alluvial monitoring well TMW43)

19 Petroleum hydrocarbons were detected in several samples collected from wells in the Administration Area of the
20 Northern Area. Overall, petroleum hydrocarbons were detected in samples from five alluvial monitoring wells,
21 with no detections in bedrock monitoring wells. The highest concentrations occurred in samples from shallow
22 wells adjacent to the former fueling facility (510 µg/L as DRO in monitoring well TMW18D). No screening levels
23 were identified for petroleum hydrocarbons.

24 Detections of SVOCs are associated with historical releases of explosives compounds and with sampling and
25 laboratory contaminants. No SVOC possibly associated with explosives breakdown or combustion products were
26 detected at concentrations above RSLs during this monitoring period. The SVOC bis(2-ethylhexyl)phthalate was
27 detected at concentrations above the EPA MCL of 6 µg/L in one sample from bedrock monitoring well TMW18 at a
28 concentration of 6.2 J µg/L. The common plastic additive bis(2-ethylhexyl)phthalate may be present in a variety of
29 laboratory and sampling equipment (including sample tubing, pump, bailer, and laboratory equipment) and was
30 detected in samples from four monitoring wells. No other SVOCs were detected at concentrations above
31 screening levels. The SVOCs 2,4-Dinitrophenol, Benzoic acid, and Benzyl Alcohol, were detected at multiple wells
32 below screening levels. Detections of other SVOCs were sporadic (with each compound occurring in two or fewer
33 samples).

34 5.1.7 Metals

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

41 Dissolved aluminum, arsenic, iron, lead, manganese, and selenium were detected in multiple groundwater
42 samples above regulatory screening levels. Because background groundwater concentrations have not yet been
43 accepted by the regulators for FWDA, it cannot clearly be demonstrated whether the detected concentrations are
44 a result of natural conditions or anthropogenic sources of contamination. Therefore, no contaminant plume maps

5.0 Analytical Results

1 were created for the metals data. A background evaluation of FWDA groundwater was submitted to the NMED in
2 September 2014 and responses to NMED comments are currently in progress.

3 **5.2 OB/OD Area Analytical Results**

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

6 **5.3 Field Variances from the Work Plan**

7 One field variance to the Work Plan occurred during the monitoring period. Alluvial monitoring well FW35 was dry
8 and could not be sampled during this monitoring event. Water levels at this well have been gradually falling the
9 last few sampling events and it is not clear if the well will be suitable for long-term monitoring. Water levels will
10 be monitored at this sample location to determine when sampling can be performed or if the well should be
11 properly abandoned.

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

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

21 **5.4 New Findings**

22 No new findings were identified from monitoring data. Monitoring data are generally consistent with historical
23 data.

24 Supplemental monitoring was performed for analysis of EDB at select wells and for analysis of nitrate and nitrite
25 at TMW28. No analytes were detected as part of this supplemental sampling effort, and no changes were made to
26 groundwater plumes or COPCs.

5.0 Analytical Results

TABLE 5-1

Fall 2015 Stable Groundwater Parameters (Page 1 of 3)

Groundwater Periodic Monitoring Report July through December 2015 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	11/05/15	3.2	0.0	500 ^a	not calculated	7.36	9.2	0.00	0.03
BGMW02	North Alluvial	13.5 - 33.5	11/05/15	4.85	0.42	85	301	7.23	10.06	4.1	0.09
BGMW03	North Alluvial	8.5 - 28.5	10/30/15	3.27	0.92	152	366	7.53	13.00	167	N/A
FW31	North Alluvial	10.0 - 50.0	11/02/15	2.33	3.97	61	276	8.16	11.72	33.2	N/A
FW35	North Alluvial	10.0 - 30.0	Well was dry in October 2015 and was not purged and sampled								
MW01	North Alluvial	33.6 - 53.6	10/29/15	3.39	4.01	179	394	7.34	12.05	70.4	N/A
MW02	North Alluvial	37.0 - 47.0	10/29/15	2.01	2.50	218	433	7.12	12.61	42.6	N/A
MW03	North Alluvial	43.0 - 53.0	10/30/15	4.17	0.36	41	257	7.12	11.00	0.00	0
MW18D	North Alluvial	47.0 - 57.0	11/02/15	0.42	0.14	-93	120	7.51	14.82	>1000	N/A
MW20	North Alluvial	47.0 - 57.0	11/02/15	13.8	7.34	162	375	6.79	14.37	0.00	0.60
MW22D	North Alluvial	47.0 - 57.0	11/02/15	4.94	0.65	190 ^a	not calculated	7.16	16.29	0.00	0.05
MW22S	North Alluvial	31.0 - 41.0	11/04/15	3.50	3.86	114	329	6.57	11.87	0.00	N/A
MW23	North Alluvial	63.5 - 133.5	11/06/15	1.81	1.15	-8	208	6.35	11.00	1.84	N/A
MW24	North Alluvial	16.0 - 66.0	11/05/15	1.24	0.94	-140	76	6.09	10.73	5.8	N/A
SMW01	North Alluvial	29.9 - 49.9	11/03/15	3.1	0.78	-32	183	7.63	12.45	0.00	0.06
TMW01	North Alluvial	44.0 - 59.0	11/04/15	2.64	6.04	29	245	7.35	10.41	0.00	0.18
TMW03	North Alluvial	49.8 - 69.8	11/04/15	3.52	0.21	9	226	7.96	9.5	0.00	0.01
TMW04	North Alluvial	50.0 - 70.0	11/04/15	3.39	1.19	124	340	7.72	10.12	0.00	0.19
TMW06	North Alluvial	45.0 - 55.0	11/04/15	3.21	0.19	120	336	7.51	11.05	0.00	0.67
TMW07	North Alluvial	65.0 - 75.0	10/30/15	5.12	8.33 ^a	-30	186	7.69	10.02	47.5	N/A
TMW08	North Alluvial	30.0 - 60.0	11/05/15	14.4	0	23	238	7.09	12.2	10.6	0.2
TMW10	North Alluvial	28.0 - 58.0	11/04/15	6.98	7.81	46	262	7.52	10.45	0.00	NM
TMW11	North Alluvial	55.0 - 80.0	11/05/15	2.57	0.12	30	247	7.37	8.84	18.2	0.48
TMW13	North Alluvial	60.7 - 70.7	11/04/15	2.11	0.7	-71	145	7.56	10.61	0.00	0.14
TMW15	North Alluvial	56.0 - 71.0	11/06/15	2.1	0.81	6	222	7.4	10.48	5.6	0.13
TMW21	North Alluvial	48.0 - 58.0	10/29/15	2.35	2.67	85	301	7.94	10.72	186	N/A
TMW22	North Alluvial	52.0 - 62.0	10/30/15	3.17	3.13	186	403	7.66	9.42	0.00	N/A
TMW23	North Alluvial	46.0 - 56.0	10/30/15	2.97	1.69	112	327	8.16	12.02	115	N/A
TMW24	North Alluvial	44.0 - 54.0	11/06/15	3.73	0.44	-57	158	7.45	11.97	40.7	0
TMW25	North Alluvial	42.5 - 52.5	11/04/15	3.51	8.5 ^a	-94	122	7.61	10.11	0.00	N/A
TMW26	North Alluvial	45.0 - 55.0	10/30/15	3.21	4.5	34	250	7.64	10.5	7.5	0.07
TMW27	North Alluvial	60.0 - 70.0	11/30/15	1.41	7.9 ^a	-146	70	7.58	11.3	0.00	0.33
TMW28	North Alluvial	37.0 - 47.0	11/03/15	1.7	2.85	-87	128	7.2	12.39	0.00	0
TMW29	North Alluvial	49.0 - 59.0	10/28/15	2.08	2.36	159	373	7.85	13.1	0	N/A

5.0 Analytical Results

TABLE 5-1

Fall 2015 Stable Groundwater Parameters (Page 2 of 3)

Groundwater Periodic Monitoring Report July through December 2015 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	10/29/15	2.62	1.83	82	296	7.23	14.25	477	N/A
TMW33	North Alluvial	37.0 - 57.0	10/30/15	9.08	1.09	83	296	7.44	15.13	50.6	N/A
TMW34	North Alluvial	37.0 - 57.0	11/03/15	5.13	3.26	108	321	6.86	14.56	0	0.11
TMW35	North Alluvial	35.0 - 55.0	11/02/15	4.68	3.48	247	461	7.3	13.83	0	0.12
TMW39S	North Alluvial	32.5 - 52.5	10/27/15	3.75	2.91	89	303	7.58	14.04	64.5	N/A
TMW40S	North Alluvial	50.0 - 60.0	10/30/15	4.08	4.97	198	415	7.61	9.91	0	N/A
TMW41	North Alluvial	55.5 - 65.5	10/29/15	3.22	2.42	151	367	8.18	10.88	19.8	N/A
TMW43	North Alluvial	58.0 - 78.0	10/31/15	2.24	0	105	320	7.61	12.16	0	0.12
TMW44	North Alluvial	43.5 - 63.5	10/29/15	3.22	0.64	61	276	8.00	12.69	269	N/A
TMW45	North Alluvial	38.5 - 58.5	11/03/15	3.33	0	65	279	7.63	12.99	0	0.25
TMW46	North Alluvial	38.5 - 58.5	10/27/15	4.63	1.44	66	279	7.41	14.55	62.9	N/A
TMW47	North Alluvial	82.5 - 102.5	11/05/15	2.3	0.21	-120	97	8.37	9.98	0	1.5
TMW02	North Bedrock	67.9 - 81.9	11/03/15	4.06	1.31	119	330	7.65	17.64	0	0.2
TMW14A	North Bedrock	94.25 - 109.25	11/03/15	1.61	6.09 ^a	-156	56	8.56	16.5	0	0.01
TMW16	North Bedrock	123.0 - 138.0	10/27/15	1.7	0.76	39	254	8.35	11.76	60.42	N/A
TMW17	North Bedrock	112.0 - 127.0	11/03/15	1.64	1.06	-169	44	8.68	14.9	0	1.81
TMW18	North Bedrock	150.0 - 160.0	10/29/15	2.64	1.61	-76	138	9.06	12.86	1.04	N/A
TMW19	North Bedrock	169.0 - 184.0	10/28/15	2.63	0	3	218	8.1	11.82	346	N/A
TMW30	North Bedrock	35.0 - 45.0	10/29/15	2.07	6.99	185	401	7.81	10.34	93.4	N/A
TMW31D	North Bedrock	77.0 - 107.0	11/05/15	2.48	0	34	250	7.35	10.58	0	0.4
TMW32	North Bedrock	117.0 - 137.0	11/05/15	3.28	0.99	-82	135	7.27	9.83	0	0.13
TMW36	North Bedrock	132.0 - 152.0	10/28/15	2.77	0	-260	-46	8.82	13.16	24.37	N/A
TMW37	North Bedrock	88.0 - 108.0	10/28/15	2.49	0.06	-27	187	7.95	13.09	26.51	N/A
TMW38	North Bedrock	118.9 - 158.9	11/06/15	3.22	0.69	-107	109	8.49	10.39	56	0.26
TMW39D	North Bedrock	70.0 - 100.0	11/04/15	2.7	0.95	-100	116	8.28	10.93	11.1	0.45
TMW40D	North Bedrock	135.0 - 155.0	11/03/15	2.83	0.83	-73	142	8.11	12.73	0	0.01
TMW48	North Bedrock	71.0 - 91.0	11/04/15	2.44	0.08	125	341	7.51	10.24	0	N/A
TMW49	North Bedrock	40.0 - 60.0	11/05/15	3.31	1.23	140	358	7.61	7.54	0	0.64

TABLE 5-1

Fall 2015 Stable Groundwater Parameters (Page 3 of 3)*Groundwater Periodic Monitoring Report July through December 2015 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:

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

NM = not measured

NTU = nephelometric turbidity unit

ORP = oxygen-reduction potential

pH = hydrogen (ion) concentration

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

5.0 Analytical Results

TABLE 5-2

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

Groundwater Periodic Monitoring Report July through December 2015 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
BGMW01	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
	BGMW01042014	Normal	North Alluvial	4/15/2014	0.20 U	0.20 U
BGMW02	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
	DBW02042014	Duplicate	North Alluvial	4/15/2014	13 J	0.20 U
	BGMW02042014	Normal	North Alluvial	4/15/2014	32 J	0.50 U
BGMW03	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
	BGMW03042014	Normal	North Alluvial	4/11/2014	4.4	0.78 J
FW31	FW3112015	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
	FW31042014	Normal	North Alluvial	4/10/2014	0.14 J	0.10 U
FW35	FW35102015	Normal	North Alluvial	10/2015	Well dry this event ^c	
	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
	FW35042014	Normal	North Alluvial	4/10/2014	0.32 J	0.20 U
MW01	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
	MW01042014	Normal	North Alluvial	4/9/2014	7.0	0.20 U
MW02	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
	MW02042014	Normal	North Alluvial	4/9/2014	1.3	0.10 U
MW03	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
	MW03042014	Normal	North Alluvial	4/14/2014	7.7	0.20 U
MW18D	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
	MW18D042014	Normal	North Alluvial	4/14/2014	0.50 U	0.50 U
MW20	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
	MW20042014	Normal	North Alluvial	4/14/2014	9.1	0.50 U
MW22D	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
	DMW22D042014	Duplicate	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 July through December 2015 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	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
	MW22S042014	Normal	North Alluvial	4/9/2014	19	0.20 U
MW23	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
	DMW23042014	Duplicate	North Alluvial	4/11/2014	0.10 U	0.10 U
	MW23042014	Normal	North Alluvial	4/11/2014	0.10 U	0.10 U
MW24	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
	MW24042014	Normal	North Alluvial	4/11/2014	0.10 U	0.10 U
	DMW24042014	Duplicate	North Alluvial	4/11/2014	0.10 U	0.10 U
SMW01	SMW01102015	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
	SMW0102014	Normal	North Alluvial	10/27/2014	0.10 U	0.10 U
	SMW01042014	Normal	North Alluvial	4/15/2014	0.10 U	0.10 U
TMW01	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
	TMW01042014	Normal	North Alluvial	4/16/2014	8.6	0.10 U
TMW03	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
	TMW03042014	Normal	North Alluvial	4/16/2014	130	1.2 J
TMW04	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
	TMW04042014	Normal	North Alluvial	4/16/2014	45	0.20 U
TMW06	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
	TMW06042014	Normal	North Alluvial	4/16/2014	13	0.20 U
TMW07	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
	TMW07042014	Normal	North Alluvial	4/10/2014	0.20 U	0.20 U
TMW08	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
	TMW08042014	Normal	North Alluvial	4/15/2014	4.5	0.50 U
	DTW08042014	Duplicate	North Alluvial	4/15/2014	4.6	0.50 U

TABLE 5-2

Summary of Nitrate-nitrogen and Nitrite-nitrogen Analytical Detections (Page 3 of 6)
Groundwater Periodic Monitoring Report July through December 2015 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	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
	TMW10042014	Normal	North Alluvial	4/14/2014	0.50 U	0.50 U
TMW11	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
	TMW11042014	Normal	North Alluvial	4/17/2014	4.6	0.10 U
TMW13	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
	TMW13042014	Normal	North Alluvial	4/17/2014	1.9	0.10 U
TMW15	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
	TMW15042014	Normal	North Alluvial	4/17/2014	9.0	0.10 U
TMW21	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
	TMW21042014	Normal	North Alluvial	4/14/2014	8.7	0.10 U
TMW22	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
	TMW22042014	Normal	North Alluvial	4/10/2014	11 J	0.20 U
TMW23	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
	TMW23042014	Normal	North Alluvial	4/10/2014	29 J	0.20 U
TMW24	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
	TMW24042014	Normal	North Alluvial	4/17/2014	0.20 U	0.20 U
TMW25	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
	TMW25042014	Normal	North Alluvial	4/15/2014	0.44 J	0.20 U
TMW26	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
	TMW26042014	Normal	North Alluvial	4/15/2014	0.20 U	0.20 U
TMW28	TMW28102015	Normal	North Alluvial	12/01/15	0.048 U	0.10 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 July through December 2015 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	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
	TMW29042014	Normal	North Alluvial	4/10/2014	2.4 J	0.41 J
TMW31S	TMW31S102015	Normal	North Alluvial	10/29/2015	7.6	0.10 U
	TMW31S042015	Normal	North Alluvial	4/2/2015	7	0.10 U
	TMW31S102014	Normal	North Alluvial	10/22/2014	7.6	0.10 U
	TMW31S042014	Normal	North Alluvial	4/10/2014	7.8 J	0.10 U
TMW33	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
	TMW33042014	Normal	North Alluvial	4/10/2014	1.1 J	0.50 U
TMW34	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
	TMW34042014	Normal	North Alluvial	4/15/2014	0.20 U	0.20 U
TMW35	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
	TMW35042014	Normal	North Alluvial	4/14/2014	12	0.20 U
TMW39S	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
	TMW39S042014	Normal	North Alluvial	4/11/2014	8.5	0.20 U
TMW40S	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
	TMW40S042014	Normal	North Alluvial	4/10/2014	120 J	1.5 J
TMW41	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
	TMW41042014	Normal	North Alluvial	4/10/2014	7.1 J	0.20 U
TMW43	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
	TMW43042014	Normal	North Alluvial	4/15/2014	0.10 U	0.10 U
TMW44	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
	TMW44042014	Normal	North Alluvial	4/10/2014	45 J	0.20 U

TABLE 5-2

Summary of Nitrate-nitrogen and Nitrite-nitrogen Analytical Detections (Page 5 of 6)
 Groundwater Periodic Monitoring Report July through December 2015 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
TMW45	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
	TMW45042014	Normal	North Alluvial	4/11/2014	0.50 J	0.20 U
TMW46	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
	TMW46042014	Normal	North Alluvial	4/11/2014	84 J	0.20 U
TMW47	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
	TMW47042014	Normal	North Alluvial	4/16/2014	0.10 U	0.10 U
TMW02	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
	TMW02042014	Normal	North Bedrock	4/16/2014	90	0.20 U
TMW14A	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
	TMW14A042014	Normal	North Bedrock	4/15/2014	0.069 J	0.10 U
TMW17	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
	TMW17042014	Normal	North Bedrock	4/17/2014	0.10 U	0.10 U
TMW18	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
	TMW18042014	Normal	North Bedrock	4/11/2014	0.10 U	0.10 U
TMW30	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
	TMW30042014	Normal	North Bedrock	4/11/2014	17 J	0.10 U
TMW31D	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 U
	TMW31D102014	Normal	North Bedrock	10/30/2014	15	0.10 U
	DTW31D102014	Duplicate	North Bedrock	10/30/2014	15	0.10 U
	TMW31D042014	Normal	North Bedrock	4/16/2014	14	0.10 U
TMW32	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
	TMW32042014	Normal	North Bedrock	4/16/2014	2.4	0.20 U
TMW36	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
	TMW36042014	Normal	North Bedrock	4/9/2014	0.10 U	0.10 U

5.0 Analytical Results

TABLE 5-2

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

Groundwater Periodic Monitoring Report July through December 2015 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
TMW37	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
	TMW37042014	Normal	North Bedrock	4/9/2014	0.050 U	0.10 U
TMW38	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
	TMW38042014	Normal	North Bedrock	4/17/2014	0.20 U	0.20 U
TMW39D	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
	TMW39D042014	Normal	North Bedrock	4/16/2014	0.20 J	0.20 U
TMW40D	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
	TMW40D042014	Normal	North Bedrock	4/17/2014	1.9	0.86 J
TMW48	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
	TMW48042014	Normal	North Bedrock	4/17/2014	14 J	0.10 U
	DTW48042014	Duplicate	North Bedrock	4/17/2014	15 J	0.10 U
TMW49	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
	TMW49042014	Normal	North Bedrock	4/16/2014	6.6	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 historic data is presented

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 8)
 Groundwater Periodic Monitoring Report July through December 2015 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-trinitrophenylnitramine 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	0.48	39	3.1	1.7	39	42	0.7	39	1.4	1000					
BGMW01	BGMW01102015	Normal	North Alluvial	11/5/2015	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	North Alluvial	4/2/2015	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	North Alluvial	10/24/2014	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
	BGMW01042014	Normal	North Alluvial	4/15/2014	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
BGMW02	BGMW02102015	Normal	North Alluvial	11/5/2015	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	North Alluvial	4/2/2015	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	North Alluvial	10/24/2014	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
	DBW02042014	Duplicate	North Alluvial	4/15/2014	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
BGMW02042014	Normal	North Alluvial	4/15/2014	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	
BGMW03	BGMW03102015	Normal	North Alluvial	10/30/2015	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	North Alluvial	4/1/2015	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
	BGMW03102014	Normal	North Alluvial	10/22/2014	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
	BGMW03042014	Normal	North Alluvial	4/11/2014	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
FW31	FW3112015	Normal	North Alluvial	11/2/2015	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	North Alluvial	4/1/2015	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	North Alluvial	10/22/2014	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
	FW31042014	Normal	North Alluvial	4/10/2014	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	0.069 U	0.16 U	0.16 U	0.16 U
FW35	FW35102015	Normal	North Alluvial	10/2015	Well dry this event ^b													
	FW35042015	Normal	North Alluvial	4/1/2015	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	North Alluvial	10/27/2014	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
	FW35042014	Normal	North Alluvial	4/10/2014	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
MW01	MW01102015	Normal	North Alluvial	10/28/2015	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	North Alluvial	4/1/2015	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	North Alluvial	10/23/2014	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
	MW01042014	Normal	North Alluvial	4/9/2014	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 J	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U
MW02	MW02102015	Normal	North Alluvial	10/28/2015	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	North Alluvial	4/1/2015	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	North Alluvial	10/24/2014	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
	MW02042014	Normal	North Alluvial	4/9/2014	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.46 J	0.35 J	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U

5.0 Analytical Results

TABLE 5-3

Summary of Total Explosives Analytical Detections (Page 2 of 8)

Groundwater Periodic Monitoring Report July through December 2015 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-trinitrophenylnitramine 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 Tap Water Screening Levels) ^a													
590	2.0	25	2.4	0.48	39	3.1	1.7	39	42	0.7	39	1.4	1000					
MW03	MW03102015	Normal	North Alluvial	10/30/2015	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	North Alluvial	4/3/2015	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	North Alluvial	10/24/2014	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
	MW03042014	Normal	North Alluvial	4/14/2014	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
MW18D	MW18D102015	Normal	North Alluvial	11/2/2015	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	North Alluvial	4/8/2015	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	North Alluvial	10/31/2014	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
	MW18D042014	Normal	North Alluvial	4/14/2014	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
MW20	MW20102015	Normal	North Alluvial	11/2/2015	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	North Alluvial	11/2/2015	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	North Alluvial	4/3/2015	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	North Alluvial	10/28/2014	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	North Alluvial	10/28/2014	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	MW22S102015	Normal	North Alluvial	10/30/2015	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	North Alluvial	4/1/2015	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	North Alluvial	10/23/2014	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
	MW22S042014	Normal	North Alluvial	4/9/2014	0.39 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	0.39 U	0.15 U	0.15 U	0.15 U	0.15 U
MW22D	MW22D102015	Normal	North Alluvial	11/2/2015	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	North Alluvial	4/6/2015	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	North Alluvial	10/29/2014	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
	MW22D042014	Normal	North Alluvial	4/14/2014	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
	DMW22D042014	Duplicate	North Alluvial	4/14/2014	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
MW23	MW23102015	Normal	North Alluvial	11/6/2015	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	North Alluvial	11/6/2015	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	North Alluvial	4/7/2015	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	North Alluvial	4/7/2015	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
	MW23102014	Normal	North Alluvial	10/28/2014	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	North Alluvial	10/28/2014	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
	MW23042014	Normal	North Alluvial	4/11/2014	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
DMW23042014	Duplicate	North Alluvial	4/11/2014	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	

TABLE 5-3
 Summary of Total Explosives Analytical Detections (Page 3 of 8)
 Groundwater Periodic Monitoring Report July through December 2015 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-trinitrophenyltriamine 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 Tap Water Screening Levels) ^a													
590	2.0	25	2.4	0.48	39	3.1	1.7	39	42	0.7	39	1.4	1000					
MW24	MW24102015	Normal	North Alluvial	11/5/2015	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	
	MW24042015	Normal	North Alluvial	4/6/2015	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	
	DMW24042015	Duplicate	North Alluvial	4/6/2015	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	
	MW24102014	Normal	North Alluvial	10/27/2014	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	
	DMW24102014	Duplicate	North Alluvial	10/27/2014	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	
	MW24042014	Normal	North Alluvial	4/11/2014	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	
	DMW24042014	Duplicate	North Alluvial	4/11/2014	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	
SMW01	SMW011102015	Normal	North Alluvial	11/3/2015	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	
	SMW01042015	Normal	North Alluvial	4/8/2015	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	
	SMW01102014	Normal	North Alluvial	10/27/2014	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	
	SMW01042014	Normal	North Alluvial	4/15/2014	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	
TMW01	TMW01102015	Normal	North Alluvial	11/4/2015	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	
	TMW01042015	Normal	North Alluvial	4/7/2015	0.49 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.49 U	0.18 U	0.18 U	0.18 U		
	TMW01102014	Normal	North Alluvial	10/30/2014	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U		
	TMW01042014	Normal	North Alluvial	4/16/2014	0.44 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U		
TMW03	TMW03102015	Normal	North Alluvial	11/4/2015	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	
	TMW03042015	Normal	North Alluvial	4/9/2015	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	
	TMW03102014	Normal	North Alluvial	10/30/2014	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	
	TMW03042014	Normal	North Alluvial	4/16/2014	0.42 U	0.16 U	0.16 U	0.48 J	0.16 U	0.90 J	0.16 U	0.16 U	0.16 U	0.42 U	480 J	0.16 U	0.16 U	
TMW04	TMW04102015	Normal	North Alluvial	11/4/2015	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	
	TMW04042015	Normal	North Alluvial	4/9/2015	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	
	TMW04102014	Normal	North Alluvial	10/30/2014	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	
	TMW04042014	Normal	North Alluvial	4/16/2014	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	1.3 J	0.17 U	0.17 U	0.17 U	0.45 U	5.2 J	0.17 U	8.8 J	
TMW06	TMW06102015	Normal	North Alluvial	11/4/2015	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	
	TMW06042015	Normal	North Alluvial	4/9/2015	0.41 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.41 U	0.15 U	0.15 U	0.15 U		
	TMW06102014	Normal	North Alluvial	10/29/2014	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.46 U	0.17 U	0.17 U	0.17 U		
	TMW06042014	Normal	North Alluvial	4/16/2014	0.44 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.44 U	0.16 U	0.16 U	0.16 U		
TMW07	TMW07102015	Normal	North Alluvial	10/30/2015	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	
	TMW07042015	Normal	North Alluvial	4/1/2015	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U		
	TMW07102014	Normal	North Alluvial	10/23/2014	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U		
	TMW07042014	Normal	North Alluvial	4/10/2014	0.41 U	0.15 U	0.15 U	0.092 J	0.15 U	0.15 U	0.90	0.15 U	0.15 U	0.93 J	0.15 U	0.15 U		

5.0 Analytical Results

TABLE 5-3

Summary of Total Explosives Analytical Detections (Page 4 of 8)
 Groundwater Periodic Monitoring Report July through December 2015 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-trinitrophenylhydramine 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 Tap Water Screening Levels) ^a													
TMW10	TMW10102015	Normal	North Alluvial	11/4/2015	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	North Alluvial	4/7/2015	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	North Alluvial	10/28/2014	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
	TMW10042014	Normal	North Alluvial	4/14/2014	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
TMW11	TMW11102015	Normal	North Alluvial	11/5/2015	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	North Alluvial	4/8/2015	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	North Alluvial	10/29/2014	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
	TMW11042014	Normal	North Alluvial	4/17/2014	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
TMW15	TMW15102015	Normal	North Alluvial	11/6/2015	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	0.23 UJ
	DTW15102015	Duplicate	North Alluvial	11/6/2015	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	0.22 UJ
	TMW15042015	Normal	North Alluvial	4/8/2015	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
	DTW15042015	Duplicate	North Alluvial	4/8/2015	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
	TMW15102014	Normal	North Alluvial	10/29/2014	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
	TMW15042014	Normal	North Alluvial	4/17/2014	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
TMW21	TMW21102015	Normal	North Alluvial	10/29/2015	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	North Alluvial	4/3/2015	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
	TMW21102014	Normal	North Alluvial	10/31/2014	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
	TMW21042014	Normal	North Alluvial	4/14/2014	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.38 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
TMW22	TMW22102015	Normal	North Alluvial	10/29/2015	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	North Alluvial	4/1/2015	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	North Alluvial	10/23/2014	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
	TMW22042014	Normal	North Alluvial	4/10/2014	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
TMW23	TMW23102015	Normal	North Alluvial	10/30/2015	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	North Alluvial	4/1/2015	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
	TMW23102014	Normal	North Alluvial	10/22/2014	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
	TMW23042014	Normal	North Alluvial	4/10/2014	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	49	0.16 U	0.16 U	1.2 J
TMW24	TMW24102015	Normal	North Alluvial	11/6/2015	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	North Alluvial	4/8/2015	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
	TMW24102014	Normal	North Alluvial	10/31/2014	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
	TMW24042014	Normal	North Alluvial	4/17/2014	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
TMW25	TMW25102015	Normal	North Alluvial	11/4/2015	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	North Alluvial	4/7/2015	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	North Alluvial	10/31/2014	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
	TMW25042014	Normal	North Alluvial	4/15/2014	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

TABLE 5-3
 Summary of Total Explosives Analytical Detections (Page 5 of 8)
 Groundwater Periodic Monitoring Report July through December 2015 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 Tap Water Screening Levels) ^a													
590	2.0	25	2.4	0.48	39	3.1	1.7	39	42	0.7	39	1.4	1000					
TMW26	TMW26102015	Normal	North Alluvial	10/30/2015	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
	DTW26102015	Duplicate	North Alluvial	10/30/2015	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
	TMW26042015	Normal	North Alluvial	4/7/2015	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	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U
	DTW26042015	Duplicate	North Alluvial	4/7/2015	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	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U
	TMW26102014	Normal	North Alluvial	10/27/2014	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	0.17 U	0.44 U	0.17 U	0.17 U	0.17 U
	DTW26102014	Duplicate	North Alluvial	10/27/2014	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	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U
TMW29	TMW29102015	Normal	North Alluvial	10/28/2015	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	North Alluvial	4/3/2015	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	0.16 U	0.43 U	0.16 U	0.16 U	0.16 U
	TMW29102014	Normal	North Alluvial	10/23/2014	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
	TMW29042014	Normal	North Alluvial	4/10/2014	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	0.15 U	0.41 U	0.15 U	0.15 U	0.15 U
TMW31S	TMW31S102015	Normal	North Alluvial	10/29/2015	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	North Alluvial	4/2/2015	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	North Alluvial	10/22/2014	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
	TMW31S042014	Normal	North Alluvial	4/10/2014	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	TMW39S102015	Normal	North Alluvial	10/29/2015	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	North Alluvial	4/1/2015	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	North Alluvial	10/23/2014	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
	TMW39S042014	Normal	North Alluvial	4/11/2014	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
TMW40S	TMW40S102015	Normal	North Alluvial	10/29/2015	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	North Alluvial	4/2/2015	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	North Alluvial	10/22/2014	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
	TMW40S042014	Normal	North Alluvial	4/10/2014	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.36 J	0.16 U	0.16 U	0.16 U	3.0 J	1200	0.16 U	0.16 U	9.6 J
TMW41	TMW41102015	Normal	North Alluvial	10/29/2015	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	North Alluvial	4/1/2015	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	North Alluvial	10/23/2014	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
	TMW41042014	Normal	North Alluvial	4/10/2014	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	TMW43102015	Normal	North Alluvial	11/3/2015	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	North Alluvial	11/3/2015	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	North Alluvial	4/10/2015	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	North Alluvial	4/10/2015	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	North Alluvial	10/31/2014	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	North Alluvial	10/31/2014	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
TMW43042014	Normal	North Alluvial	4/15/2014	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	0.17 U	4	0.17 U	0.17 U	0.17 U	

5.0 Analytical Results

TABLE 5-3

Summary of Total Explosives Analytical Detections (Page 6 of 8)
 Groundwater Periodic Monitoring Report July through December 2015 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 Tap Water Screening Levels) ^a													
590	2.0	25	2.4	0.48	39	3.1	1.7	39	42	0.7	39	1.4	1000					
TMW44	TMW44102015	Normal	North Alluvial	10/29/2015	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	North Alluvial	4/1/2015	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	North Alluvial	10/23/2014	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
	TMW44042014	Normal	North Alluvial	4/10/2014	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	0.34 J	0.16 U	0.16 U	2.3 J
TMW45	TMW45102015	Normal	North Alluvial	11/3/2015	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	North Alluvial	4/9/2015	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	North Alluvial	10/29/2014	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
	TMW45042014	Normal	North Alluvial	4/11/2014	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
TMW46	TMW46102015	Normal	North Alluvial	10/29/2015	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	North Alluvial	4/2/2015	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	North Alluvial	10/23/2014	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
	TMW46042014	Normal	North Alluvial	4/11/2014	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
TMW47	TMW47102015	Normal	North Alluvial	11/5/2015	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	North Alluvial	4/10/2015	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	North Alluvial	10/31/2014	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
	TMW47042014	Normal	North Alluvial	4/16/2014	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
TMW02	TMW02102015	Normal	North Bedrock	11/3/2015	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	North Bedrock	4/9/2015	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	North Bedrock	10/30/2014	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
	TMW02042014	Normal	North Bedrock	4/16/2014	0.46 U	0.17 U	0.17 U	0.17 U	0.17 U	0.10 J	0.17 U	0.17 U	0.14 J	0.46 U	0.17 U	0.17 U	0.17 U	1.2
TMW14A	TMW14A102015	Normal	North Bedrock	11/3/2015	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	North Bedrock	4/8/2015	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	North Bedrock	10/29/2014	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
	TMW14A042014	Normal	North Bedrock	4/15/2014	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
TMW16	TMW16102015	Normal	North Bedrock	10/28/2015	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	North Bedrock	4/1/2015	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	North Bedrock	10/24/2014	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
	TMW16042014	Normal	North Bedrock	4/9/2014	0.40 U	0.15 U	0.15 U	0.17 J	0.17 J	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

TABLE 5-3
 Summary of Total Explosives Analytical Detections (Page 7 of 8)
 Groundwater Periodic Monitoring Report July through December 2015 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-trinitrophenylnitramine 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 Tap Water Screening Levels) ⁹													
590	2.0	25	2.4	0.48	39	3.1	1.7	39	42	0.7	39	1.4	1000					
TMW18	TMW18102015	Normal	North Bedrock	10/29/2015	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	North Bedrock	4/1/2015	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	North Bedrock	10/24/2014	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
	TMW18042014	Normal	North Bedrock	4/11/2014	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
TMW19	TMW19102015	Normal	North Bedrock	10/28/2015	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	North Bedrock	4/1/2015	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	North Bedrock	10/24/2014	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
	TMW19042014	Normal	North Bedrock	4/9/2014	0.40 U	0.15 U	0.15 U	0.35 J	0.15 U	0.15 U	1.6	0.18 J	0.15 U	1.5	0.15 U	0.15 U	0.15 U	0.15 U
TMW30	TMW30102015	Normal	North Bedrock	10/29/2015	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	North Bedrock	4/1/2015	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	North Bedrock	10/22/2014	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
	TMW30042014	Normal	North Bedrock	4/11/2014	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
TMW31D	TMW31D102015	Normal	North Bedrock	11/5/2015	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	North Bedrock	11/5/2015	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	North Bedrock	4/6/2015	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	North Bedrock	10/30/2014	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	North Bedrock	10/30/2014	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
	TMW31D042014	Normal	North Bedrock	4/16/2014	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.42 J	0.16 U	0.16 U	0.50 J	0.16 U	0.16 U	0.16 U
TMW32	TMW32102015	Normal	North Bedrock	11/5/2015	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	North Bedrock	4/9/2015	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	North Bedrock	10/30/2014	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
	TMW32042014	Normal	North Bedrock	4/16/2014	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
TMW36	TMW36102015	Normal	North Bedrock	10/28/2015	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	North Bedrock	4/1/2015	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	North Bedrock	10/24/2014	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
	TMW36042014	Normal	North Bedrock	4/9/2014	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
TMW37	TMW37102015	Normal	North Bedrock	10/28/2015	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	North Bedrock	4/1/2015	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	North Bedrock	10/24/2014	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
	TMW37042014	Normal	North Bedrock	4/9/2014	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 8 of 8)

Groundwater Periodic Monitoring Report July through December 2015 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-trinitrophenyltriamine 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 Tap Water Screening Levels) ^a														
590	2.0	25	2.4	0.48	39	3.1	1.7	39	42	0.7	39	1.4	1000						
TMW38	TMW38102015	Normal	North Bedrock	11/6/2015	0.42 R	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.13 UJ	0.21 UJ	0.21 UJ	0.13 UJ	0.42 UJ	0.13 UJ	0.21 UJ	0.21 UJ	0.21 UJ	
	TMW38042015	Normal	North Bedrock	4/8/2015	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	0.16 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U
	TMW38102014	Normal	North Bedrock	10/28/2014	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	0.17 U	0.45 U	0.17 U	0.17 U	0.17 U	0.17 U
	TMW38042014	Normal	North Bedrock	4/17/2014	0.43 U	0.16 U	0.16 U	0.16 U	0.16 U	0.098 J	0.16 U	0.16 U	0.16 U	0.16 U	0.41 J	0.16 U	0.16 U	0.16 U	0.16 U
TMW39D	TMW39D102015	Normal	North Bedrock	11/4/2015	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	North Bedrock	4/6/2015	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	North Bedrock	4/6/2015	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	North Bedrock	10/30/2014	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	TMW40D042015	Normal	North Bedrock	4/16/2014	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 UJ	0.16 U	0.16 U	0.16 U	0.16 U	
	TMW40D102015	Normal	North Bedrock	11/3/2015	0.43 U	0.21 U	0.21 U	0.21 U	0.21 U	0.13 U	0.21 U	0.21 UJ	0.13 U	0.43 U	0.13 U	0.21 U	0.21 U	0.21 U	
	TMW40D042015	Normal	North Bedrock	4/9/2015	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	North Bedrock	10/31/2014	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 UJ	0.16 U	0.16 U	
TMW48	TMW48042015	Normal	North Bedrock	4/17/2014	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	
	TMW48102015	Normal	North Bedrock	11/4/2015	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	North Bedrock	4/6/2015	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	North Bedrock	10/30/2014	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	TMW48042014	Normal	North Bedrock	4/17/2014	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	
	DTW48042014	Duplicate	North Bedrock	4/17/2014	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	
	TMW49102015	Normal	North Bedrock	11/5/2015	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	North Bedrock	4/9/2015	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	TMW49102014	Normal	North Bedrock	10/30/2014	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	
	TMW49042014	Normal	North Bedrock	4/16/2014	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 UJ	0.16 U	0.16 U	0.16 U	0.16 U	

Notes:

^a EPA Region 6, Regional Screening Levels, November (Formerly Human Health Medium Specific Screening Levels) (EPA, 2014).

^b Well was dry and was not purged or sampled during 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.

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.

TABLE 5-4

Summary of Perchlorate Analytical Detections (Page 1 of 6)

Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Perchlorate ($\mu\text{g/L}$) CAS 14797-73-0
					EPA Method 6860
Regulatory Limits					6^a
BGMW01	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
	BGMW01042014	Normal	North Alluvial	4/15/2014	0.020 U
BGMW02	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
	BGMW02042014	Normal	North Alluvial	4/15/2014	0.45
	DBW02042014	Duplicate	North Alluvial	4/15/2014	0.44
BGMW03	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
	BGMW03042014	Normal	North Alluvial	4/11/2014	0.24
MW01	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
	MW01042014	Normal	North Alluvial	4/9/2014	0.020 U
MW02	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
	MW02042014	Normal	North Alluvial	4/10/2014	0.015 J
MW03	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
	MW03042014	Normal	North Alluvial	4/14/2014	0.018 J
MW18D	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
	MW18D042014	Normal	North Alluvial	4/14/2014	0.020 U
MW20	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	0.3
MW20042014	Normal	North Alluvial	4/14/2014	0.33	
MW22D	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
	MW22D042014	Normal	North Alluvial	4/14/2014	0.36
	DMW22D042014	Duplicate	North Alluvial	4/14/2014	0.36
MW22S	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
	MW22S042014	Normal	North Alluvial	4/10/2014	0.039 J

5.0 Analytical Results

TABLE 5-4

Summary of Perchlorate Analytical Detections (Page 2 of 6)

Groundwater Periodic Monitoring Report July through December 2015 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	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
	MW23042014	Normal	North Alluvial	4/11/2014	0.010 J
	DMW23042014	Duplicate	North Alluvial	4/11/2014	0.016 J
MW24	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
	DMW24042014	Normal	North Alluvial	4/11/2014	0.020 U
	MW24042014	Duplicate	North Alluvial	4/11/2014	0.020 U
	SMW01	SMW011102015	Normal	North Alluvial	11/3/2015
SMW01042015		Normal	North Alluvial	4/8/2015	4.0 U
SMW01102014		Normal	North Alluvial	10/27/2014	0.020 U
SMW01042014		Normal	North Alluvial	4/15/2014	0.020 U
TMW01	TMW01102015	Normal	North Alluvial	11/4/2015	240
	TMW01042015	Normal	North Alluvial	4/7/2015	290
	TMW01102014	Normal	North Alluvial	10/30/2014	320
	TMW01042014	Normal	North Alluvial	4/16/2014	300
TMW03	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
	TMW03042014	Normal	North Alluvial	4/16/2014	0.98
TMW04	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
	TMW04042014	Normal	North Alluvial	4/16/2014	0.34
TMW08	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
	TMW08042014	Normal	North Alluvial	4/15/2014	0.020 U
	DTW08042014	Duplicate	North Alluvial	4/15/2014	0.020 U
TMW10	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
	TMW10042014	Normal	North Alluvial	4/14/2014	0.020 U
TMW11	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
	TMW11042014	Normal	North Alluvial	4/17/2014	0.18
TMW13	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
	TMW13042014	Normal	North Alluvial	4/17/2014	0.077 J

TABLE 5-4

Summary of Perchlorate Analytical Detections (Page 3 of 6)

Groundwater Periodic Monitoring Report July through December 2015 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	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
	TMW15042014	Normal	North Alluvial	4/17/2014	0.16 J
TMW21	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
	TMW21042014	Normal	North Alluvial	4/14/2014	0.020 U
TMW22	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
	TMW22042014	Normal	North Alluvial	4/10/2014	0.010 J
TMW23	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
	TMW23042014	Normal	North Alluvial	4/10/2014	0.037 J
TMW24	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
	TMW24042014	Normal	North Alluvial	4/17/2014	0.020 UJ
TMW26	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
	TMW26042014	Normal	North Alluvial	4/15/2014	0.020 U
TMW27	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
	TMW27042014	Normal	North Alluvial	4/15/2014	0.020 U
TMW29	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
	TMW29042014	Normal	North Alluvial	4/10/2014	0.067
TMW31S	TMW31S102015	Normal	North Alluvial	10/29/2015	670
	TMW31S042015	Normal	North Alluvial	4/2/2015	480
	TMW31S102014	Normal	North Alluvial	10/22/2014	460
	TMW31S042014	Normal	North Alluvial	4/10/2014	440
TMW34	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
	TMW34042014	Normal	North Alluvial	4/15/2014	0.26

5.0 Analytical Results

TABLE 5-4

Summary of Perchlorate Analytical Detections (Page 4 of 6)

Groundwater Periodic Monitoring Report July through December 2015 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	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
	TMW35042014	Normal	North Alluvial	4/14/2014	0.076
TMW39S	TMW39S102015	Normal	North Alluvial	10/29/2015	600
	TMW39S042015	Normal	North Alluvial	4/1/2015	670
	TMW39S102014	Normal	North Alluvial	10/23/2014	600
	TMW39S042014	Normal	North Alluvial	4/11/2014	880
TMW40S	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
	TMW40S042014	Normal	North Alluvial	4/11/2014	9.1
TMW41	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
	TMW41042014	Normal	North Alluvial	4/10/2014	2.5
TMW43	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	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
	TMW44042014	Normal	North Alluvial	4/10/2014	0.032 J
TMW45	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
	TMW45042014	Normal	North Alluvial	4/11/2014	0.020 U
TMW46	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
	TMW46042014	Normal	North Alluvial	4/11/2014	0.47
TMW47	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
	TMW47042014	Normal	North Alluvial	4/16/2014	0.020 U
TMW02	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
	TMW02042014	Normal	North Bedrock	4/16/2014	3.8
TMW16	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
	TMW16042014	Normal	North Bedrock	4/9/2014	0.020 U

TABLE 5-4

Summary of Perchlorate Analytical Detections (Page 5 of 6)

Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Perchlorate ($\mu\text{g/L}$) CAS 14797-73-0
					EPA Method 6860
Regulatory Limits					6^a
TMW17	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
	TMW17042014	Normal	North Bedrock	4/17/2014	0.020 U
TMW18	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
	TMW18042014	Normal	North Bedrock	4/11/2014	0.084
TMW19	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
	TMW19042014	Normal	North Bedrock	4/9/2014	0.020 U
TMW30	TMW30102015	Normal	North Bedrock	10/29/2015	930
	TMW30042015	Normal	North Bedrock	4/1/2015	1400
	TMW30102014	Normal	North Bedrock	10/22/2014	1300
	TMW30042014	Normal	North Bedrock	4/11/2014	1400
TMW31D	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
	TMW31D042014	Normal	North Bedrock	4/16/2014	1400
	DTW31D042014	Duplicate	North Bedrock	4/16/2014	2000
TMW32	TMW32102015	Normal	North Bedrock	11/5/2015	200
	TMW32042015	Normal	North Bedrock	4/9/2015	320
	TMW32102014	Normal	North Bedrock	10/30/2014	500
	TMW32042014	Normal	North Bedrock	4/16/2014	370
TMW36	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
	TMW36042014	Normal	North Bedrock	4/9/2014	0.020 U
TMW37	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
	TMW37042014	Normal	North Bedrock	4/9/2014	0.020 U
TMW38	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
	TMW38042014	Normal	North Bedrock	4/17/2014	0.020 UJ
TMW39D	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
	TMW39D042014	Normal	North Bedrock	4/16/2014	4.2

5.0 Analytical Results

TABLE 5-4

Summary of Perchlorate Analytical Detections (Page 6 of 6)

Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Perchlorate (µg/L) CAS 14797-73-0
					EPA Method 6860
TMW40D	TMW40D102015	Normal	North Bedrock	11/3/2015	260
	TMW40D042015	Normal	North Bedrock	4/9/2015	260
	TMW40D102014	Normal	North Bedrock	10/31/2014	320
	TMW40D042014	Normal	North Bedrock	4/17/2014	610 J
TMW48	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
	TMW48042014	Normal	North Bedrock	4/17/2014	1500 J
	DTW48042014	Duplicate	North Bedrock	4/17/2014	1600 J
TMW49	TMW49102015	Normal	North Bedrock	11/5/2015	1100
	TMW49042015	Normal	North Bedrock	4/9/2015	1100
	TMW49102014	Normal	North Bedrock	10/30/2014	1700
	TMW49042014	Normal	North Bedrock	4/16/2014	1500

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 July through December 2015 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	Carbon disulfide CAS 75-15-0	Chloroform CAS 67-66-3	Chloromethane CAS 74-87-3	Methylene chloride CAS 75-09-2	Toluene CAS 108-88-3	Trichloroethene CAS 79-01-6
					Regulatory Limit										
					60 ^a	25 ^a	7 ^c	5 ^b	14000 ^c	810 ^c	80 ^b	190 ^c	5 ^b	750 ^a	5 ^b
BGMW01	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	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	0.80 U	0.40 U	0.20 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	0.68 J	0.40 U	0.20 U
	BGMW01042014	Normal	North Alluvial	4/15/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
BGMW02	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	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	0.80 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	0.64 J	0.40 U	0.20 U
	BGMW02042014	Normal	North Alluvial	4/15/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
	DBW02042014	Duplicate	North Alluvial	4/15/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
FW35	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	0.80 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	0.80 U	0.40 U	0.43 J
	FW35042014	Normal	North Alluvial	4/10/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
MW01	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	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	0.80 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	0.80 U	0.40 U	0.20 U
	MW01042014	Normal	North Alluvial	4/9/2014	0.20 UJ	0.40 UJ	0.40 UJ	1.0 J	6.4 UJ	0.80 UJ	0.20 UJ	0.80 UJ	0.80 UJ	0.40 UJ	0.20 UJ
MW18D	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	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	0.80 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	0.80 U	0.40 U	0.20 U
	MW18D042014	Normal	North Alluvial	4/14/2014	0.20 UJ	0.40 UJ	0.40 UJ	78 J	6.4 UJ	0.80 UJ	0.20 UJ	0.80 UJ	0.80 UJ	0.40 UJ	0.20 UJ
MW20	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	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	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	0.80 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	0.80 U	0.40 U	0.20 U
	DMW20102014	Duplicate	North Alluvial	10/28/2014	0.20 U	0.40 U	0.40 U	4.7	2.3 J	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
	MW20042014	Normal	North Alluvial	4/14/2014	0.20 U	0.40 U	0.40 U	4.6	6.4 U	0.80 U	0.20 U	0.80 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 July through December 2015 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	Carbon disulfide CAS 75-15-0	Chloroform CAS 67-66-3	Chloromethane CAS 74-87-3	Methylene chloride CAS 75-09-2	Toluene CAS 108-88-3	Trichloroethene CAS 79-01-6
					Regulatory Limit										
					60 ^a	25 ^a	7 ^c	5 ^b	14000 ^c	810 ^c	80 ^b	190 ^c	5 ^b	750 ^a	5 ^b
MW22D	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	0.40 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	0.80 U	0.40 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	0.80 U	0.40 U	0.20 U
	MW22D042014	Normal	North Alluvial	4/14/2014	0.20 U	0.40 U	0.40 U	1.1	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
	DMW22D042014	Duplicate	North Alluvial	4/14/2014	0.20 U	0.40 U	0.40 U	1	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
MW22S	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	0.40 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	0.80 U	0.40 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	0.80 U	0.40 U	0.20 U
	MW22S042014	Normal	North Alluvial	4/9/2014	2	0.66 J	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
MW23	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	0.40 U	0.40 U
	DMW23102015	Duplicate	North Alluvial	11/6/2015	0.40 U	0.80 U	0.80 UJ	0.40 U	6.4 U	1.6 U	0.40 U	0.80 U	0.80 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	0.80 U	0.40 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	0.80 U	0.40 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 UJ	0.80 U	0.20 U	0.80 U	0.43 J	0.20 J	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	0.80 UJ	0.40 UJ	0.20 U
	MW23042014	Normal	North Alluvial	4/11/2014	0.20 U	0.40 U	0.40 U	0.40 U	10 UJ	0.80 U	0.20 U	0.80 U	0.40 U	18	0.20 U
DMW23042014	Duplicate	North Alluvial	4/11/2014	0.20 U	0.40 U	0.40 U	0.40 U	4.2 UJ	0.80 U	0.20 U	0.80 U	0.38 U	18	0.20 U	
MW24	MW24102015	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	0.40 U
	MW24042015	Normal	North Alluvial	4/6/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
	DMW24042015	Duplicate	North Alluvial	4/6/2015	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
	MW24102014	Normal	North Alluvial	10/27/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
	DMW24102014	Duplicate	North Alluvial	10/27/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
	MW24042014	Normal	North Alluvial	4/11/2014	0.20 U	0.40 U	0.40 U	0.40 U	2.1 UJ	0.80 U	0.20 U	0.80 U	0.80 UJ	0.33 J	0.20 U
	DMW24042014	Duplicate	North Alluvial	4/11/2014	0.20 U	0.40 U	0.40 U	0.40 U	10 UJ	0.80 U	0.20 U	0.80 U	0.65 UJ	0.40 UJ	0.20 U
TMW08	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	0.40 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	0.80 U	0.40 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	0.80 U	0.40 U	0.20 U
	TMW08042014	Normal	North Alluvial	4/15/2014	0.20 U	0.40 U	0.40 U	0.40 U	3.5 J	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
	DTW08042014	Duplicate	North Alluvial	4/15/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 UJ	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U

TABLE 5-5
 Summary of Volatile Organic Compound Analytical Detections (Page 3 of 5)
 Groundwater Periodic Monitoring Report July through December 2015 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	Carbon disulfide CAS 75-15-0	Chloroform CAS 67-66-3	Chloromethane CAS 74-87-3	Methylene chloride CAS 75-09-2	Toluene CAS 108-88-3	Trichloroethene CAS 79-01-6
					Regulatory Limit										
					60 ^a	25 ^a	7 ^c	5 ^b	14000 ^c	810 ^c	80 ^b	190 ^c	5 ^b	750 ^a	5 ^b
TMW10	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	0.40 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	0.80 U	0.40 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	0.80 U	0.40 U	0.20 U
	TMW10042014	Normal	North Alluvial	4/14/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
TMW24	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	0.40 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	0.80 U	0.40 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	0.80 U	0.40 U	0.20 U
	TMW24042014	Normal	North Alluvial	4/17/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.61 J	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
TMW33	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	0.61 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	0.80 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	0.80 U	0.40 U	0.20 U
	TMW33042014	Normal	North Alluvial	4/10/2014	0.20 U	0.40 U	0.40 U	34	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
TMW34	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	0.40 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	0.40 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 UJ	0.80 U	0.20 U	0.80 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	0.80 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	0.80 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	0.80 U	0.40 U	0.20 U
TMW35	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	0.40 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	0.80 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	0.80 U	0.40 U	0.20 U
	TMW35042014	Normal	North Alluvial	4/14/2014	0.20 U	0.40 U	0.40 U	1.8	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
TMW40S	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	0.40 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	0.72 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	0.53 J	0.40 U	0.20 U
	TMW40S042014	Normal	North Alluvial	4/10/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	2	0.80 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 4 of 5)
 Groundwater Periodic Monitoring Report July through December 2015 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	Carbon disulfide CAS 75-15-0	Chloroform CAS 67-66-3	Chloromethane CAS 74-87-3	Methylene chloride CAS 75-09-2	Toluene CAS 108-88-3	Trichloroethene CAS 79-01-6
					Regulatory Limit										
					60 ^a	25 ^a	7 ^c	5 ^b	14000 ^c	810 ^c	80 ^b	190 ^c	5 ^b	750 ^a	5 ^b
TMW47	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	0.40 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	0.45 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	0.80 U	0.40 U	0.20 U
	TMW47042014	Normal	North Alluvial	4/16/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	1.5 J	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
TMW14A	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	0.40 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	0.80 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	0.80 U	0.40 U	0.20 U
	TMW14A042014	Normal	North Bedrock	4/15/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.78 J	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
TMW16	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	0.40 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	0.80 U	0.20 J	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	0.80 U	0.22 J	0.20 U
	TMW16042014	Normal	North Bedrock	4/9/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
TMW17	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	0.40 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	0.80 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 J	0.80 U	0.40 U	0.20 U
	TMW17042014	Normal	North Bedrock	4/17/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	4.2	0.20 U	1.1 J	0.80 U	0.40 U	0.20 U
TMW18	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	0.18 J	0.40 U
	TMW18042015	Normal	North Bedrock	4/1/2015	0.20 U	0.40 U	0.40 U	0.40 U	4.9 J	0.80 U	0.20 U	0.80 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	0.80 U	0.82 J	0.20 U
	TMW18042014	Normal	North Bedrock	4/11/2014	0.20 U	0.40 U	0.40 U	0.40 U	3.1 U	0.80 U	0.20 U	0.80 U	0.43 U	0.62 J	0.20 U
TMW19	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	0.38 J	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	0.80 U	0.39 J	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	0.80 U	0.36 J	0.20 U
	TMW19042014	Normal	North Bedrock	4/9/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.45 J	0.20 U
TMW36	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	0.40 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	0.80 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	0.80 U	0.59 J	0.20 U
	TMW36042014	Normal	North Bedrock	4/9/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U

TABLE 5-5
Summary of Volatile Organic Compound Analytical Detections (Page 5 of 5)
 Groundwater Periodic Monitoring Report July through December 2015 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	Carbon disulfide CAS 75-15-0	Chloroform CAS 67-66-3	Chloromethane CAS 74-87-3	Methylene chloride CAS 75-09-2	Toluene CAS 108-88-3	Trichloroethene CAS 79-01-6
					Regulatory Limit										
					60 ^a	25 ^a	7 ^c	5 ^b	14000 ^c	810 ^c	80 ^b	190 ^c	5 ^b	750 ^a	5 ^b
TMW37	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	0.40 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	0.80 U	0.28 J	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	0.80 U	0.52 J	0.20 U
	TMW37042014	Normal	North Bedrock	4/9/2014	0.20 U	0.40 U	0.40 U	0.40 U	6.4 U	0.80 U	0.20 U	0.80 U	0.80 U	0.74 J	0.20 U
TMW38	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	0.40 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	0.80 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 J	21 J	0.20 U	0.80 U	0.80 U	0.40 U	0.20 U
	TMW38042014	Normal	North Bedrock	4/17/2014	0.20 U	0.40 U	0.40 U	0.40 U	3.5 J	19	0.20 U	0.80 U	0.80 U	0.40 U	0.20 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 - *Code of Federal Regulations* Title 40, Parts 141, 142, and 143

^c EPA Region 6, Regional Screening Levels, November (formerly Human Health Medium Specific Screening Levels) (EPA, 2014)

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

Bold 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.

5.0 Analytical Results

TABLE 5-6

Summary of Ethylene dibromide (EDB) Analytical Results

Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well Identifier	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	Ethylene dibromide (µg/L) CAS 106-93-4
					EPA Method 8011
Regulatory Limits^a					0.05
MW01	MW01102015	Normal	North Alluvial	10/29/2015	0.014 U
MW02	MW02102015	Normal	North Alluvial	10/29/2015	0.014 U
MW03	MW03102015	Normal	North Alluvial	10/30/2015	0.014 U
MW18D	MW18D102015	Normal	North Alluvial	11/2/2015	0.014 U
MW20	MW20102015	Normal	North Alluvial	11/2/2015	0.014 U
MW20	DMW20102015	Duplicate	North Alluvial	11/2/2015	0.014 U
MW22D	MW22D102015	Normal	North Alluvial	11/2/2015	0.014 U
MW22S	MW22S102015	Normal	North Alluvial	10/29/2015	0.014 U
TMW33	TMW33102015	Normal	North Alluvial	10/30/2015	0.014 U
TMW34	TMW34102015	Normal	North Alluvial	11/3/2015	0.014 U
TMW34	DTW34102015	Duplicate	North Alluvial	11/3/2015	0.014 U
TMW35	TMW35102015	Normal	North Alluvial	11/2/2015	0.014 U

Notes:

^a EPA Region 6, Regional Screening Levels, November (EPA, 2014)

Sampling for EDB was performed as a one-time event. There is no historical data.

Bold indicates analyte was positively detected above regulatory limits

µg/L = microgram(s) per liter

CAS = Chemical Abstracts Service (registry number)

EDB = ethylene dibromide or 1,2-Dibromomethane

EPA = U.S. Environmental Protection Agency

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

5.0 Analytical Results

TABLE 5-7

Summary of Semivolatile Organic Compounds and Total Petroleum Hydrocarbons Analytical Results (Page 2 of 4)
Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well ID	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8015C (µg/L)					EPA Method 8260B (µg/L)																
					Diesel Range Organics CAS DR0	Gasoline Range Organics CAS GRO	2,4-Dinitrophenol CAS 51-28-5	2-Methylnaphthalene CAS 91-57-6	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-ethylhexyl) phthalate CAS 117-81-7	Caprolactam CAS 105-60-2	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	n-Nitrosodiphenylamine CAS 86-30-6	phenanthrene CAS 85-01-8	Pyrene CAS 129-00-0	
					NE	NE	39 ^c	30 ^a	1900 ^c	30 ^a	30 ^a	75000 ^c	2000 ^c	6 ^b	9900 ^c	7.9 ^c	15000 ^c	NE	30 ^a	30 ^a	750 ^c	NE	120 ^c	30 ^a	30 ^a	
MW23	MW23102015	Normal	North Alluvial	11/6/2015	NA	NA	30 U	1.0 U	5.1 U	1.0 U	1.0 U	11 J	0.48 J	0.63 J	2.1 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	
	DMW23102015	Duplicate	North Alluvial	11/6/2015	NA	NA	31 U	1.0 U	5.1 U	1.0 U	1.0 U	11 J	0.32 J	2.1 UJ	2.5 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	
	MW23042015	Normal	North Alluvial	4/7/2015	NA	NA	20 U	1.0 UJ	5.0 UJ	1.0 U	1.0 U	50 U	1.0 UJ	1.0 UJ	2.5 U	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U	
	DMW23042015	Duplicate	North Alluvial	4/7/2015	NA	NA	20 R	1.0 R	5.1 R	1.0 R	1.0 R	1.0 R	1.0 R	0.77 J	2.4 R	1.0 R	1.0 R	1.0 R	1.0 R	1.0 R	1.0 R	1.0 R	1.0 R	1.0 R	1.0 R	1.0 R
	MW23102014	Normal	North Alluvial	10/28/2014	NA	NA	20 U	0.98 U	4.9 U	0.98 U	0.98 UJ	49 U	0.98 U	0.98 U	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
	DMW23102014	Duplicate	North Alluvial	10/28/2014	NA	NA	19 U	0.97 U	4.8 U	0.97 UJ	0.51 J	48 U	0.97 U	0.97 U	2.4 U	0.97 U	0.97 U	0.97 U	0.97 UJ	0.97 UJ	0.97 UJ	0.97 U	0.97 UJ	0.97 UJ	0.97 UJ	0.97 UJ
	MW23042014	Normal	North Alluvial	4/11/2014	NA	NA	20 U	1.0 U	5.0 U	1.0 U	1.0 U	50 U	1.0 U	3.4 J	10 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
DMW23042014	Duplicate	North Alluvial	4/11/2014	NA	NA	20 U	0.99 U	4.9 U	0.99 U	0.99 U	49 U	0.99 U	3.2 J	10 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	
TMW03	TMW03102015	Normal	North Alluvial	11/4/2015	NA	NA	28 J	1.1 U	5.6 U	1.1 U	1.1 U	33 U	0.56 U	2.2 U	2.6 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	
	TMW03042015	Normal	North Alluvial	4/9/2015	NA	NA	Not Analyzed																			
	TMW03102014	Normal	North Alluvial	10/30/2014	NA	NA	24 J	1.0 U	5.2 U	1.0 U	1.0 UJ	52 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	
	TMW03042014	Normal	North Alluvial	4/16/2014	NA	NA	52 J	1.1 U	5.7 UJ	1.1 U	1.1 UJ	57 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	
TMW04	TMW04102015	Normal	North Alluvial	11/4/2015	NA	NA	32 U	1.1 U	5.3 U	1.1 U	1.1 U	32 U	0.53 U	2.1 U	2.6 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	
	TMW04042015	Normal	North Alluvial	4/9/2015	NA	NA	21 U	1.0 U	5.2 U	1.0 U	1.0 U	52 U	1.0 U	1.0 U	2.6 U	1.0 U	0.52 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	
	TMW04102014	Normal	North Alluvial	10/30/2014	NA	NA	21 U	1.1 U	5.3 U	1.1 U	1.1 U	53 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	
	TMW04042014	Normal	North Alluvial	4/16/2014	NA	NA	46 U	2.3 U	11 U	2.3 U	2.3 U	110 U	2.3 U	2.3 U	2.8 U	2.3 U	2.3 U	1.4 J	0.82 J	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	
TMW07	TMW07102015	Normal	North Alluvial	10/30/2015	NA	NA	28 U	0.95 U	4.7 U	0.95 U	0.95 U	11 J	0.47 U	4.3 J	2.5 U	0.95 U	0.95 U	0.47 U	0.47 U	0.95 U	0.47 U	0.47 U	0.95 U	0.95 U	0.95 U	
	TMW07042015	Normal	North Alluvial	4/11/2015	NA	NA	20 U	0.99 U	5.0 U	0.99 U	0.99 U	50 U	0.99 U	2.1 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	
	TMW07102014	Normal	North Alluvial	10/23/2014	NA	NA	20 U	0.98 U	4.9 U	0.98 U	0.98 U	49 U	0.98 U	2.5 J	190	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	
	TMW07042014	Normal	North Alluvial	4/10/2014	NA	NA	19 U	0.95 U	4.7 U	0.95 U	0.95 U	47 U	0.95 U	5.2 J	2.5 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	
TMW08	TMW08102015	Normal	North Alluvial	11/5/2015	110 U	25 U	Not Analyzed																			
	TMW08042015	Normal	North Alluvial	4/8/2015	66 J	20 UJ	Not Analyzed																			
	TMW08102014	Normal	North Alluvial	10/29/2014	100 U	20 UJ	Not Analyzed																			
	TMW08042014	Normal	North Alluvial	4/15/2014	98 U	20 U	Not Analyzed																			
	DTW08042014	Duplicate	North Alluvial	4/15/2014	96 U	20 U	Not Analyzed																			
TMW22	TMW22102015	Normal	North Alluvial	10/29/2015	NA	NA	25 J	1.0 U	5.2 U	1.0 U	1.0 U	12 J	0.52 U	2.1 U	2.5 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	
	TMW22042015	Normal	North Alluvial	4/1/2015	NA	NA	11 J	0.97 U	4.9 U	0.97 U	0.97 U	49 U	0.97 U	1.9 J	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	
	TMW22102014	Normal	North Alluvial	10/23/2014	NA	NA	20 U	1.0 U	5.1 U	1.0 U	1.0 U	51 U	1.0 U	3.1 J	70	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	
	TMW22042014	Normal	North Alluvial	4/10/2014	NA	NA	19 U	0.97 U	4.9 U	0.97 U	0.97 U	49 U	0.97 U	3.1 J	2.5 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	
TMW31S	TMW31S102015	Normal	North Alluvial	10/29/2015	NA	NA	29 U	0.97 U	4.8 U	0.97 U	0.97 U	29 U	0.48 U	1.9 U	2.4 U	0.97 U	0.97 U	0.48 U	0.48 U	0.97 U	0.48 U	0.48 U	0.97 U	0.97 U	0.97 U	
	TMW31S042015	Normal	North Alluvial	4/2/2015	NA	NA	19 U	0.96 U	4.8 U	0.96 U	0.96 U	48 UJ	0.96 U	0.96 U	2.4 U	0.96 U	0.96 U	0.20 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	
	TMW31S102014	Normal	North Alluvial	10/22/2014	NA	NA	20 U	1.0 U	5.1 U	1.0 U	1.0 U	10 J	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	
	TMW31S042014	Normal	North Alluvial	4/10/2014	NA	NA	20 U	1.0 U	5.0 U	1.0 U	1.0 U	50 U	1.0 U	3.2 J	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	
TMW33	TMW33102015	Normal	North Alluvial	10/30/2015	100 J	14 J	29 UJ	0.98 UJ	4.9 UJ	0.98 UJ	0.98 UJ	10 J	0.49 UJ	2.0 UJ	2.4 U	0.98 UJ	0.98 UJ	0.49 UJ	0.49 UJ	0.98 UJ	0.49 UJ	0.49 UJ	0.98 UJ	0.98 UJ	0.98 UJ	
	TMW33042015	Normal	North Alluvial	4/2/2015	79 J	20 U	20 U	1.0 U	5.0 U	1.0 U	1.0 U	50 UJ	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	
	TMW33102014	Normal	North Alluvial	10/22/2014	83 J	19 J	20 U	1.0 U	5.0 U	1.0 U	1.0 U	50 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	
	TMW33042014	Normal	North Alluvial	4/10/2014	64 J	31	21 U	1.0 U	5.2 U	1.0 U	1.0 U	52 U	1.0 U	3.4 J	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	
TMW34	TMW34102015	Normal	North Alluvial	11/3/2015	130 U	25 U	Not Analyzed																			
	DTW34102015	Duplicate	North Alluvial	11/3/2015	140 U	25 U	Not Analyzed																			
	TMW34042015	Normal	North Alluvial	4/3/2015	150 J	20 U	Not Analyzed																			
	DTW34042015	Duplicate	North Alluvial	4/3/2015	65 J	20 U	Not Analyzed																			
	TMW34102014	Normal	North Alluvial	10/28/2014	100 U	20 U	Not Analyzed																			
	DTW34102014	Duplicate	North Alluvial	10/28/2014	98 U	20 U	Not Analyzed																			
TMW34042014	Normal	North Alluvial	4/15/2014	100 U	20 U	Not Analyzed																				

5.0 Analytical Results

TABLE 5-7

Summary of Semivolatile Organic Compounds and Total Petroleum Hydrocarbons Analytical Results (Page 4 of 4)
Groundwater Periodic Monitoring Report July through December 2015 Fort Wingate Depot Activity

Well ID	Sample Identifier	Sample Type	Groundwater Zone	Sample Date	EPA Method 8015C (µg/L)				EPA Method 8260B (µg/L)																	
					Diesel Range Organics CAS DRO	Gasoline Range Organics CAS GRO	2,4-Dinitrophenol CAS 51-28-5	2-Methylnaphthalene CAS 91-57-6	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-ethylhexyl) phthalate CAS 117-81-7	Caprolactam CAS 105-60-2	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	n-Nitrosodiphenylamine CAS 86-30-6	phenanthrene CAS 85-01-8	Pyrene CAS 129-00-0	
					Regulatory Limit																					
					NE	NE	39 ^c	30 ^a	1900 ^c	30 ^a	30 ^a	75000 ^c	2000 ^c	6 ^b	9900 ^c	7.9 ^c	15000 ^c	NE	30 ^a	30 ^a	750 ^c	NE	120 ^c	30 ^a	30 ^a	
TMW31D	TMW31D102015	Normal	North Bedrock	11/5/2015	NA	NA	31 U	1.0 U	5.2 U	1.0 U	1.0 U	31 U	0.52 U	2.1 U	2.6 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
	DTW31D102015	Duplicate	North Bedrock	11/5/2015	NA	NA	32 U	1.1 U	5.3 U	1.1 U	1.1 U	32 U	0.53 U	2.1 U	2.7 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
	TMW31D042015	Normal	North Bedrock	4/6/2015	NA	NA	19 U	0.95 U	4.8 U	0.46 J	0.95 U	48 U	0.95 U	0.95 U	2.4 U	0.34 J	0.55 J	0.95 U	0.36 J	0.37 J	0.95 U	0.95 U	0.73 J	0.44 J	0.38 J	0.38 J
	TMW31D102014	Normal	North Bedrock	10/30/2014	NA	NA	22 U	1.1 U	5.4 U	1.1 U	1.1 U	54 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
	DTW31D102014	Duplicate	North Bedrock	10/30/2014	NA	NA	21 U	1.0 U	5.2 U	1.0 U	1.0 U	52 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
	TMW31D042014	Normal	North Bedrock	4/16/2014	NA	NA	21 U	1.1 U	5.3 U	1.1 U	1.1 U	53 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
TMW36	DTW31D042014	Duplicate	North Bedrock	4/16/2014	NA	NA	20 U	0.99 U	5.0 U	0.99 U	0.99 U	50 U	0.99 U	0.99 U	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
	TMW36102015	Normal	North Bedrock	10/28/2015	NA	NA	33 U	1.1 U	0.47 J	1.1 U	1.1 U	33 U	0.54 U	2.2 U	2.6 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
	TMW36042015	Normal	North Bedrock	4/1/2015	NA	NA	19 U	0.95 U	4.8 U	0.95 U	0.95 U	48 U	0.95 U	0.87 J	2.4 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U	0.95 U
	TMW36102014	Normal	North Bedrock	10/24/2014	NA	NA	19 U	0.96 U	4.8 U	0.96 U	0.96 U	48 U	0.96 U	0.97 J	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
TMW37	TMW36042014	Normal	North Bedrock	4/9/2014	NA	NA	20 U	1.0 U	5.1 U	1.0 U	1.0 U	51 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	
	TMW37102015	Normal	North Bedrock	10/28/2015	NA	NA	32 U	1.1 U	5.3 U	1.1 U	1.1 U	32 U	0.53 U	2.1 U	2.6 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	
	TMW37042015	Normal	North Bedrock	4/1/2015	NA	NA	19 U	0.96 U	4.0 J	0.96 U	0.96 U	48 U	0.96 U	2.4 J	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	
	TMW37102014	Normal	North Bedrock	10/24/2014	NA	NA	20 U	0.99 U	4.9 U	0.99 U	0.99 U	49 U	0.99 U	1.5 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	
TMW38	TMW37042014	Normal	North Bedrock	4/9/2014	NA	NA	20 U	0.99 U	0.82 U	0.99 U	0.99 U	50 U	0.99 U	2.8 U	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	
	TMW38102015	Normal	North Bedrock	11/6/2015	NA	NA	31 U	1.0 U	5.2 U	1.0 U	1.0 U	11 J	0.52 U	2.1 U	2.5 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	
	TMW38042015	Normal	North Bedrock	4/8/2015	NA	NA	22 U	1.1 U	5.6 U	1.1 U	1.1 U	56 U	1.1 U	1.1 U	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	
	TMW38102014	Normal	North Bedrock	10/28/2014	NA	NA	22 U	1.1 U	5.4 U	1.1 U	1.1 U	54 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	
	TMW38042014	Normal	North Bedrock	4/17/2014	NA	NA	20 U	1.0 U	5.1 U	1.0 U	1.0 U	51 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	

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, November (formerly Human Health Medium Specific Screening Levels) (EPA, 2014)

^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

MCL = maximum contaminant level

NA = not analyzed

N/A = not applicable

NE = not established

SVOC = semivolatile organic compound

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 5-8
 Summary of Dissolved Metals Analytical Detections (Page 1 of 7)
 Groundwater Periodic Monitoring Report July through December 2015 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																									2 ^c
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c			
BGMW01	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			
	BGMW01042014	Normal	North Alluvial	4/15/2014	100 J	0.60 U	0.80 J	17	0.24 U	0.12 U	46000	1.5 U	0.42 J	1.7 U	75 J	0.50 U	25000	170	6.3	1100 J	2.0 U	0.10 U	860000	0.20 U	2.0 J	2.3 J	0.080 U			
BGMW02	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 U	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 U	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			
	BGMW02042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	0.73 J	18	0.24 U	0.12 U	95000	1.5 U	0.068 J	0.95 U	58 J	0.50 U	130000	85	0.50 J	950 J	80	0.10 U	1100000	0.070 J	7.2	6.0 U	0.080 U			
	DBW02042014	Duplicate	North Alluvial	4/15/2014	31 U	0.60 U	0.90 J	16	0.24 U	0.12 U	95000	1.5 U	0.085 J	0.75 U	30 U	0.50 U	130000	87	0.50 J	1200 J	79	0.10 U	1100000	0.20 U	7	6.0 U	0.080 U			
BGMW03	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 U	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			
	BGMW03042014	Normal	North Alluvial	4/11/2014	61 U	0.60 U	1.7 J	33	0.24 U	0.12 U	73000	0.69 U	0.21 U	3.6 U	39 U	0.50 U	16000	14 U	0.89 U	2400 J	37	0.10 U	800000 J	0.20 U	10	2.2 U	0.080 U			
FW31	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			
	FW31042014	Normal	North Alluvial	4/10/2014	97 J	0.60 U	6.8	14	0.24 U	0.11 J	6900	0.75 J	0.10 U	1.1 J	44 J	0.50 U	2300	5	0.90 U	1700 J	2.0 U	0.10 U	550000	0.20 U	11	2.2 J	0.080 U			
FW35	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	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			
	MW01042014	Normal	North Alluvial	4/9/2014	31 U	0.60 U	0.52 J	15 U	0.24 U	0.12 U	32000	1.5 U	0.082 U	1.2 U	30 U	0.50 U	7300	39 U	0.67 U	570 J	16	0.10 U	950000	0.055 U	1.7 J	13 U	0.073 J			
MW02	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	MW02042014	Normal	North Alluvial	4/10/2014	590 U	0.60 U	1.0 U	30 U	0.24 U	0.12 U	170000	0.62 U	0.30 U	1.4 U	380 U	0.34 U	39000	69	1.0 U	1000 J	7.3	0.10 U	440000	0.20 U	1.5 J	22 U	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			
MW18D	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			
	MW03042014	Normal	North Alluvial	4/14/2014	31 U	0.60 U	0.36 J	8.7	0.24 U	0.12 U	64000	1.5 U	0.12 J	3.6 U	30 U	0.50 U	12000	44	0.69 U	620 J	28	0.10 U	1100000	0.20 U	1.2 J	9.3 U	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 J	23	0.24 U	0.40 U	76000	1.5 U	0.97 J	1.3 J	63 J	0.31 J	19000	680	3.3	1600 J	0.74 J	0.034 J	2000000	0.089 U	13	16 J	0.080 U			
MW20	MW18D102014	Normal	North Alluvial	10/31/2014	31 U	0.60 U	0.84 J	17	0.24 U	0.12 U	76000	1.5 U	0.74 J	0.57 J	62 J	0.50 U	19000	740	2.5 J	620 J	2.0 U	0.10 U	2300000	0.20 U	2.0 J	11 J	0.080 U			
	MW18D042014	Normal	North Alluvial	4/14/2014	34 U	0.60 U	0.84 J	19	0.24 U	0.12 U	73000	1.5 U	0.77 J	2.1 U	110 U	0.50 U	18000	760	2.9 J	2000 J	0.87 J	0.10 U	2100000	0.20 U	2.2 J	15 U	0.080 U			
	MW20102015	Normal	North Alluvial	11/2/2015	70 U	1.0 U	1.0 U	15	0.30 U	1.0 U	330000	1.8 U	1.4	2	22 J	0.70 U	76000	1700	3.3 U	3800	75	0.10 U	4100000	0.20 U	2.0 U	80 J	0.080 U			
	DMW20102015	Duplicate	North Alluvial	11/2/2015	70 U	1.0 U	0.43 J	16	0.15 J	1.0 U	310000	1.8 U	1.4	2.2	85 U	0.70 U	71000	1700	3.2 U	3700	74	0.10 U	3800000	0.058 U	0.60 J	84 J	0.080 U			
MW20	MW20042015	Normal	North Alluvial	4/3/2015	31 U	0.60 U	0.42 J	15	0.24 U	0.40 U	310000	1.5 U	1.6	2.6	30 U	0.50 U	69000	1900	3.5	2500 J	89	0.038 J	4200000	0.20 U	1.0 U	120	0.080 U			
	MW20102014	Normal	North Alluvial	10/28/2014	31 U	0.60 U	1.0 U	15	0.24 U	0.12 U	350000	1.5 U	1.4	2.3	30 U	0.50 U	75000	1600	3.4	2600 J	85 J	0.10 U								

5.0 Analytical Results

TABLE 5-8

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

Groundwater Periodic Monitoring Report July through December 2015 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																									
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c			
MW22D	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					
	MW22D042014	Normal	North Alluvial	4/14/2014	31 U	0.43 J	0.43 J	11	0.24 U	0.12 U	79000	1.5 U	0.21 J	1.0 UJ	30 U	0.50 U	15000	140	1.1 U	710 J	43	0.10 U	1100000	0.20 U	1.4 J	180	0.080 U			
	DMW22D042014	Duplicate	North Alluvial	4/14/2014	31 U	0.60 UJ	0.38 J	10	0.24 U	0.12 U	78000	1.5 U	0.20 J	1.9 UJ	30 U	0.50 U	15000	140	1.0 U	940 J	43	0.10 U	1100000	0.20 U	1.3 J	170	0.080 U			
MW22S	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			
	MW22S042014	Normal	North Alluvial	4/10/2014	33000	0.60 U	4.5 J	250	1.5	0.19 J	100000	7.7 U	4.5	10 U	15000	18	25000	340	11	4800	27	0.14 J	900000	0.14 U	17	37 U	0.19 J			
MW23	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			
	MW23042014	Normal	North Alluvial	4/11/2014	27000	0.60 U	3.4 J	210	1.1	0.12 UJ	11000	21	6.7	11 U	17000	9.1	7800	210	21	6700	1.5 J	0.11 UJ	530000 J	0.21 J	55	62 U	0.080 U			
DMW23042014	Duplicate	North Alluvial	4/11/2014	33000	0.60 U	3.9 J	270	1.5	0.11 J	13000	26	8.5	14 U	21000	12	9800	270	23	7400	2.0 J	0.044 UJ	520000 J	0.26 J	59	70 U	0.080 U				
MW24	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			
	MW24042014	Normal	North Alluvial	4/11/2014	31 U	0.40 J	0.83 J	290	0.24 U	0.12 U	36000	1.5 U	0.12 U	1.5 U	2000	0.50 U	12000	490	0.90 U	960 J	2.0 U	0.10 U	290000 J	0.20 U	0.58 U	6.0 U	0.080 U			
DMW24042014	Duplicate	North Alluvial	4/11/2014	31 U	0.60 UJ	0.93 J	300	0.24 U	0.12 U	34000	1.5 U	0.099 U	1.5 U	2000	0.50 U	11000	480	0.90 U	1000 J	2.0 U	0.10 U	280000 J	0.20 U	0.55 U	6.0 U	0.080 U				
SMW01	SMW01102015	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			
	SMW01042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	1.0 J	21	0.24 U	0.12 U	20000	1.5 U	0.12 J	1.5 U	30 U	0.50 U	6500	93	1.9 J	1400 J	2.0 J	0.10 U	710000	0.20 U	2.0 J	6.0 U	0.080 U			
TMW01	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	670 J	5.7	0.10 U	550000 J	0.20 U	13	6.0 U	0.080 U			
	TMW01102014	Normal	North Alluvial	10/30/2014	31 U	0.60 U	0.74 J	12	0.24 U	0.12 U	120000	0.65 J	0.10 U	7.8	30 U	0.50 U	19000	12	0.90 U	410 J	6.2	0.10 U	590000	0.20 U	14	6.0 U	0.080 U			
	TMW01042014	Normal	North Alluvial	4/16/2014	31 U	0.66 J	0.89 J	10	0.24 U	0.12 U	110000	1.5 U	0.10 U	8.6	30 U	0.50 U	20000	12	0.31 J	290 J	5.5	0.10 U	630000	0.12 J	12	6.0 U	0.080 U			
TMW03	TMW03102015	Normal	North Alluvial	11/4/2015	150 U	1.0 U	0.45 J	12	0.30 U	1.0 U	51000	1.8 U	0.064 J	0.96 J	50 U	0.70 U	11000	5.1	1.1 J	990 J	51	0.10 U	930000	0.20 U	2.3 J	8.7 J	0.080 U			
	TMW03042015	Normal	North Alluvial	4/9/2015	31 U	0.60 U	0.63 J	13	0.24 U	0.40 U	49000	1.5 U	0.10 U	1.0 J	30 U	0.50 U	12000	5.4	0.49 J	860 J	54	0.10 U	970000	0.20 U	1.8 J	7.7 J	0.080 U			
	TMW03102014	Normal	North Alluvial	10/30/2014	31 U	0.60 U	0.58 J	13	0.24 U	0.12 U	54000	1.5 U	0.071 J	0.72 J	30 U	0.50 U	11000	4.7	0.90 U	730 J	61	0.10 U	1100000	0.20 U	2.2 J	9.6 J	0.080 U			
TMW03042014	Normal	North Alluvial	4/16/2014	31 U	0.60 U	0.62 J	12	0.24 U	0.12 U	50000	1.5 U	0.10 U	0.80 J	30 U	0.50 U	11000	4.7	0.34 J	900 J	64	0.10 U	1100000	0.20 U	1.8 J	9.7 J	0.073 U				
TMW04	TMW04102015	Normal	North Alluvial	11/4/2015	150 U	1.0 U	0.86 J	7.6	0.30 U	1.0 U	31000	2.4 J	0.20 U	0.90 J	50 U	0.70 U	5500	0.36 J	0.71 J	1200	82	0.10 U	880000	0.20 U	16	4.1 J	0.080 U			
	TMW04042015	Normal	North Alluvial	4/9/2015	31 U	0.60 U	0.80 J	7.7	0.24 U	0.40 U	31000	1.5 J	0.10 U	1.1 J	30 U	0.50 U	6000	0.90 U	0.31 J	980 J	74	0.10 U	890000							

TABLE 5-8
 Summary of Dissolved Metals Analytical Detections (Page 3 of 7)
 Groundwater Periodic Monitoring Report July through December 2015 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																									2 ^c
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c			
TMW07	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 U	1800000 J	0.20 U	5.0 J	4.5 J	0.080 U			
	TMW07042014	Normal	North Alluvial	4/10/2014	330	0.48 J	0.63 J	21	0.24 U	0.12 U	59000	1.4 J	0.68 J	0.77 J	290	0.50 U	9700	320	2.1 J	5700	2.0 U	0.10 U	1300000	0.20 U	5.6 J	2.8 J	0.027 J			
TMW08	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			
	TMW08042014	Normal	North Alluvial	4/15/2014	31 U	0.83 J	0.45 J	9.8	0.11 J	0.12 U	220000	1.5 U	0.28 J	1.4 U	190 J	0.50 U	69000	250	1.1 J	3700 J	39	0.10 U	4400000	0.11 J	0.93 J	4.4 J	0.080 U			
	DTW08042014	Duplicate	North Alluvial	4/15/2014	31 U	0.46 J	0.45 J	10	0.24 U	0.12 U	220000	1.5 U	0.33 J	1.7 U	68 J	0.50 U	67000	260	1.2 J	6900 J	41	0.10 U	4300000	0.076 J	0.88 J	5.0 J	0.080 U			
TMW10	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 U			
	TMW10042014	Normal	North Alluvial	4/14/2014	31 U	0.60 U	0.72 J	19	0.24 U	0.12 U	88000	1.5 U	0.066 J	2.4 U	30 U	0.50 U	20000	100	1.6 U	1600 J	0.78 J	0.10 U	2000000	0.20 U	3.1 J	6.0 U	0.080 U			
TMW11	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			
	TMW11042014	Normal	North Alluvial	4/17/2014	21 J	0.68 J	0.39 J	19	0.24 U	0.12 U	16000	1.1 J	0.10 U	1.5 U	30 U	0.50 U	3100	4.9	0.50 J	680 J	13	0.10 U	560000	0.16 J	1.7 J	2.0 J	0.083 U			
TMW13	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 U	1.0 U	15 J	0.24 U	0.12 U	27000	0.64 J	0.10 U	1.5 U	30 U	0.50 U	5300	0.90 U	0.90 U	860 J	9.5	0.10 U	600000	0.20 U	2.7 J	6.0 U	0.080 U			
	TMW13042014	Normal	North Alluvial	4/17/2014	31 U	0.60 U	1.0 U	17	0.24 U	0.12 U	27000	0.67 J	0.10 U	1.5 U	30 U	0.50 U	5100	0.90 U	0.90 U	700 J	13	0.10 U	590000	0.20 U	2.7 J	6.0 U	0.081 U			
TMW15	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 U	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			
	TMW15042014	Normal	North Alluvial	4/17/2014	31 U	0.60 U	1.0 U	21	0.24 U	0.12 U	19000	0.90 J	0.10 U	0.59 J	30 U	0.50 U	3500	0.90 U	0.52 J	660 J	15	0.10 U	590000	0.20 U	2.0 J	7.9 J	0.083 U			
TMW21	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	37	0.080 U			
	TMW21102014	Normal	North Alluvial	10/31/2014	31 U	0.60 U	0.89 J	19	0.24 U	0.12 U	34000	0.82 J	0.087 J	1.5 J	30 U	0.50 U	7000	58	0.51 J	650 J	2.2 J	0.10 U	730000	0.20 U	2.4 J	2.4 J	0.080 U			
	TMW21042014	Normal	North Alluvial	4/14/2014	31 U	0.60 U	0.90 J	20	0.24 U	0.12 U	35000	1.5 U	0.11 J	2.6 U	30 U	0.50 U	7000	57	2.7 J	1000 J	2.9 J	0.10 U	670000	0.20 U	2.4 J	2.8 U	0.080 U			
TMW22	TMW22102015	Normal	North Alluvial	10/29/2015	70 U	1.0 U	0.97 J	20	0.30 U	1.0 U	35000	0.53 J	0.11 J	1.3 J	85 U	0.70 U	11000	21	1.4 J	1000 J	2.8 J	0.10 U	910000	0.20 U	5.1 J	8.0 U	0.080 U			
	TMW22042015	Normal	North Alluvial	4/1/2015	200 J	0.60 U	0.98 J	17 J	0.24 U	0.40 U	35000	1.4 J	0.13 J	1.5 J	120	0.50 U	11000	13	0.61 J	1100 J	3.1 J	0.10 U	780000	0.20 U	5.4 J	6.5 J	0.080 U			
	TMW22102014	Normal	North Alluvial	10/23/2014	31 U	0.86 J	1.6 J	72	0.19 J	0.12 U	670000	4.9 J	1.2	3.5	30 U	1.2 J	170000	100	3	13000	2.2 J	0.10 U	1800000 J	0.072 J	13	9.4 J	0.080 U			
	TMW22042014	Normal	North Alluvial	4/10/2014	24 J	0.60 U	1.0 J	20	0.24 U	0.12 U	36000	1.9 J	0.063 J	1.5 J	30 U	0.50 U	11000	1.5 J	1.1 J	1200 J	5.7	0.10 U	910000	0.20 U	4.5 J	7.1 J	0.080 U			
TMW23	TMW23102015	Normal	North Alluvial	10/30/2015	370	1.0 U	1.7 J	71	0.20 J	1.0 U	19000	4.2 J	1.2	2.7	240	1.4 J	5200	81 J	2.8 J	920 J	2.0 U	0.10 U	820000	0.20 U	8.6	8.2 J	0.080 U			
	TMW23042015	Normal	North Alluvial	4/1/2015	45 J	0.60 U	1.0 J	18 J	0.24 U	0.40 U	18000	0.82 J	0.058 J	1.7 J	32 J	0.50 U	4600	8.2	0.78 J	750 J	2.0 U	0.10 U	760000	0.20 U	2.7 J	2.9 J	0.080 U			
	TMW23102014	Normal	North Alluvial	10/22/2014	31 U	0.60 U	0.83 J	16	0.24 U	0.12 U	19000	0.63 J	0.10 U	1.1 J	30 U	0.18 J	4600	3.4 J	0.90 U	780 J	2.0 U	0.10 U	870000	0.20 U	2.5 J	3.0 J	0.080 U			
	TMW23042014	Normal	North Alluvial	4/10/2014																										

5.0 Analytical Results

TABLE 5-8

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

Groundwater Periodic Monitoring Report July through December 2015 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																							
					200 ^a	6 ^b	10 ^b	1000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
TMW24	TMW24102015	Normal	North Alluvial	11/6/2015	150 U	1.0 U	1.1 J	39 J	0.30 U	1.0 U	37000	1.8 U	0.22 J	0.71 J	49 J	0.70 U	9500	140	2.1 J	730 J	2.0 U	0.10 U	1000000	0.20 U	1.9 J	4.8 J	0.080 U	
	TMW24042015	Normal	North Alluvial	4/8/2015	34 J	0.60 U	1.1 J	40	0.24 U	0.40 U	34000	1.5 U	0.26 J	1.5 U	69 J	0.50 U	8700	140	0.84 J	990 J	2.0 U	0.10 U	940000	0.20 U	1.0 J	2.4 J	0.080 U	
	TMW24102014	Normal	North Alluvial	10/31/2014	31 U	0.60 U	1.3 J	34	0.24 U	0.12 U	33000	1.5 U	0.18 J	1.5 U	36 J	0.50 U	8300	140	0.80 J	320 J	2.0 U	0.10 U	990000	0.20 U	1.7 J	6.0 U	0.080 U	
	TMW24042014	Normal	North Alluvial	4/17/2014	31 U	0.60 U	1.1 J	34	0.24 U	0.12 U	35000	1.5 U	0.23 U	1.5 U	39 J	0.50 U	8800	140	0.96 J	570 J	2.0 U	0.10 U	1000000	0.20 U	1.7 J	6.0 U	0.086 U	
TMW25	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 U	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	
	TMW25042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	0.63 J	11	0.24 U	0.12 U	55000	1.5 U	0.064 J	0.86 U	30 U	0.50 U	12000	130	0.75 J	1400 J	2.0 J	0.10 U	990000	0.20 U	3.3 J	3.2 J	0.080 U	
TMW26	TMW26102015	Normal	North Alluvial	10/30/2015	70 U	1.0 U	1.2 J	19	0.30 U	1.0 U	18000	1.8 U	0.27 J	2.2	85 U	0.70 U	7300	120 J	1.8 J	390 J	2.0 U	0.10 U	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 U	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 U	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 U	1.0 J	15 J	0.24 U	0.12 U	20000	1.5 U	0.25 J	1.6 J	32 J	0.50 U	7500	100 J	1.7 J	1100 J	2.0 U	0.10 U	900000	0.20 U	3.2 J	6.0 U	0.080 U	
	DTW26102014	Duplicate	North Alluvial	10/27/2014	310 U	0.60 U	0.79 J	15 J	0.24 U	0.12 U	20000	1.5 U	0.22 J	1.3 J	30 U	0.50 U	7900	86 J	1.7 J	910 J	2.0 U	0.10 U	940000	0.054 J	2.7 J	6.0 U	0.080 U	
TMW26042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	1.2 J	17	0.24 U	0.12 U	19000	1.5 U	0.20 J	1.7 U	30 U	0.50 U	7300	100	1.9 J	790 J	2.0 U	0.10 U	930000	0.20 U	3.5 J	6.0 U	0.080 U		
TMW27	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 U	26000	1.5 U	0.12 J	1.5 U	540	0.50 U	6600	480 J	0.52 J	600 J	2.0 U	0.033 J	350000	0.12 J	1.0 U	2.2 J	0.080 U	
	TMW27042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	20	120	0.24 U	0.12 U	25000	1.5 U	0.19 J	1.5 U	580	0.50 U	6500	570	0.93 J	770 J	2.0 U	0.19 J	380000	0.20 U	1.0 U	2.2 J	0.080 U	
TMW28	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	
	TMW28042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	1.0 U	53	0.24 U	0.12 U	120000	1.5 U	0.14 J	1.5 U	410	0.50 U	37000	450	0.31 J	1500 J	2.0 U	0.10 U	360000	0.20 U	1.0 J	2.0 J	0.080 U	
TMW29	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	
	TMW29042014	Normal	North Alluvial	4/10/2014	2100	0.86 J	1.2 J	33	0.24 U	0.18 J	43000	1.7 J	0.55 J	1.4 J	1300	0.72 J	8200	50	1.8 J	1700 J	19	0.10 U	630000	0.14 J	7.9	5.7 J	0.080 U	
TMW31S	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	
	TMW31S042014	Normal	North Alluvial	4/10/2014	31 U	0.60 U	1.0 U	16	0.24 U	0.12 U	120000	1.1 J	0.10 U	1.5 U	30 U	0.50 U	20000	18	0.41 J	760 J	9.3	0.10 U	590000	0.20 U	2.1 J	5.6 J	0.080 U	
TMW33	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	1.5 J	1200 J	0.82 J	0.055 J	3000000	0.14 J	3.4 J	2.0 J	0.080 U	
	TMW33102014	Normal	North Alluvial	10/22/2014	360	0.60 U	0.95 J	30	0.24 U	0.12 U	110000	0.65 J	0.17 J	3.6	310	0.24 J	28000	160	1.8 U	2100 J	0.70 J	0.10 U	2500000	0.20 U	4.6 J	3.4 J	0.080 U	
	TMW33042014	Normal	North Alluvial	4/10/2014	31 U	0.60 U	0.74 J	21	0.24 U	0.12 U	110000	1.5 U	0.21 J	4.3	30 U	0.50 U	27000	200	2.2 J	2500 J	1.2 J	0.10 U	2400000	0.056 J	3.7 J	2.6 J	0.080 U	
TMW34	TMW34102015	Normal	North Alluvial	11/3/2015	150 U	1.0 U	1.0 U	11	0.30 U	1.0 U	130000	1.8 U	0.11 J	0.74 J	50 U	0.70 U	27000	140	0.59 J	1600	110	0.10 U	1400000	0.20 U	1.5 J	8.0 U	0.080 U	
	DTW34102015	Duplicate	North Alluvial	11/3/2015	150 U	1.0 U	0.33 J	11	0.30 U	1.0 U	130000	1.8 U	0.11 J	1.8 U	50 U	0.70 U	27000	150	0.48 J	1600	110	0.10 U	1400000	0.20 U	1.3 J	8.0 U	0.080 U	
	TMW34042015	Normal	North Alluvial	4/3/2015	31 U	0.60 U	1.0 U	13	0.24 U	0.40 U	120000	0.75 J	0.16 J	0.74 J	30 U	0.50 U	25000	120	0.62 J	1100 J	120	0.034 J	1500000	0.060 J</				

TABLE 5-8
 Summary of Dissolved Metals Analytical Detections (Page 5 of 7)
 Groundwater Periodic Monitoring Report July through December 2015 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																							
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
TMW39S	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	
	TMW39S042014	Normal	North Alluvial	4/11/2014	81 U	0.60 U	0.52 J	15 U	0.24 U	0.12 U	74000	2.3 U	0.057 U	0.65 U	49 U	0.50 U	15000	2.5 U	0.72 U	1300 J	11	0.10 U	910000 J	0.20 U	3.8 U	6.0 U	0.080 U	
TMW40S	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	
	TMW40S042014	Normal	North Alluvial	4/11/2014	13000	0.60 U	15	180	1.1	0.12 J	75000	5.9 J	2.3	4.7	6000	9.7	13000	220	5.9	2500 J	54	0.10 U	1000000	0.052 J	38	110	0.080 U	
TMW41	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	
	TMW41042014	Normal	North Alluvial	4/10/2014	31 U	0.67 J	0.56 J	12	0.24 U	0.12 U	19000	7.7 J	0.10 U	0.94 J	30 U	0.50 U	4700	0.37 J	0.90 U	1100 J	4.9 J	0.10 U	970000	0.15 J	7.5	6.0 U	0.080 U	
TMW43	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	
TMW43042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	0.34 J	21	0.24 U	0.12 U	36000	1.5 U	0.087 J	1.5 U	30 U	0.50 U	6600	55	0.90 U	1100 J	6.8	0.10 U	640000	0.20 U	1.7 J	2.6 J	0.080 U		
TMW44	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	
	TMW44042014	Normal	North Alluvial	4/10/2014	900	0.60 UJ	0.92 J	17	0.24 U	0.12 U	36000	0.70 J	0.27 J	1.0 J	590	0.38 J	11000	27	0.69 J	1100 J	3.2 J	0.10 U	780000	0.20 U	4.2 J	2.6 J	0.080 U	
TMW45	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	
	TMW45042014	Normal	North Alluvial	4/11/2014	31 U	0.60 U	0.96 J	71	0.24 U	0.12 U	30000	1.5 U	0.068 U	2.2 U	22 U	0.50 U	7600	40	1.8 U	1100 J	2.0 U	0.10 U	960000 J	0.20 U	4.6 J	6.0 U	0.080 U	
TMW46	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	18000	0.71 J	0.37 J	830 J	110	0.10 U	1300000	0.20 U	2.4 J	8.0 U	0.080 U	
	TMW46042015	Normal	North Alluvial	4/2/2015	31 U	1.4 J	0.50 J	9.2	0.11 J	0.40 U	74000 J	1.5 U	0.10 J	1.3 J	30 U	0.50 U	17000	0.31 J	0.90 U	450 J	100	0.045 J	1200000	0.079 J	2.3 J	6.0 U	0.080 U	
	TMW46102014	Normal	North Alluvial	10/23/2014	620	0.60 U	0.64 J	21	0.24 U	0.12 U	67000	1.0 J	0.28 J	1.7 J	440	0.46 J	17000	11	0.70 J	970 J	140 J	0.10 U	1200000 J	0.20 U	3.7 J	4.3 J	0.080 U	
	TMW46042014	Normal	North Alluvial	4/11/2014	31 U	0.60 U	0.46 J	11 U	0.24 U	0.12 U	71000	1.5 U	0.068 U	1.9 U	30 U	0.50 U	16000	0.93 U	0.90 U	960 J	130	0.10 U	1200000 J	0.20 U	2.7 U	6.0 U	0.080 U	
TMW47	TMW47102015	Normal	North Alluvial	11/5/2015	150 U	1.0 U	0.52 J	14	0.30 U	1.0 U	6300	1.8 U	0.087 J	1.8 U	50 U	0.70 U	690	40	0.60 J	1100	2.0 U	0.10 U	550000	0.20 U	0.89 J	8.0 U	0.080 U	
	TMW47042015	Normal	North Alluvial	4/10/2015	31 U	0.60 U	1.0 U	14	0.24 U	0.40 U	6400	1.5 U	0.072 J	1.5 U	27 J	0.50 U	750	40	0.90 U	1200 J	2.0 U	0.10 U	570000	0.20 U	1.0 U	6.0 U	0.080 U	
	TMW47102014	Normal	North Alluvial	10/31/2014	31 U	0.70 J	0.68 J	14	0.24 U	0.12 U	6000	1.5 U	0.12 J	1.5 U	30 UJ	0.50 U	660	43	0.90 U	930 J	2.0 U	0.10 U	610000	0.13 J	1.0 J	6.0 U	0.080 U	
	TMW47042014	Normal	North Alluvial	4/16/2014	31 U	0.60 U	1.0 U	12	0.24 U	0.12 U	6300	1.5 U	0.067 J	1.5 U	30 U	0.50 U	690	44	0.38 J	1100 J	2.0 U	0.10 U	620000	0.20 U	0.90 J	6.0 U	0.080 U	
TMW02	TMW02102015	Normal	North Bedrock	11/3/2015	150 U	1.0 U	0.39 J	11	0.30 U	1.0 U	24000	1.8 U	0.16 J	0.63 J	50 U	0.70 U	2800	150	0.51 J	1700	120	0.10 U	1100000	0.20 U	1.4 J	8.0 U	0.080 U	
	TMW02042015	Normal	North Bedrock	4/9/2015	31 U	0.60 U	1.2 J	10	0.24 U	0.40 U	23000	1.5 U	0.10 U	1.2 J	30 U	0.50 U	3000	0.31 U	0.50 J	2000 J	72	0.10 U	1100000	0.20 U	44	6.0 U	0.080 U	
	TMW02102014	Normal	North Bedrock	10/30/2014	31 U	0.60 U	1.2 J	8.8	0.24 U	0.12 U	25000	0.71 J	0.10 U	1.5 U	30 U	0.50 U	2700											

5.0 Analytical Results

TABLE 5-8

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

Groundwater Periodic Monitoring Report July through December 2015 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																				2 ^c		
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c
TMW16	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
	TMW16042014	Normal	North Bedrock	4/9/2014	31 U	0.60 U	1.0 U	15 U	0.24 U	0.12 U	4200 U	1.5 U	0.095 U	5.1 U	30 U	0.50 U	420 U	4.9 U	2.1 U	860 J	2.0 U	0.10 U	470000	0.20 U	7.8	9.3 U	0.080 U
TMW17	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
	TMW17042014	Normal	North Bedrock	4/17/2014	130 J	0.60 U	1.0 U	16	0.24 U	0.12 U	4500	1.5 U	0.10 U	1.5 U	41 J	0.39 J	490 J	11	1.1 J	1100 J	2.0 U	0.10 U	440000	0.20 U	0.73 J	130	0.081 U
TMW18	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
	TMW18042014	Normal	North Bedrock	4/11/2014	100 U	0.60 U	3.6 J	15 U	0.24 U	0.12 U	6800	1.1 U	0.078 U	1.8 U	34 U	0.45 U	1000	2.6 U	0.62 U	4200	2.0 U	0.10 U	720000 J	0.20 U	14	6.1 U	0.080 U
TMW19	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
	TMW19042014	Normal	North Bedrock	4/9/2014	290 U	0.60 U	1.0 U	7.9 U	0.24 U	0.12 U	9300	1.5 U	0.095 U	1.5 U	140 U	0.19 U	1000	17 U	1.6 U	1200 J	2.0 U	0.10 U	680000	0.075 U	6.9	3.6 U	0.080 U
TMW30	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
	TMW30042014	Normal	North Bedrock	4/11/2014	75 U	0.60 U	0.92 J	11 U	0.24 U	0.12 U	58000	0.51 U	0.13 U	0.75 U	66 U	0.50 U	11000	4.3 U	1.1 U	1100 J	8	0.10 U	510000 J	0.20 U	14	4.2 U	0.080 U
TMW31D	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 U	0.10 U	1.5 J	30 U	0.50 U	11000	0.88 J	0.90 U	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 U	0.39 J	1400 J	21 J	0.10 U	580000	0.20 U	12 J	8.6 J	0.080 U
	TMW31D042014	Normal	North Bedrock	4/16/2014	31 U	0.60 U	0.42 J	8.1	0.24 U	0.12 U	63000	1.5 U	0.10 U	1.7 J	30 U	0.50 U	11000	1.2 J	0.90 U	1300 J	7.2	0.10 U	590000	0.20 U	6.8	22	0.066 U
TMW32	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	0.20 U	3.0 J	4.2 J	0.080 U
	TMW32102014	Normal	North Bedrock	10/30/2014	31 U	0.43 J	1.6 J	8.2	0.24 U	0.12 U	11000	1.5 U	0.061 J	1.5 U	30 U	0.50 U	1100	31	0.37 J	990 J	3.5 J	0.10 U	770000	0.20 U	2.6 J	3.1 J	0.080 U
	TMW32042014	Normal	North Bedrock	4/16/2014	31 U	0.60 U	0.54 J	8.1	0.24 U	0.12 U	11000	1.5 U	0.10 U	1.5 U	47 J	0.50 U	1200	25	0.90 U	1200 J	3.7 J	0.10 U	800000	0.20 U	3.9 J	3.1 J	0.080 U
TMW36	TMW36102015	Normal	North Bedrock	10/28/2015	70 U	1.0 U	1.0 U	8.3	0.30 U	1.0 U	8600	0.70 J	0.18 J	1.8 U	85 U	0.36 J	960	15	4.5	1100 J	2.0 U	0.10 U	680000	0.20 U	1.9 J	15 J	0.080 U
	TMW36042015	Normal	North Bedrock	4/1/2015	31 U	0.60 U	1.0 U	8.4 J	0.24 U	0.40 U	8700	1.5 U	0.066 J	1.5 U	30 U	0.50 U	910	15	1.1 J	1000 J	2.0 U	0.10 U	620000	0.20 U	2.4 J	6.5 J	0.080 U
	TMW36102014	Normal	North Bedrock	10/24/2014	29 J	0.60 U	1.0 U	8.5 J	0.24 U	0.12 U	8700	1.5 U	0.50 J	1.5 U	30 U	0.50 U	950	19	0.67 J	1000 J	2.0 U	0.10 U	680000	0.20 U	1.8 J	9.3 J	0.080 U
	TMW36042014	Normal	North Bedrock	4/9/2014	31 U	0.60 U	1.0 U	7.2 U	0.24 U	0.16 J	8700	1.5 U	0.10 U	1.5 U	30 U	0.50 U	900	15 U	0.64 U	950 J	2.0 U	0.10 U	680000	0.20 U	1.5 J	6.1 U	0.043 J
TMW37	TMW37102015	Normal	North Bedrock	10/28/2015	65 J	1.0 U	0.39 J	9.3	0.30 U	1.0 U	6000	0.67 J	0.20 J	1.8 U	56 J	0.39 J	720	14	6.2	930 J	2.0 U	0.10 U	570000	0.20 U	3.7 J	15 J	0.080 U
	TMW37042015	Normal	North Bedrock	4/1/2015	31 U	0.60 U	0.73 J	12 J	0.24 U	0.40 U	5600	1.5 U	0.057 J	1.5 U	30 U	0.50 U	630	7.5	1.9 J	890 J	2.0 U	0.10 U	520000	0.20 U	14	3.6 J	0.080 U
	TMW37102014	Normal	North Bedrock	10/24/2014	31 U	0.60 U	0.46 J	10 J	0.24 U	0.12 U	5700	1.5 U	0.58 J	0.81 J	30 U	0.19 U	640	12	2.9 J	780 J	2.0 U	0.10 U	600000	0.20 U	3.5 J	13 J	0.080 U
	TMW37042014	Normal	North Bedrock	4/9/2014	31 U	0.60 U	0.49 J	11 U	0.24 U	0.12 U	5700	1.5 U	0.079 U	1.5 U	30 U	0.50 U	600 U	7.4 U	1.8 U	940 J	2.0 U	0.10 U	550000	0.20 U	11	3.5 U	0.14 J
TM																											

TABLE 5-8
 Summary of Dissolved Metals Analytical Detections (Page 7 of 7)
 Groundwater Periodic Monitoring Report July through December 2015 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																						
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c
TMW39D	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
	TMW39D042014	Normal	North Bedrock	4/16/2014	31 U	0.60 U	1.0 U	7.9	0.24 U	0.12 U	20000	1.5 U	0.10 U	1.5 U	30 U	0.50 U	2200	57	0.90 U	1400 J	2.0 U	0.10 U	820000	0.20 U	0.65 J	6.0 U	0.080 U
TMW40D	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
	TMW40D042014	Normal	North Bedrock	4/17/2014	31 U	0.60 U	0.46 J	8.4	0.24 U	0.12 U	16000	1.5 U	0.10 U	0.93 J	30 U	0.50 U	2000	54	0.51 J	1400 J	3.4 J	0.10 UJ	750000	0.20 U	3.0 J	3.9 J	0.084 U
TMW48	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
	TMW48042014	Normal	North Bedrock	4/17/2014	31 U	0.60 UJ	0.63 J	11	0.24 U	0.12 U	80000	1.5 U	0.10 UJ	0.96 J	30 U	0.50 U	17000	7.9	0.39 J	1400 J	7.4	0.10 UJ	550000	0.071 J	6	9.7 J	0.081 U
	DTW48042014	Duplicate	North Bedrock	4/17/2014	31 U	0.42 J	0.79 J	13	0.24 U	0.12 U	80000	1.5 U	0.061 UJ	0.60 J	30 U	0.50 U	17000	8.7	0.43 J	1500 J	8.3	0.10 UJ	550000	0.15 J	6.6	12 J	0.074 U
TMW49	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
	TMW49042014	Normal	North Bedrock	4/16/2014	31 U	0.60 U	0.52 J	13	0.24 U	0.12 U	79000	0.51 J	0.10 U	1.4 J	30 U	0.50 U	14000	0.90 U	1.7 J	1400 J	21	0.10 U	610000	0.20 U	12	10 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 Region 6, Regional Screening Levels, November (formerly Human Health Medium Specific Screening Levels) (EPA, 2014)
^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 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.

TABLE 5-9
 Summary of Total Metals Analytical Detections (Page 1 of 7)
 Groundwater Periodic Monitoring Report July through December 2015 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																							
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
BGMW01	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	
	BGMW01042014	Normal	North Alluvial	4/15/2014	2500	0.60 U	1.1 J	37	0.14 J	0.14 J	49000	1.7 J	1.3	6	1600	1.4 J	26000	280	9.3	1500 J	2.0 U	0.24 J	850000	0.20 UJ	7.1 J	23	0.080 U	
BGMW02	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	
	BGMW02042014	Normal	North Alluvial	4/15/2014	240 J	0.60 U	0.87 J	20	0.24 U	0.12 U	92000	1.5 U	0.16 J	2.0 J	160	0.50 UJ	130000	94	0.71 J	970 J	92 J	0.10 U	1100000	0.20 UJ	8.4 J	6.0 U	0.080 U	
BGMW03	DBW02042014	Duplicate	North Alluvial	4/15/2014	270 J	0.60 U	0.92 J	21	0.24 U	0.12 U	93000	1.5 U	0.16 J	0.97 J	180	0.50 UJ	130000	96	0.77 J	1200 J	92 J	0.10 U	1100000	0.20 UJ	8.3 J	6.0 U	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	BGMW03042014	Normal	North Alluvial	4/11/2014	3100	0.60 U	2.3 J	67	0.23 J	0.12 U	67000	2.9 U	1.2	5.7 U	2000	2.2 U	16000	75	2.1 U	3000	37	0.10 U	760000	0.055 J	15	9.8 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 UJ	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	FW31042014	Normal	North Alluvial	4/10/2014	1700	0.60 UJ	7.6	72	0.10 J	0.13 J	7100	2.0 J	0.51 J	1.2 J	630	0.73 J	2700	83	1.3 J	2000 J	2.0 U	0.10 U	550000	0.094 U	13	6.6 J	0.080 U	
	FW35102015	Normal	North Alluvial	10/2015																								
	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	FW35042014	Normal	North Alluvial	4/10/2014	3000	0.60 UJ	0.50 J	94	0.21 J	0.12 U	280000	3.0 J	1.4	2.7	1400	1.2 J	110000	620	4.4	1400 J	1.2 J	0.10 U	620000	0.20 U	4.8 J	64	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	MW01042014	Normal	North Alluvial	4/9/2014	7300	0.60 U	1.8 J	96	0.39 J	0.10 J	38000	5.3 J	2.1	5.1 U	4200	3.0	8800	190	4.7	2100 J	19	0.10 U	940000	0.077 J	12	50 U	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	MW02042014	Normal	North Alluvial	4/9/2014	20000	0.60 U	3.7 J	210	1.1	1.5	210000	7.3 J	5.4	7.0 U	14000	7.4	42000	1100	9	4100	8.6	0.043 J	390000	0.11 J	25	290	0.034 J	
	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	MW03042014	Normal	North Alluvial	4/14/2014	31 U	0.60 U	0.36 J	9	0.24 U	0.12 U	62000	1.5 U	0.12 J	0.89 J	30 U	0.50 U	12000	45 J	0.77 U	760 J	26	0.10 U	1200000	0.20 U	1.3 J	6.5 U	0.080 U	
	MW18D102015	Normal	North Alluvial	11/2/2015	4500	1.3 U	2.4 J	94	0.29 J	0.32 J	72000	6.6 J	2.4	13	3300	7.8	19000	740	6.8	3300 UJ	2.0 U	0.27 J	1900000	0.089 U	50	800	0.037 J	
	MW18D042015	Normal	North Alluvial	4/8/2015	26000	0.75 U	5.5	250	1.2	0.89 J	100000	17	7.8	36	16000	19	25000	1000	18	5900	1.1 J	0.25 J	2000000	0.28 U	49	1700	0.089 J	
	MW18D102014	Normal	North Alluvial	10/31/2014	87 J	0.60 U	0.98 J	21	0.24 U	0.12 U	62000	1.5 U	0.78 J	7.5 U	130	0.50 U	18000	790	2.9 J	760 J	10 U	0.10 U	1800000	0.20 U	2.3 J	18 J	0.080 U	
MW20	MW18D042014	Normal	North Alluvial	4/14/2014	52 U	0.60 U	0.90 J	19	0.24 U	0.12 U	72000	1.5 U	0.81 J	0.69 J	120 U	0.50 U	17000	780 J	3.1 U	1500 J	0.74 J	0.10 U	2200000	0.20 U	2.2 J	16 U	0.080 U	
	MW20102015	Normal	North Alluvial	11/2/2015	70 U	1.0 U	1.0 U	16	0.30 UJ	1.0 U	340000	1.8 UJ	1.3	2	49 J	0.70 U	70000	1800	3.3	4600 UJ	68	0.036 UJ	4100000 J	0.20 UJ	2.0 U	97	0.080 U	
	DMW20102015	Duplicate	North Alluvial	11/2/2015	70 U	1.0 U	1.0 U	15	0.38 J	1.0 U	330000	0.65 J	1.4	2.5	52 J	0.70 U	74000	1800	3	5600 UJ	70	0.10 UJ	4400000	0.096 UJ	2.0 U	98	0.080 U	
	MW20042015	Normal	North Alluvial	4/3/20																								

5.0 Analytical Results

TABLE 5-9

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

Groundwater Periodic Monitoring Report July through December 2015 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																							
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
MW22D	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	
	MW22D042014	Normal	North Alluvial	4/14/2014	31 U	0.60 U	0.36 J	11	0.24 U	0.12 U	81000	1.5 U	0.22 J	0.64 J	30 U	0.50 U	15000	130 J	0.96 U	710 J	44	0.10 U	1200000	0.20 U	1.4 J	15 U	0.080 U	
	DMW22D042014	Duplicate	North Alluvial	4/14/2014	31 U	0.60 U	0.36 J	11	0.24 U	0.12 U	80000	1.5 U	0.21 J	0.82 J	30 U	0.50 U	15000	130 J	0.95 U	910 J	43	0.10 U	1200000	0.20 U	1.4 J	19 U	0.080 U	
MW22S	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	
	MW22S042014	Normal	North Alluvial	4/10/2014	23000	0.60 U	7.3	240	1.7	0.32 J	110000	6.7 J	4.9	10	13000	28	24000	490	8.8	3100	25	0.22 J	920000	0.20 U	17	55 U	0.11 J	
MW23	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	
	MW23042014	Normal	North Alluvial	4/11/2014	20000	0.60 U	1.1 J	150	0.24 U	0.12 U	10000	2.7 U	1.3	0.80 U	11000	0.47 UJ	7000	110	3.2 U	5000	2.0 U	0.21 J	540000	0.20 U	6.8	3.3 U	0.080 U	
DMW23042014	Duplicate	North Alluvial	4/11/2014	26000	0.60 U	1.2 J	140	0.24 U	0.12 U	12000	3.4 U	1.3	0.95 U	15000	1.8 UJ	8600	110	3.8 U	5700	2.0 U	0.13 J	490000	0.20 U	7.5	3.7 U	0.080 U		
MW24	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	
	MW24042014	Normal	North Alluvial	4/11/2014	26 U	0.60 U	0.82 J	290	0.24 U	0.12 U	34000	1.5 U	0.10 U	1.5 U	1900	0.50 U	11000	480	0.90 U	930 J	2.0 U	0.10 U	270000	0.20 U	0.57 J	6.0 U	0.080 U	
DMW24042014	Duplicate	North Alluvial	4/11/2014	31 U	0.60 U	0.83 J	300	0.24 U	0.12 U	35000	1.5 U	0.12 U	1.5 U	2000	0.50 U	11000	490	0.90 U	1000 J	2.0 U	0.10 U	270000	0.20 U	0.61 J	6.0 U	0.080 U		
SMW01	SMW01102015	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	
	SMW01042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	1.0 J	23	0.24 U	0.12 U	20000	1.5 U	0.23 J	1.2 J	28 J	0.50 UJ	6600	120	2.0 J	920 J	0.85 J	0.078 J	740000	0.20 UJ	2.6 J	6.0 U	0.080 U	
TMW01	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	0.50 U	19000	12	0.31 J	510 J	6.7	0.10 U	580000	0.20 U	12	6.0 U	0.080 U	
	TMW01102014	Normal	North Alluvial	10/30/2014	31 U	0.60 U	0.79 J	12	0.24 U	0.12 U	110000	0.50 J	0.10 U	8.4	30 U	0.50 U	20000	11	0.34 J	370 J	6.6	0.10 U	570000	0.20 U	14	6.0 U	0.080 U	
	TMW01042014	Normal	North Alluvial	4/16/2014	31 U	0.60 U	0.64 J	11	0.24 U	0.14 J	110000	1.5 U	0.10 U	9	30 U	0.50 U	18000	12 J	0.90 U	540 J	4.7 J	0.10 U	580000	0.20 U	11	3.1 J	0.080 U	
TMW03	TMW03102015	Normal	North Alluvial	11/4/2015	150 U	1.0 U	0.56 J	13	0.30 U	1.0 U	50000	0.71 J	0.081 J	1.0 J	20 J	0.70 U	11000	6.7	1.0 U	750 J	59	0.10 U	970000	0.084 U	2.2 J	10 J	0.080 U	
	TMW03042015	Normal	North Alluvial	4/9/2015	31 U	0.60 U	0.52 J	12	0.24 U	0.40 U	49000	1.5 U	0.089 J	1.5 U	30 U	0.50 U	11000	4.9	0.90 U	510 J	59	0.10 U	890000 J	0.20 U	1.9 J	3.4 J	0.080 U	
	TMW03102014	Normal	North Alluvial	10/30/2014	31 U	0.60 U	0.55 J	14	0.24 U	0.12 U	49000	1.5 U	0.066 J	7.5 U	23 J	0.50 U	11000	5.3	0.38 J	460 J	67	0.10 U	970000	0.20 U	2.4 J	13 J	0.080 U	
	TMW03042014	Normal	North Alluvial	4/16/2014	31 U	0.60 U	0.43 J	13	0.24 U	0.12 U	48000	1.5 U	0.077 J	0.57 J	30 U	0.50 U	10000	4.9 J	0.90 U	710 J	64	0.10 U	970000	0.20 U	1.7 J	10 J	0.080 U	
TMW04	TMW04102015	Normal	North Alluvial	11/4/2015	150 U	1.0 U	0.96 J	8.3	0.30 U	1.0 U	30000	2.2 J	0.057 J	1.1 J	50 U	0.70 U	5600	0.95 U	1.0 U	1100	88	0.10 U	910000	0.20 U	16	2.3 J	0.080 U	
	TMW04042015	Normal	North Alluvial	4/9/2015	31 U	0.60 U	1.3 J	7	0.24 U	0.40 U	32000	1.9 J	0.10 U	1.5 U	54 J	0.50 U	5900	0.40 J	0.90 U	750 J	84	0.10 U	830000 J	0.067 U	16	5.1 J	0.080 U	
	TMW04102014	Normal	North Alluvial	10/																								

TABLE 5-9

Summary of Total Metals Analytical Detections (Page 3 of 7)
 Groundwater Periodic Monitoring Report July through December 2015 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																							
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
TMW07	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	
	TMW07042014	Normal	North Alluvial	4/10/2014	1400	0.60 J	0.92 J	38	0.14 J	0.12 U	58000	4.5 J	1.3	4.6	820	0.74 J	9900	360	4.5	6800	2.0 U	0.10 U	1300000	0.20 U	7.9	9.8 J	0.089 J	
TMW08	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	
	TMW08042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	0.66 J	11	0.24 U	0.12 U	220000	1.5 U	0.38 J	2	2000	0.50 U	67000	270	1.5 J	4400 J	53 J	0.10 U	4400000	0.20 U	2.4 J	6.4 J	0.080 U	
	DTW08042014	Duplicate	North Alluvial	4/15/2014	31 U	0.60 U	0.66 J	11	0.24 U	0.12 U	230000	1.5 U	0.41 J	2.2	2100	0.50 U	68000	280	1.6 J	5900 J	54 J	0.10 U	4600000	0.20 U	2.6 J	6.4 J	0.080 U	
TMW10	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	
	TMW10042014	Normal	North Alluvial	4/14/2014	31 U	0.60 U	0.74 J	19	0.24 U	0.12 U	88000	1.5 U	0.10 U	2.2	30 U	0.50 U	20000	110 J	1.3 U	1500 J	0.90 J	0.10 U	2100000	0.20 U	3.2 J	2.8 U	0.080 U	
TMW11	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	
	TMW11042014	Normal	North Alluvial	4/17/2014	540	0.76 J	0.38 J	21	0.24 U	0.12 U	16000	1.5 J	0.12 J	1.5 U	240	0.20 J	3100	9.7	0.63 J	740 J	15	0.10 U	550000	0.14 U	2.5 J	3.9 J	0.080 U	
TMW13	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 U	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	
	TMW13042014	Normal	North Alluvial	4/17/2014	31 U	0.60 U	1.0 U	19	0.24 U	0.12 U	26000	0.67 J	0.10 U	1.5 U	30 U	0.50 U	4900	0.42 J	0.30 J	720 J	12	0.10 U	570000	0.20 U	2.8 J	6.0 U	0.080 U	
TMW15	TMW15102015	Normal	North Alluvial	11/6/2015	150 U	1.0 U	1.0 U	24 J	0.30 U	1.0 U	21000	0.89 J	0.20 U	1.8 U	41 J	0.70 U	3800	1.5 J	1.0 U	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 U	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	
	TMW15042014	Normal	North Alluvial	4/17/2014	19 J	0.60 U	1.0 U	25	0.24 U	0.12 U	20000	1.2 J	0.10 U	1.5 U	30 U	0.50 U	3700	8.5	0.34 J	590 J	14	0.10 U	580000	0.20 U	2.2 J	7.2 J	0.080 U	
TMW21	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	750	20	5200	3.2 J	0.26 J	630000	0.29 J	35	88	0.080 U	
	TMW21102014	Normal	North Alluvial	10/31/2014	31 U	0.60 U	1.0 J	21	0.24 U	0.12 U	34000	0.80 J	0.082 J	6.9	30 U	0.50 U	7200	43	0.96 J	700 J	3.1 J	0.16 J	650000	0.20 U	2.6 J	3.5 J	0.080 U	
	TMW21042014	Normal	North Alluvial	4/14/2014	31 U	0.60 U	0.98 J	20	0.24 U	0.12 U	34000	1.5 U	0.075 J	4.8	30 U	0.50 U	6700	40 J	0.62 U	760 J	3.0 J	0.15 J	680000	0.20 U	2.6 J	7.5 U	0.080 U	
TMW22	TMW22102015	Normal	North Alluvial	10/29/2015	3100	0.70 J	1.2 J	60	0.22 J	1.0 U	36000	2.8 J	0.72 J	1.3 J	1400	0.97 J	12000	56	2.7 J	1600 J	2.9 J	0.12 J	920000	0.099 J	7.6	14 J	0.080 U	
	TMW22042015	Normal	North Alluvial	4/1/2015	530 J	0.60 U	0.90 J	28 J	0.24 U	0.40 U	35000	1.9 J	0.25 J	0.91 J	290	1.2 J	11000	28	1.1 J	910 J	2.8 J	0.10 U	820000	0.20 U	6.2	11 J	0.080 U	
	TMW22102014	Normal	North Alluvial	10/23/2014	28000	0.84 J	3.7 J	480	1.1	0.16 J	57000	17	6.8	7.8	14000	6.8	19000	450	14	4800	2.6 J	0.047 J	850000 J	0.16 J	36 J	39	0.037 J	
	TMW22042014	Normal	North Alluvial	4/10/2014	300	0.60 U	0.92 J	21	0.24 U	0.12 U	36000	3.0 J	0.19 J	1.2 J	160	0.36 J	11000	3.9	1.5 J	1000 J	5.1	0.10 U	920000	0.20 U	4.8 J	9.2 J	0.076 J	
TMW23	TMW23102015	Normal	North Alluvial	10/30/2015	4500	1.0 U	1.8 J	81	0.21 J	1.0 U	20000	4.0 J	1.1	1.8 J	2500	1.4 J	5800	83 J	2.8 J	1800 J	2.0 U	0.035 U	870000	0.20 U	7.5	13 J	0.080 U	
	TMW23042015	Normal	North Alluvial	4/1/2015	1800 J	0.60 U	1.4 J	42 J	0.24 U	0.40 U	17000	2.8 J	0.69 J	1.5 J	1100	0.80 J	4600	36	1.8 J	1000 J	2.0 U	0.10 U	730000	0.20 U	6.1	7.2 J	0.080 U	
	TMW23102014	Normal	North Alluvial	10/22/2014	6900	0.60 U	2.1 J	100 J	0.32 J	0.12 U	21000	6.1 J	1.8	6.1	4400	2.3 J	6100	110	4.1	1700 J	2.0 U	0.10 U	820000	0.20 U	11	20	0.080 U	
	TMW23042014	Normal	North Alluvial	4/10/2014	4900	0.60 U																						

5.0 Analytical Results

TABLE 5-9

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

Groundwater Periodic Monitoring Report July through December 2015 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																							
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
TMW25	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	
	TMW25042014	Normal	North Alluvial	4/15/2014	22 J	0.60 U	0.63 J	13	0.24 U	0.12 U	53000	1.5 U	0.56 J	0.97 J	60 J	0.50 U	11000	430	1.0 J	960 J	0.92 J	0.10 U	900000	0.20 U	4.4 J	4.7 J	0.080 U	
TMW26	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 U	0.10 U	830000	0.20 U	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	
TMW26042014	Normal	North Alluvial	4/15/2014	840	0.60 U	1.2 J	34	0.24 U	0.12 U	19000	0.98 J	0.49 J	2.7	490	0.28 J	7500	130	2.6 J	870 J	2.0 U	0.10 U	960000	0.20 U	5.5 J	2.2 J	0.080 U		
TMW27	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 U	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	
	TMW27042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	20 J	120	0.24 U	0.12 U	25000	1.5 U	0.18 J	1.4 J	610	0.50 U	6500	550	0.66 J	640 J	2.0 U	0.10 U	390000	0.20 U	0.57 J	8.1 J	0.080 U	
TMW28	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	
	TMW28042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	1.0 U	52	0.24 U	0.12 U	110000	1.5 U	0.14 J	0.84 J	440	0.50 U	34000	420	0.59 J	1400 J	2.0 U	0.10 U	370000	0.20 U	1.1 J	11 J	0.080 U	
TMW29	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	
	TMW29042014	Normal	North Alluvial	4/10/2014	10000	0.91 J	2.3 J	120	0.60 J	0.36 J	48000	6.4 J	2.8	4	5200	3.4	10000	180	6.9	2800 J	19	0.10 U	620000	0.19 U	16	19 J	0.080 U	
TMW31S	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	
	TMW31S042014	Normal	North Alluvial	4/10/2014	400	0.60 U	0.34 J	20	0.24 U	0.12 U	120000	1.9 J	0.15 J	0.92 J	180	0.29 J	21000	29	1.1 J	810 J	9.8	0.10 U	590000	0.20 U	2.8 J	7.3 J	0.080 U	
TMW33	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	2.5 J	25000	480	4.1	2100 J	0.88 J	0.11 J	1900000	0.18 U	10	13 J	0.080 U	
	TMW33102014	Normal	North Alluvial	10/22/2014	5100	0.60 U	1.7 J	93 J	0.34 J	0.12 U	110000	4.4 J	1.7	6.5	4600	3.1	29000	430	4.3	3100	0.70 J	0.033 U	2600000	0.080 U	12	14 J	0.080 U	
	TMW33042014	Normal	North Alluvial	4/10/2014	4900	0.60 U	1.5 J	87	0.30 J	0.14 J	100000	4.8 J	1.7	7.8	3200	2.4 J	28000	520	4.6	2800 J	0.86 J	0.10 U	2500000	0.084 U	11	12 J	0.14 J	
TMW34	TMW34102015	Normal	North Alluvial	11/3/2015	150 U	1.0 U	1.0 U	12	0.30 U	1.0 U	130000	1.8 U	0.16 J	1.8 U	50 U	0.70 U	27000	160	0.61 J	1300	110	0.10 U	1400000	0.20 U	1.5 J	8.0 U	0.080 U	
	DTW34102015	Duplicate	North Alluvial	11/3/2015	150 U	1.0 U	1.0 U	12	0.30 U	1.0 U	130000	1.8 U	0.19 J	0.56 J	50 U	0.70 U	27000	150	0.51 J	1400	110	0.10 U	1400000	0.20 U	1.4 J	8.0 U	0.080 U	
	TMW34042015	Normal	North Alluvial	4/3/2015	31 U	0.60 U	1.0 U	11	0.24 U	0.40 U	110000	1.5 U	0.18 J	0.97 J	30 U	0.50 U	24000	150	0.50 J	1100 J	110	0.10 U	1400000	0.092 J	1.5 J	3.5 J	0.080 U	
	DTW34042015	Duplicate	North Alluvial	4/3/2015	31 U	0.60 U	1.0 U	12	0.24 U	0.40 U	110000	1.5 U	0.24 J	0.85 J	30 U	0.22 J	24000	210	0.62 J	1200 J	110	0.10 U	1400000	0.20 U	1.3 J	2.4 J	0.080 U	
	TMW34102014	Normal	North Alluvial	10/28/2014	47 J	0.80 J	0.50 J	13	0.24 U	0.14 J	130000	1.5 U	0.28 J	1.2 J	56 J	0.50 U	27000	190	0.91 J	1500 J	140 J	0.10 U	1400000	0.095 J	1.5 J	3.7 J	0.080 U	
	DTW34102014	Duplicate	North Alluvial	10/28/2014	28 J	0.60 U	0.41 J	12	0.24 U	0.12 U	120000	1.5 U	0.22 J	1.0 J	34 J	0.50 U	26000	150	0.82 J	1600 J	130 J	0.10 U	1300000	0.20 U	1.4 J	6.3 J	0.080 U	
TMW34042014	Normal	North Alluvial	4/15/2014	22 J	0.60 U	0.36 J	12	0.24 U	0.12 U	130000	1.5 U	0.19 J	1.5 U	25 J	0.50 U	27000	160	0.83 J	1400 J	130 J	0.10 U	1600000	0.20 U	1.4 J	6.0 U	0.080 U		
TMW35	TMW35102015	Normal																										

TABLE 5-9
Summary of Total Metals Analytical Detections (Page 5 of 7)
Groundwater Periodic Monitoring Report July through December 2015 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																						
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c
TMW40S	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
	TMW40S042014	Normal	North Alluvial	4/11/2014	66000	0.60 U	26	1300	8.8	0.80 J	110000	30	16	26	31000	76	29000	1900	37	5400	62	0.16 J	950000	0.31 J	81	500	0.056 J
TMW41	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
	TMW41042014	Normal	North Alluvial	4/10/2014	820	0.85 J	0.59 J	19	0.13 J	0.12 U	19000	7.8 J	0.30 J	1.4 J	490	0.56 J	4600	14	1.0 J	1100 J	3.4 J	0.10 U	960000	0.17 U	7.9	7.4 J	0.079 J
TMW43	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
TMW43042014	Normal	North Alluvial	4/15/2014	31 U	0.60 U	1.0 U	20	0.24 U	0.12 U	35000	1.5 U	0.089 J	1.5 U	30 U	0.50 UJ	6600	52	0.30 J	990 J	6.0 J	0.10 U	650000	0.20 UJ	1.8 J	4.2 J	0.080 U	
TMW44	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
	TMW44042014	Normal	North Alluvial	4/10/2014	1400	0.60 UJ	0.94 J	32	0.24 U	0.12 U	35000	1.4 J	0.44 J	1.0 J	750	0.54 J	12000	53	1.2 J	910 J	2.2 J	0.10 U	780000	0.20 U	5.6 J	3.7 J	0.097 J
TMW45	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
	TMW45042014	Normal	North Alluvial	4/11/2014	280 U	0.60 U	1.0 J	76	0.24 U	0.12 U	29000	1.5 U	0.54 J	3.8 U	82 U	0.21 U	7900	490	2.8 U	1200 J	2.0 U	0.065 J	940000	0.20 U	5.0 J	6.0 U	0.080 U
TMW46	TMW46102015	Normal	North Alluvial	10/29/2015	8000	1.0 U	1.9 J	190	0.74 J	1.0 U	85000	5.5 J	2.8	4.7	5300	4.7	19000	200	3.8	2500 J	110	0.042 J	1300000	0.11 J	12	18 J	0.052 J
	TMW46042015	Normal	North Alluvial	4/2/2015	4900	1.2 J	0.88 J	70	0.20 J	0.40 U	76000	2.4 J	1.1	2.8	2200	2.0 J	18000	67	1.8 J	1200 J	110	0.058 J	1200000	0.13 U	5.8 J	15 J	0.080 U
	TMW46102014	Normal	North Alluvial	10/23/2014	15000	0.60 U	3.4 J	350	0.90 J	0.12 U	97000	12	6.5	7.9	10000	9.5	20000	440	8.8	3800	97	0.10 U	6800000 J	0.15 U	22	36	0.064 J
	TMW46042014	Normal	North Alluvial	4/11/2014	2200	0.60 U	0.75 J	42	0.10 J	0.12 U	73000	2.7 U	0.83 J	5.5 U	970	0.98 U	18000	54	1.9 U	1400 J	120	0.10 U	1200000	0.20 U	5.9 J	4.3 U	0.080 U
TMW47	TMW47102015	Normal	North Alluvial	11/5/2015	150 U	1.0 U	0.68 J	13	0.30 U	1.0 U	6200	1.8 U	0.20 U	0.60 J	20 J	0.70 U	700	45	0.33 J	1200	2.0 U	0.10 U	560000	0.20 U	1.0 J	8.0 U	0.080 U
	TMW47042015	Normal	North Alluvial	4/10/2015	23 J	0.60 U	1.0 U	15	0.24 U	0.40 U	4400	1.5 U	0.10 U	1.1 J	31 J	0.50 U	550	42	0.38 J	800 J	2.0 U	0.10 U	410000	0.20 U	1.0 J	3.0 J	0.080 U
	TMW47102014	Normal	North Alluvial	10/31/2014	18 J	0.60 U	0.81 J	16	0.24 U	0.12 U	6600 J	1.5 U	0.081 J	2	30 U	0.50 U	680	45	0.49 J	1000 J	2.0 U	0.10 U	590000	0.20 U	1.5 J	4.1 J	0.080 U
	TMW47042014	Normal	North Alluvial	4/16/2014	20 J	0.60 U	0.48 J	13	0.24 U	0.12 U	5900	1.5 U	0.070 J	0.56 J	30 U	0.50 U	670	44 J	0.90 U	1100 J	2.0 U	0.10 U	560000	0.20 U	1.2 J	6.0 U	0.080 U
TMW02	TMW02102015	Normal	North Bedrock	11/3/2015	150 U	1.0 U	1.1 J	8.5	0.30 U	1.0 U	23000	0.64 J	0.20 U	1.8 U	20 J	0.70 U	2800	1.0 J	1.0 U	1900	78	0.10 U	1100000	0.20 U	42	2.0 J	0.080 UJ
	TMW02042015	Normal	North Bedrock	4/9/2015	18 J	0.60 U	0.87 J	6.8	0.24 U	0.40 U	23000	0.52 J	0.10 U	1.5 U	30 U	0.50 U	2800	0.44 J	0.90 U	1300 J	67	0.10 U	960000 J	0.20 U	36	6.0 U	0.080 U
	TMW02102014	Normal	North Bedrock	10/30/2014	1700	0.60 U	1.4 J	26	0.24 U	0.12 U	24000	4.8 J	0.39 J	1.2 J	950	0.73 J	3100	14	1.7 J	1600 J	85	0.66 J	1100000	0.20 U	52	27	0.042 J
	TMW02042014	Normal	North Bedrock	4/16/2014	31 U	0.60 U	0.93 J	7.1	0.24 U	0.12 U	22000	0.52 J	0.10 U	1.5 U	30 U	0.50 U	2600	0.90 UJ	0.90 U	1700 J	74	0.10 U	1200000	0.20 U	41	6.0 U	0.080 U
TMW14A	TMW14A102015	Normal	North Bedrock	11/3/2015	150 U	1.0 U	1.0 U	18	0.30 U	1.0 U	3300	1.8 U	0.20 U	1.3 J	28 J	0.70 U	380 J	14	0.39 J	800 J	2.0 U	0.10 U	440000	0.20 U	2.0 U	7.5 J	0.080 UJ
	TMW14A042015	Normal	North Bedrock	4/8/2015	19 J	1.0 U	0.63 J	15	0.24 U	0.40 U	3300	1.5 U	0.10 U	1.5 U	26 J	0.50 U	390 J	11	0.30 J	790 J	2.0 U	0.10 U	410000	0.12 U	1.0 U	6.0 U	0.080 U
	TMW14A102014	Normal	North Bedrock	10/29/2014	18 J	0.60 U	0.59 J	19	0.24 U	0.12 U	3400	1.5 U	0.10 U	4.2	48 J	0.50 U	420 J	14	1.3 J	980 J	2.0 U	0.035 J	460000	0.20 U	1.0 U	6.0 U	0.080 U
	TMW14A042014	Normal	North Bedrock	4/15/2014	48 J	0.60 U	0.55 J	18	0.24 U	0.12 U	3300	1.5 U	0.0														

5.0 Analytical Results

TABLE 5-9

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

Groundwater Periodic Monitoring Report July through December 2015 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																							
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
TMW17	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	
	TMW17042014	Normal	North Bedrock	4/17/2014	970	0.60 U	0.68 J	29	0.24 U	0.23 J	6200	2.6 J	0.44 J	7.3	600	5.5	860	43	3.9	1100 J	2.0 U	2.1 J	430000	0.20 U	2.7 J	2900	0.035 J	
TMW18	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	
	TMW18042014	Normal	North Bedrock	4/11/2014	320 U	0.44 J	3.9 J	24	0.24 U	0.12 U	6900	1.8 U	0.18 U	3.5 U	160 U	1.1 U	1100	7.3 U	1.1 U	4000	2.0 U	0.13 J	680000	0.20 U	14	23 U	0.080 U	
TMW19	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	
	TMW19042014	Normal	North Bedrock	4/9/2014	990 U	0.60 U	0.36 J	9.8 U	0.24 U	0.12 U	9900	0.59 U	0.19 U	0.82 U	450 U	0.56 U	1200	22 U	2.1 U	1300 J	2.0 U	0.23 J	710000	0.20 U	8.3	4.5 U	0.080 U	
TMW30	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	
	TMW30042014	Normal	North Bedrock	4/11/2014	3300	0.60 U	1.3 J	40	0.14 J	0.12 U	56000	2.8 U	0.96 J	3.2 U	1800	2.1 U	12000	48	2.1 U	1500 J	7.9	0.039 J	470000	0.20 U	21	23 U	0.080 U	
TMW31D	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	
	TMW31D042014	Normal	North Bedrock	4/16/2014	31 U	0.60 UJ	0.46 J	11	0.24 UJ	0.12 U	56000	1.5 U	0.10 U	2.3	30 U	0.50 U	9500	0.71 J	0.90 U	1400 J	7.2	0.10 U	540000	0.20 UJ	6.6	23	0.080 U	
	DTW31D042014	Duplicate	North Bedrock	4/16/2014	31 U	0.42 J	0.53 J	8.7	0.13 J	0.12 U	55000	1.5 U	0.10 U	2.1	30 U	0.50 U	9200	0.63 J	0.90 U	1500 J	7.1	0.10 U	550000	0.12 J	6.5	20	0.080 U	
TMW32	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	
	TMW32042014	Normal	North Bedrock	4/16/2014	31 U	0.60 U	0.56 J	7.9	0.24 U	0.12 U	11000	1.5 U	0.10 U	1.5 U	30 U	0.50 U	1100	25 J	0.90 U	1100 J	3.1 J	0.10 U	730000	0.20 U	4.1 J	2.0 J	0.080 U	
TMW36	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	
	TMW36042014	Normal	North Bedrock	4/9/2014	110 U	0.60 U	1.0 U	8.4 U	0.24 U	0.12 U	8600	1.5 U	0.092 U	1.5 U	66 U	0.41 U	910	17 U	0.96 U	1100 J	2.0 U	0.037 J	680000	0.20 U	1.7 J	17 U	0.074 J	
TMW37	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	
	TMW37042014	Normal	North Bedrock	4/9/2014	240 U	0.60 U	0.62 J	13 U	0.24 U	0.12 U	5400	0.99 U	0.15 U	1.3 U	150 U	1.0 U	610	10 U	2.2 U	920 J	2.0 U	0.089 J	530000	0.20 U	13	36 U	0.080 U	
TMW38	TMW38102015	Normal	North Bedrock	11/6/2015	4400	0.47 J	1.3 J	44 J	0.20 J	1.0 U	17000	3.8 J	1.4	3.6	3600	2.1 J	2700	150	3.8	2800	2.0 U	0.15 J	870000	0.11 J	11	360	0.080 U	
	TMW38042015	Normal	North Bedrock	4/8/2015	1700	0.60 U	1.0 J	30	0.24 U	0.40 U	9600	1.6 J	0.66 J	2.1	1500	1.1 J	1600	72	1.5 J	1600 J	2.0 U	0.10 U	620000	0.071 U	9.3	160	0.080 U	
	TMW38102014	Normal	North Bedrock	10/28/2014	31 U	0.60 U	0.69 J	19	0.24 U	0.12 U	13000	1.5 U	0.091 J	1.5 U	71 J	0.50 U	1700	84	0.90 U	1400 J	2.0 U	0.10 U	780000	0.20 U	1.0 U	2.0 J	0.080 U	
	TMW38042014	Normal	North Bedrock	4/17/2014	31 U	0.60 U	0.53 J	24	0.24 U																			

TABLE 5-9
 Summary of Total Metals Analytical Detections (Page 7 of 7)
 Groundwater Periodic Monitoring Report July through December 2015 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																							
					200 ^a	6 ^b	10 ^b	1,000 ^a	4 ^b	5 ^b	NE	50 ^a	50 ^a	1,000 ^a	300 ^b	15 ^b	NE	50 ^b	200 ^a	NE	50 ^a	50 ^a	NE	2 ^b	86 ^c	5,000 ^b	2 ^c	
TMW40D	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	
	TMW40D042014	Normal	North Bedrock	4/17/2014	18 J	0.60 U	0.40 J	11	0.24 U	0.12 U	15000	1.5 U	0.10 U	1.5 U	30 U	0.50 U	2000	53	0.90 U	1400 J	3.6 J	0.10 U	730000	0.20 U	2.6 J	4.5 J	0.080 U	
TMW48	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	
	TMW48042014	Normal	North Bedrock	4/17/2014	31 U	0.60 UJ	0.69 J	13	0.24 U	0.12 U	80000	1.5 UJ	0.10 U	0.62 J	30 U	0.50 U	16000	13	0.46 J	1300 J	7.8	0.10 UJ	540000	0.20 UJ	6.1	12 J	0.080 U	
DTW48042014	Duplicate	North Bedrock	4/17/2014	31 U	0.57 J	0.66 J	13	0.24 U	0.12 U	78000	0.51 J	0.10 U	0.79 J	30 U	0.50 U	15000	12	0.53 J	1500 J	7.7	0.076 J	550000	0.12 UJ	5.8 J	11 J	0.080 U		
TMW49	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	
	TMW49042014	Normal	North Bedrock	4/16/2014	25 J	0.60 U	0.67 J	16	0.24 U	0.12 U	81000	0.69 J	0.10 U	1.2 J	30 U	0.50 U	14000	0.56 J	1.9 J	1400 J	20	0.41 J	580000	0.20 U	11	9.4 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 Region 6, Regional Screening Levels, November (Formerly Human Health Medium Specific Screening Levels) (EPA, 2014)

^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)

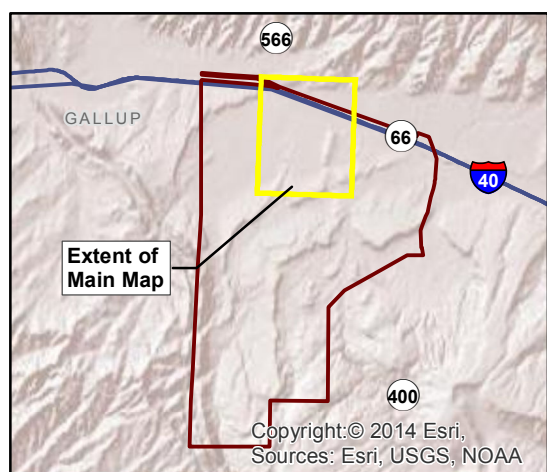
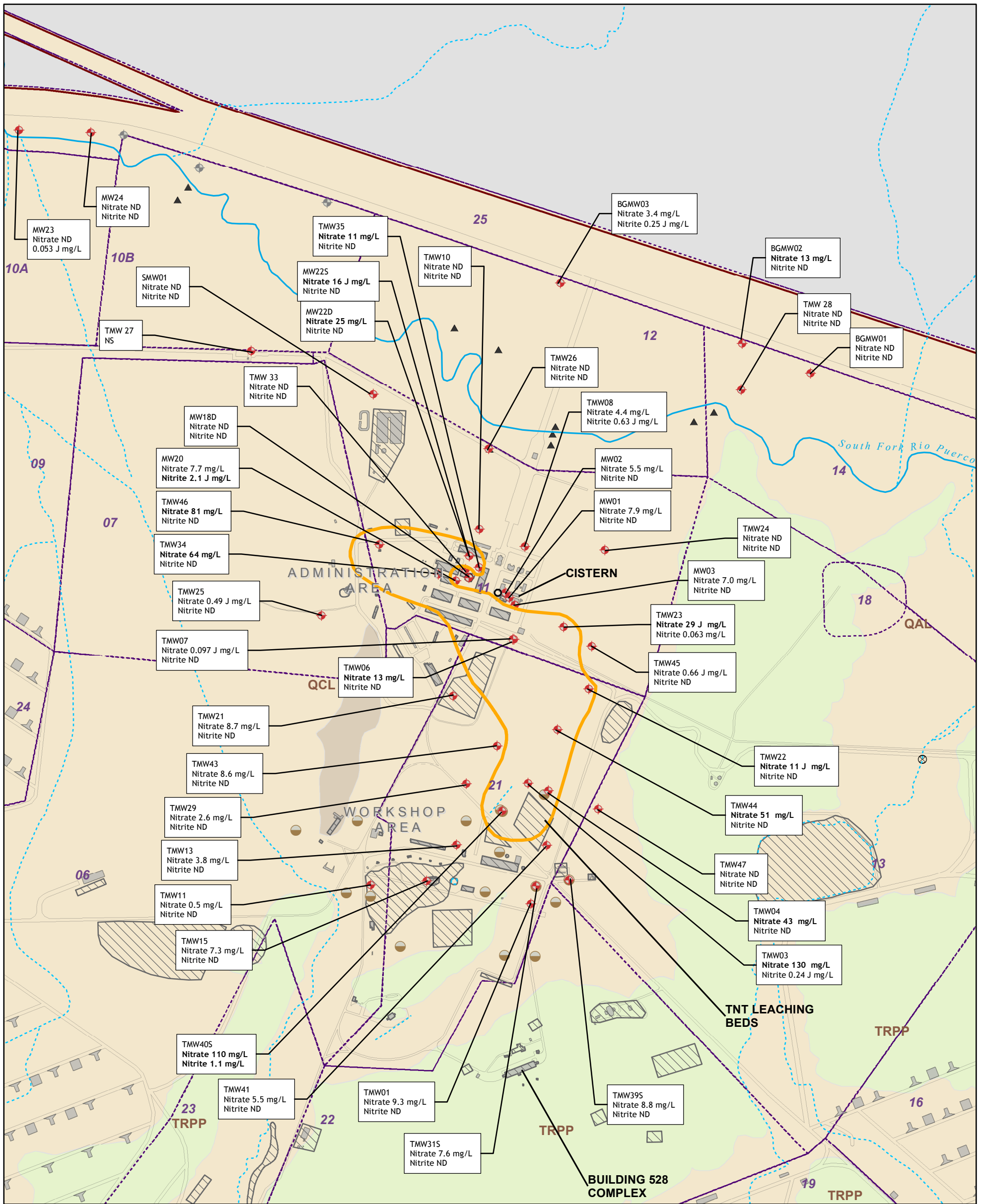
EPA = U.S. Environmental Protection Agency

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

NE = not established

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

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



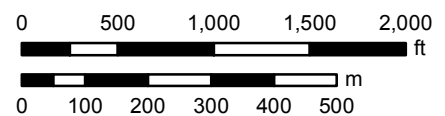
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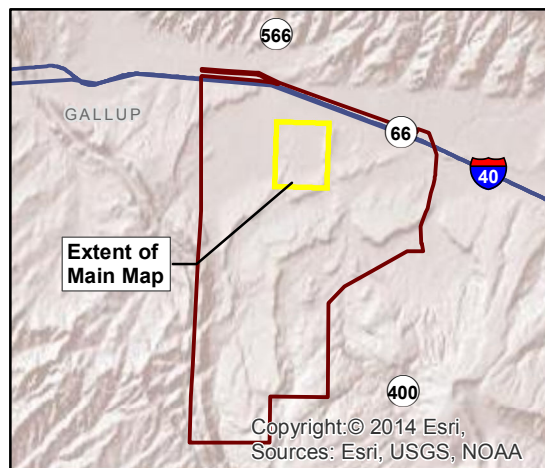
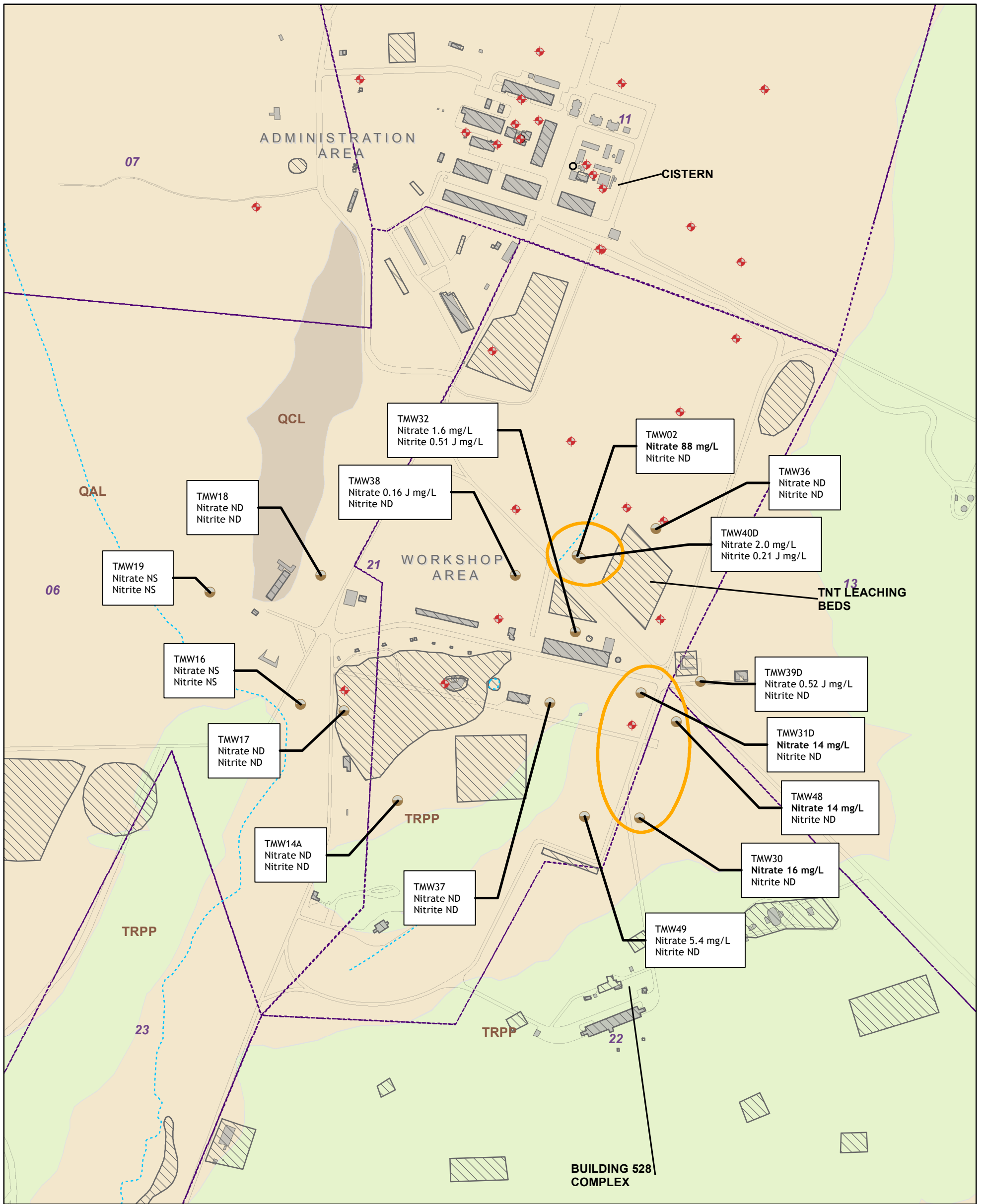
- Alluvial Well
- Bedrock Monitoring Well
- Piezometer
- Abandoned Well
- Dry Well
- Water Supply Well 69
- Bold data indicate analytical detection above the regulatory limit
- Building
- 10A Property Transfer Parcel
- Fort Wingate Installation Boundary
- Surface Geology**
- QAL QAL - Quaternary Alluvial Deposits
- QCL QCL - Quaternary Colluvial and Gravel Deposits
- TRPP TRPP - Petrified Forest Formation, Painted Desert Member
- Arroyo
- Stream
- AOC and SWMU

October 2015 Isoconcentration Contour
 Nitrate (10 mg/L)

FIGURE 5-1
Fall 2015 Northern Area Nitrate and Nitrite Concentrations in Alluvial Groundwater
 Groundwater Periodic Monitoring Report for July to December 2015
 Fort Wingate Depot Activity, McKinley County, New Mexico

Notes:
 AOC = area of concern
 J = analyte was positively identified; reported value is estimated
 mg/L = milligram(s) per liter
 ND = not detected
 NS = not sampled
 SWMU = solid waste management unit
 TNT = 2,4,6-trinitrotoluene





Legend

- Alluvial Well
- Bedrock Monitoring Well
- Dry Well
- Water Supply Well 69
- Nitrate 16 mg/L**
 Bold data indicate analytical detection above the regulatory limit
- Building
- 10A 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
- AOC and SWMU

Fall 2015 Isoconcentration Contours

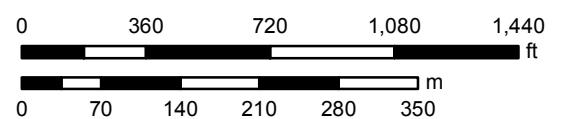
Nitrate (10 mg/L)

FIGURE 5-2

Fall 2015 Northern Area Nitrate and Nitrite Concentrations in Bedrock Groundwater

Groundwater Periodic Monitoring Report for July to December 2015
Fort Wingate Depot Activity, McKinley County, New Mexico

Notes:
AOC = area of concern
J = analyte was positively identified; reported value is estimated
mg/L = milligram(s) per liter
ND = not detected
NS = not sampled
SWMU = solid waste management unit
TNT = 2,4,6-trinitrotoluene



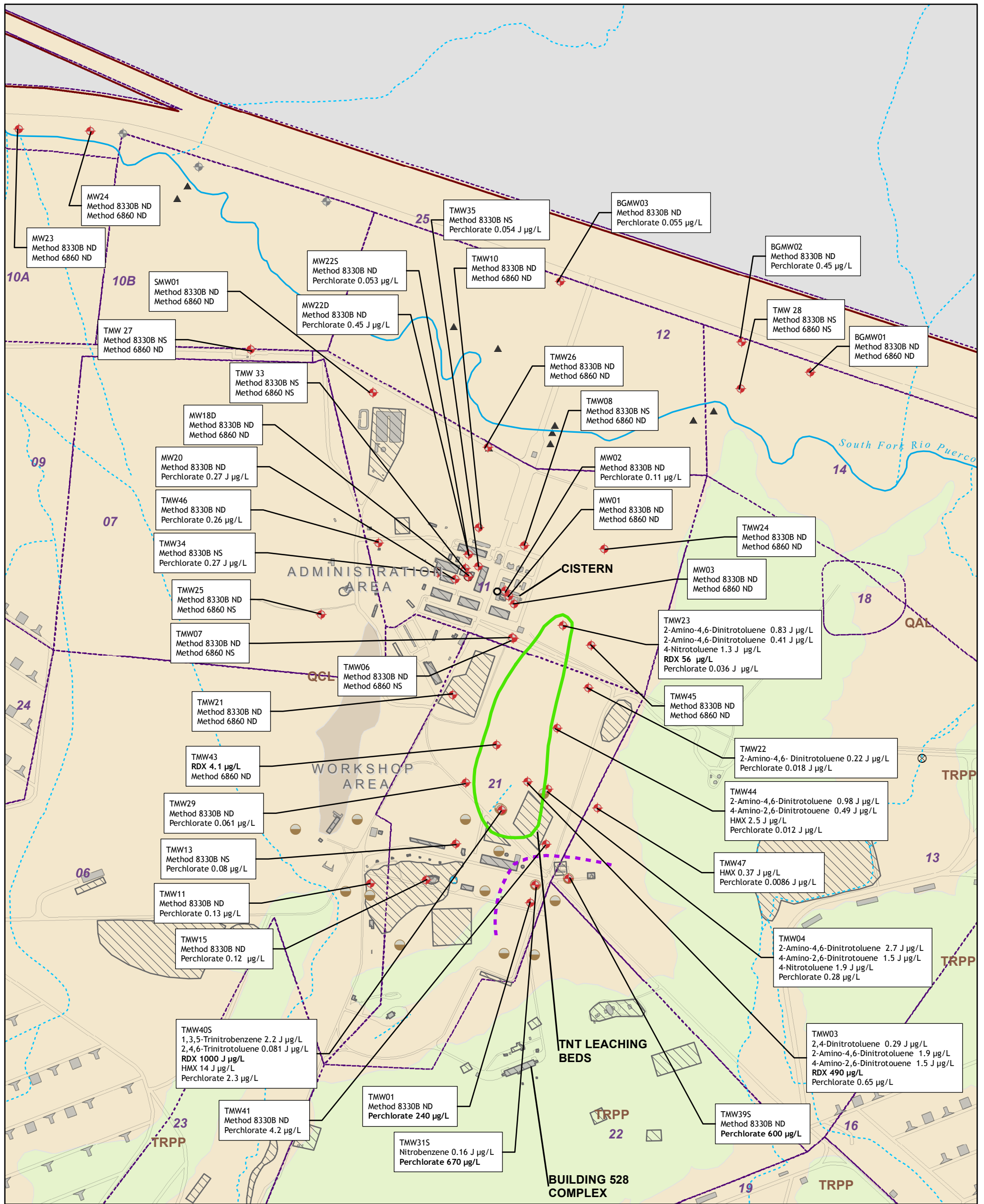
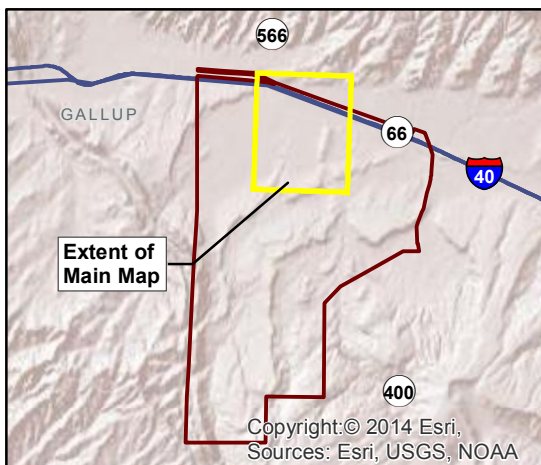
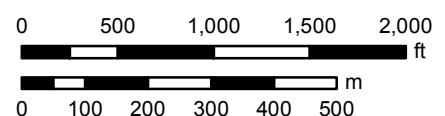


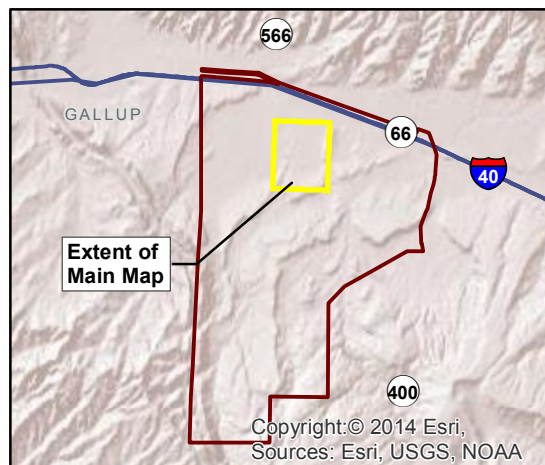
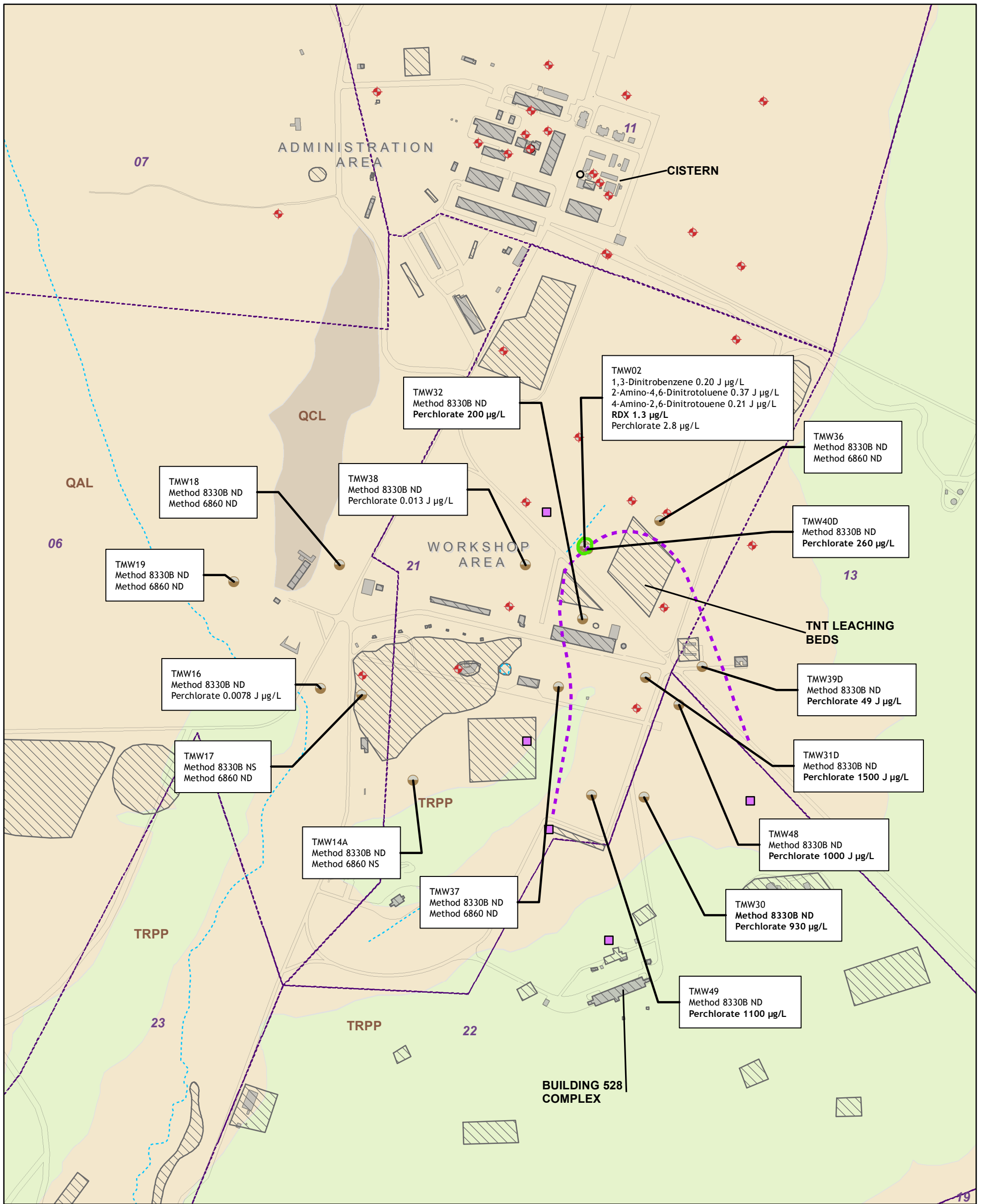
FIGURE 5-3
Fall 2015 Northern Area Explosives and Perchlorate Concentrations in Alluvial Groundwater
 Groundwater Periodic Monitoring Report for July to December 2015
 Fort Wingate Depot Activity, McKinley County, New Mexico

Notes:
 AOC = area of concern
 J = analyte was positively identified; reported value is estimated
 ND = not detected
 NS = not sampled
 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.



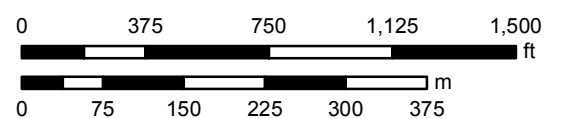
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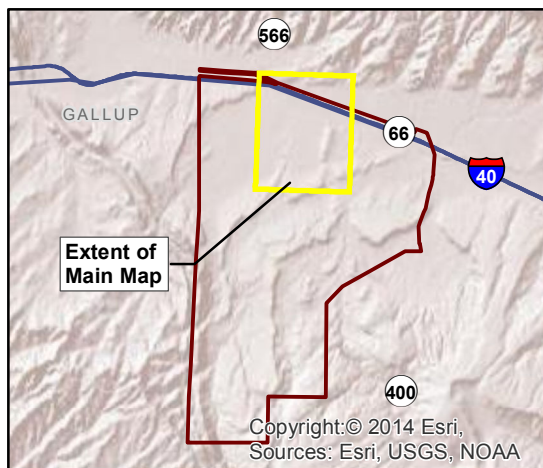
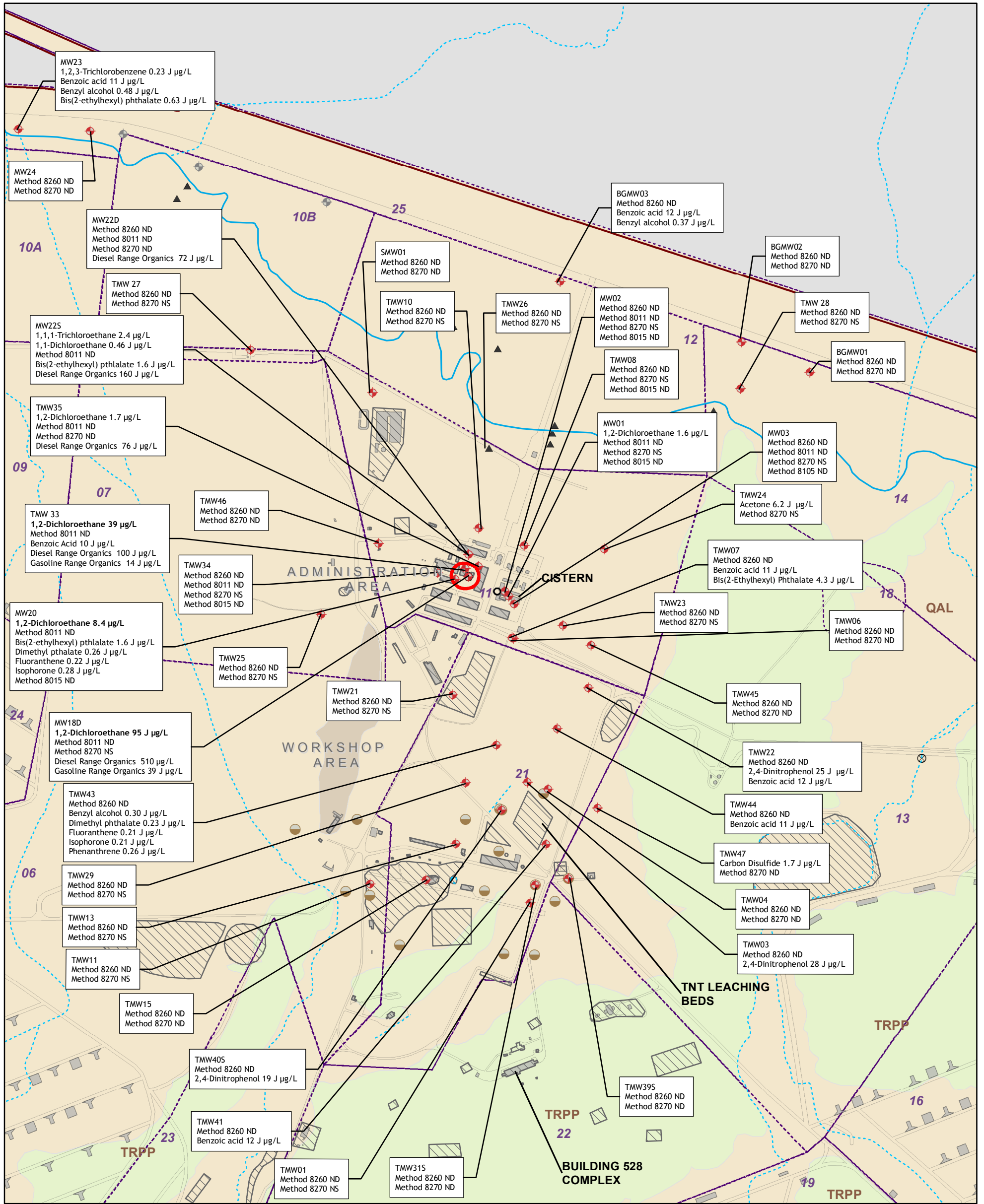
- Alluvial Well
- Bedrock Monitoring Well
- Dry Well
- Dry Bedrock Boreholes
- Water Supply Well 69
- Nitrate 16 mg/L**
- Building
- Property Transfer Parcel
- Fort Wingate Installation Boundary
- Surface Geology**
- QAL - Quaternary Alluvial Deposits
- QCL - Quaternary Colluvial and Gravel Deposits
- TRPP - Petrified Forest Formation, Painted Desert Member
- Arroyo
- AOC and SWMU
- October 2015 Isoconcentration Contour**
- Perchlorate (6 µg/L)
- RDX (0.70 µg/L)

**FIGURE 5-4
Fall 2015 Northern Area Explosives
and Perchlorate Concentrations in
Bedrock Groundwater**

Groundwater Periodic Monitoring
Report for July to December 2015
*Fort Wingate Depot Activity,
McKinley County, New Mexico*

Notes:
AOC = area of concern
J = analyte was positively identified;
reported value is estimated
ND = not detected
NS = not sampled
SWMU = solid waste management unit
TNT = 2,4,6-trinitrotoluene
µg/L = microgram(s) per liter





Legend

- Alluvial Well
- Bedrock Monitoring Well
- Piezometer
- Abandoned Well
- Dry Well
- Water Supply Well 69
- Arroyo
- Stream
- AOC and SWMU
- Spring 2015 Isoconcentration Contour
- 1,2-DCA (5 µg/L)
- Building
- Property Transfer Parcel
- Fort Wingate Installation Boundary
- Surface Geology**
- QAL QAL - Quaternary Alluvial Deposits
- QCL QCL - Quaternary Colluvial and Gravel Deposits
- TRPP TRPP - Petrified Forest Formation, Painted Desert Member

Abbreviations and Acronyms:

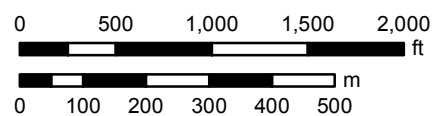
AOC = area of concern, ND = not detected, NS = not sampled, SVOC = semivolatile organic compound, SWMU = solid waste management unit, TNT = 2,4,6-trinitrotoluene, TPH = total petroleum hydrocarbons, VOC = volatile organic compound, µg/L = microgram(s) per liter

Notes:
 Laboratory data flag J = analyte was positively identified; reported value is estimated
 1) No VOCs or SVOCs were detected at Well FW31 (FW31 is located approximately 4,800 feet southeast of map view).
 2) Organochlorine pesticides (by Method SW801A) were not detected in any monitoring well.
 3) Only wells adjacent to the former fueling facility and newly installed wells were analyzed for total petroleum hydrocarbons. For list of wells, see Table 2-1.
 4) Duplicate sample for MW23 is anomalous and data are not used in this figure.

FIGURE 5-5

Fall 2015 Northern Area VOC, EDB SVOC and TPH Concentrations in Alluvial Groundwater

Groundwater Periodic Monitoring Report for July to December 2015
 Fort Wingate Depot Activity,
 McKinley County, New Mexico



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.

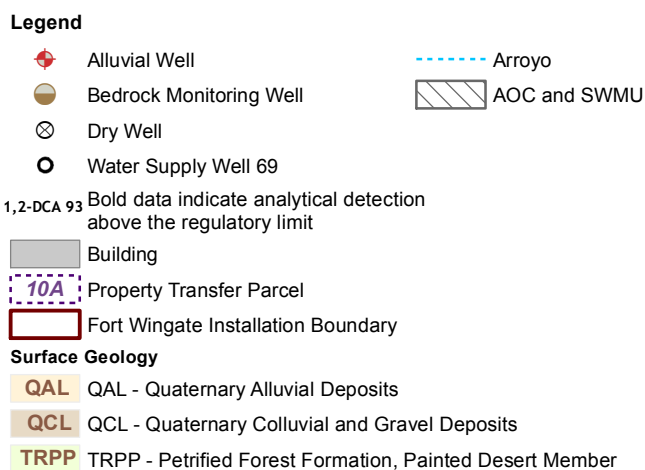
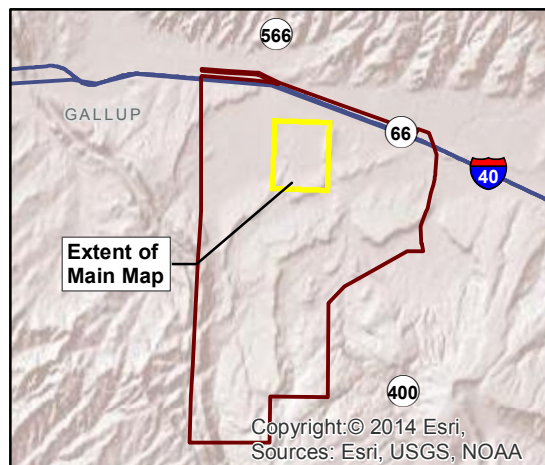
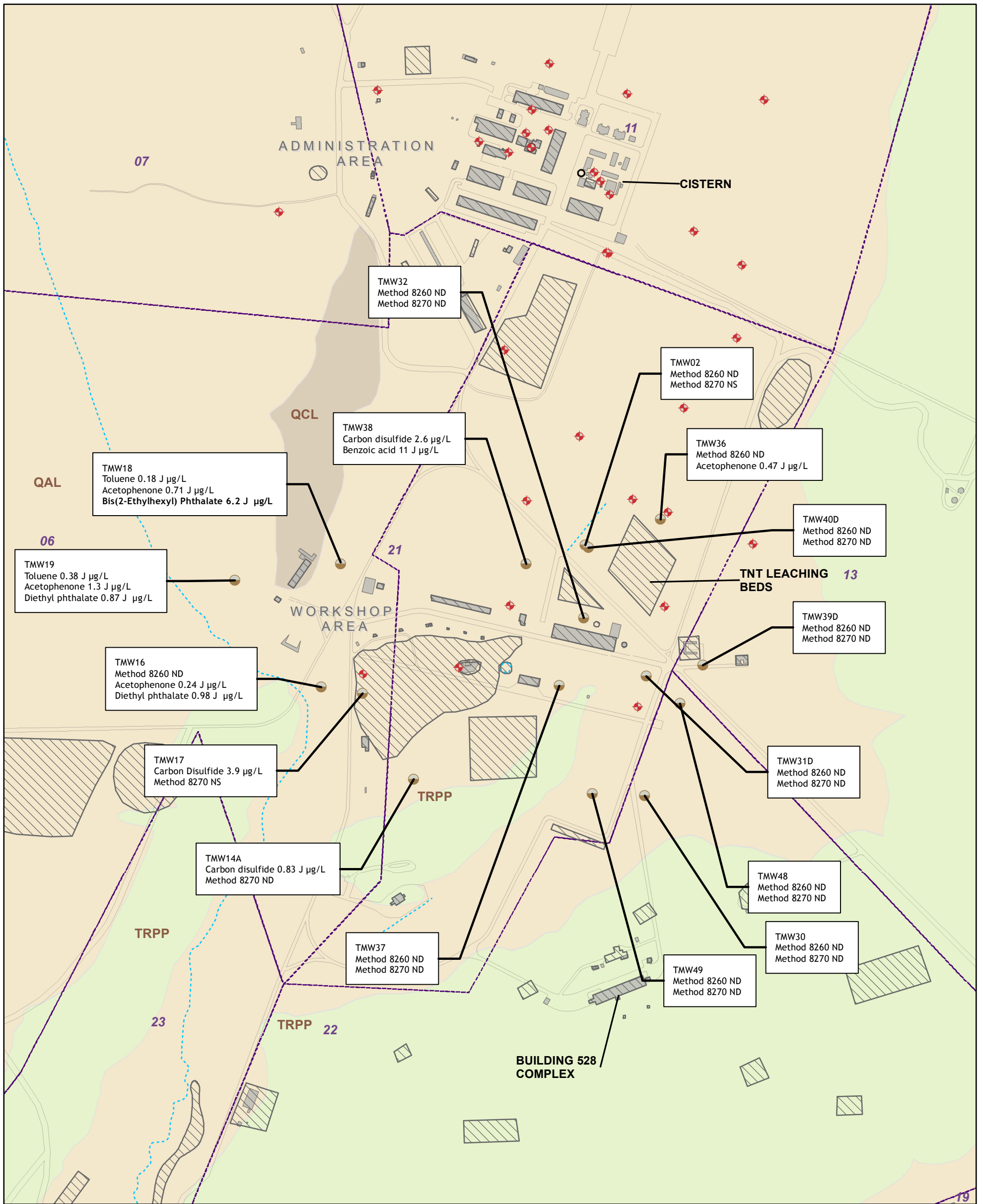
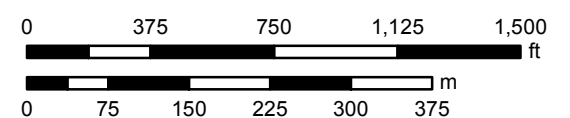


FIGURE 5-6
Fall 2015 Northern Area VOC, SVOC and TPH Concentrations in Bedrock Groundwater

Groundwater Periodic Monitoring Report for July to December 2015
Fort Wingate Depot Activity,
McKinley County, New Mexico



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.

Abbreviations and Acronyms:

AOC = area of concern, ND = not detected, NS = not sampled, SVOC = semivolatle organic compound, SWMU = solid waste management unit, TNT = 2,4,6-trinitrotoluene, TPH = total petroleum hydrocarbons, VOC = volatile organic compound, µg/L = microgram(s) per liter

Notes:

J = analyte was positively identified; reported value is estimated
Organochlorine pesticides (by Method SW8081A) were not detected in any monitoring well. For list of wells, see Table 2-1.

6.0 Summary and Recommendations

6.1 Summary

Two groundwater elevation surveys and one groundwater sampling event were performed during the monitoring period from July through December 2015. Groundwater elevation surveys were conducted on July 21 and 22, 2015, and October 26, 2015. The groundwater sampling event was conducted from October 26 to November 6, 2015.

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 of the Administration Area. The bedrock nitrate plume is also present at the TNT Leaching Beds (SWMU 1) but extends upgradient 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. Supplemental sample results at adjacent alluvial monitoring well TMW28 also indicated that no FWDA source was present in the area. 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 northern 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

6.0 Summary and Recommendations

- 1 groundwater unit appears to originate from the TNT Leaching Beds (SWMU 1) in the Workshop Area.
2 Groundwater concentrations of explosive compounds (primarily RDX) attenuate to levels below the screening
3 criteria within 2,500 feet downgradient of the TNT Leaching Beds.
- 4 One VOC was detected in groundwater samples at concentrations above regulatory cleanup standards. The
5 compound 1,2-dichloroethane was historically used as a gasoline additive and degreasing solvent. The
6 1,2-dichloroethane plume in the alluvial groundwater unit is limited to a group of wells near a former fueling
7 facility (SWMU 45, Building 6) in the Administration Area. Groundwater samples collected from four alluvial
8 monitoring wells had concentrations above the EPA MCL of 5 µg/L. No other VOCs were detected above cleanup
9 standards. The SVOC bis(2-ethylhexyl) phthalate was detected at concentrations above the regulatory cleanup
10 standard. The detection of bis(2-ethylhexyl) phthalate is likely attributable to sampling and laboratory
11 contamination.
- 12 Dissolved aluminum, arsenic, iron, lead, manganese, and selenium were detected above regulatory screening
13 levels in multiple groundwater samples. Because background groundwater concentrations have not been
14 accepted for FWDA, it cannot clearly be demonstrated whether the detected concentrations are a result of
15 natural conditions or anthropogenic sources of contamination. A background evaluation of FWDA groundwater
16 was issued to NMED in September 2014 and is currently being revised based on comments received from NMED.
- 17 Additional delineation and investigation for groundwater plumes at FWDA are planned. A Supplemental RCRA
18 Facility Investigation Work Plan was submitted to NMED in February 2015, and responses to NMED comments are
19 currently in progress. This document proposes locations for additional groundwater monitoring wells necessary to
20 further delineate the alluvial and bedrock groundwater contaminant plumes.

21 6.2 Recommendations

- 22 Based on a review of the monitoring activities and results, several recommendations were developed to address
23 data gaps and optimize the groundwater monitoring program at FWDA. The following recommendations are
24 made for field sampling procedures:
- 25 ○ Abandon alluvial aquifer monitoring well MW18S. This monitoring well has been dry or has had water levels
26 below the bottom of the well screen consistently since 2013, and intermittently before then.
 - 27 ○ Re-survey the elevations of all bedrock monitoring wells. Wells were surveyed during multiple events which is
28 believed to have introduced errors into the measured groundwater elevation data and associated
29 groundwater potentiometric surface maps. The mapped groundwater flow directions in the bedrock aquifer
30 conflict with the observed contaminant distributions.
 - 31 ○ Suspend groundwater sampling activities at monitoring wells containing less than 1 foot of saturated well
32 screen. The stagnant water present in the well sump cannot be effectively purged, and groundwater samples
33 collected from these wells are not believed to be representative of formation water. Three alluvial aquifer
34 monitoring wells, FW35, MW22S and TMW40S, currently included in the monitoring program meet this
35 criterion. It is recommended that sampling of TMW40S and FW35 be suspended due to the lack of saturated
36 well screen. Well TMW40S and FW35 will be replaced by one or more alluvial aquifer monitoring wells
37 proposed in the Supplemental RFI Work Plan. Alluvial monitoring well MW22S is collocated with MW22D in
38 the same borehole with a screen depth 16 feet above that of MW22D. It is recommended that sampling be
39 suspended from MW22S due to lack of saturated well screen. Monitoring well MW22D and the surrounding
40 monitoring wells TMW10, TMW33, and TMW35 provide sufficient monitoring coverage of the alluvial aquifer
41 in this area.
 - 42 ○ Remove the dedicated BESST pump from TMW38 and purge the well dry with non-dedicated pump. The
43 sustainable recharge and pumping rates at this well is very slow and requires approximately 3 hours to fill the
44 required sample bottles.

- 1 ○ No additional sampling for nitrate/nitrite is recommended at TWM28 because the constituents were not
2 detected in the sample from the Fall 2015 monitoring event. These results along with the groundwater
3 gradient data confirm that nitrate detections at BGMW02 are not associated with the FWDA nitrate plume.
- 4 ○ No further sampling for EDB in Administration area monitoring wells is recommended since the compound
5 was not detected in any samples collected during the Fall 2015 monitoring event. There is no evidence to
6 include EDB as a COPC for groundwater at FWDA.
- 7 The following recommendations are made for the analytical program, data analysis, and investigation:
- 8 ○ Obtain regulatory consensus on the results of the FWDA background study. Implementation of background
9 study findings is necessary to determine whether dissolved metals concentrations detected above regulatory
10 screening levels are naturally occurring or the result of waste management activities at FWDA. A background
11 evaluation of FWDA groundwater was issued to NMED in September 2014. Revisions are currently in progress.
- 12 ○ Perform additional investigation of the alluvial aquifer nitrate plume to define the western boundary of the
13 plume. The nitrate plume boundaries will be investigated as part of the upcoming Supplemental RFI.
- 14 ○ Perform additional investigation of the bedrock aquifer perchlorate plume to define the northern boundary of
15 the plume. The perchlorate plume boundaries will be investigated as part of the upcoming Supplemental RFI.
- 16 ○ Optimize groundwater monitoring and analysis using detailed data analysis of existing groundwater analytical
17 data using a proven tool such as Monitoring and Remediation Optimization System (MAROS). Groundwater
18 monitoring has been performed systematically at FWDA since 2008, and sufficient data are available to
19 characterize groundwater quality and optimize monitoring to meet specific data quality objectives. Large
20 analytical data sets are being generated by groundwater monitoring, but some of these data are not currently
21 pertinent to any FWDA groundwater contaminant plume.

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