DOE Oversight Bureau, New Mexico Environment Department

Groundwater Monitoring at Sandia National Laboratories/New Mexico Solid Waste Management Units 149 and 154

Conducted by the New Mexico Environment Department DOE Oversight Bureau for FFY 2014 Q-2

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Final Report

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The purpose of this communication is to transmit groundwater data collected by the New Mexico Environment Department DOE Oversight Bureau from Solid Waste Management Units 149 and 154 groundwater monitoring wells CTF-MW2 and CTF-MW3 during second quarter FFY 2014.

Acknowledgment:
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Introduction

The New Mexico Environment Department (NMED) DOE Oversight Bureau (DOE-OB or Bureau) has compiled and assessed groundwater data collected during March 2014. The Bureau collected groundwater samples from Coyote Test Field (CTF) monitoring well CTF-MW3, located near Solid Waste Management Unit (SWMU) 149 (Figure 1), and monitoring well CTF-MW2, located near SWMU 154 (Figure 2), at Sandia National Laboratories/New Mexico (SNL/NM). Split samples were collected using standard SNL/NM sampling procedures and equipment. The samples were submitted to an independent analytical laboratory for analysis of total and dissolved target analyte list (TAL) metals plus uranium, anions, nitrate-nitrite, perchlorate, high explosives, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), gross alpha, gross beta, gamma-emitting isotopes, and isotopic uranium. Elevated levels above the U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) of arsenic were measured at monitoring well CTF-MW2.

Data Assessment

All groundwater samples were collected and analyzed in accordance with U.S. EPA protocols. Data results are compared to applicable MCLs established by the U.S. EPA National Primary Drinking Water Regulations (40 CFR 141), National Primary Drinking Water Standards, EPA, July 2002.

Results

Analytical results for total and dissolved TAL metals plus uranium are presented in Table 1 and Table 2, respectively. All metal concentrations were below established MCLs, except for arsenic. Arsenic exceeds the MCL of 0.010 mg/L in both unfiltered and filtered monitoring well CTF-MW2 groundwater samples at concentrations of 0.043 mg/L, and 0.04 mg/L, respectively.

Analytical results for major anions (as bromide, chloride, fluoride, and sulfate), nitrate-nitrite and perchlorate are listed in Table 3. No parameters were detected above established MCLs in either monitoring well. Currently, no MCL is established for perchlorate, but in each well, perchlorate was not detected above the method detection limit (MDL).

Analytical results for high explosive (HE) compounds are presented in Table 4. HE was only analyzed in samples taken from monitoring well CTF-MW2. The HE compound hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) was detected above the MDL in monitoring well CTF-MW2 at a concentration of 0.39 µg/L. No MCL exists for RDX.

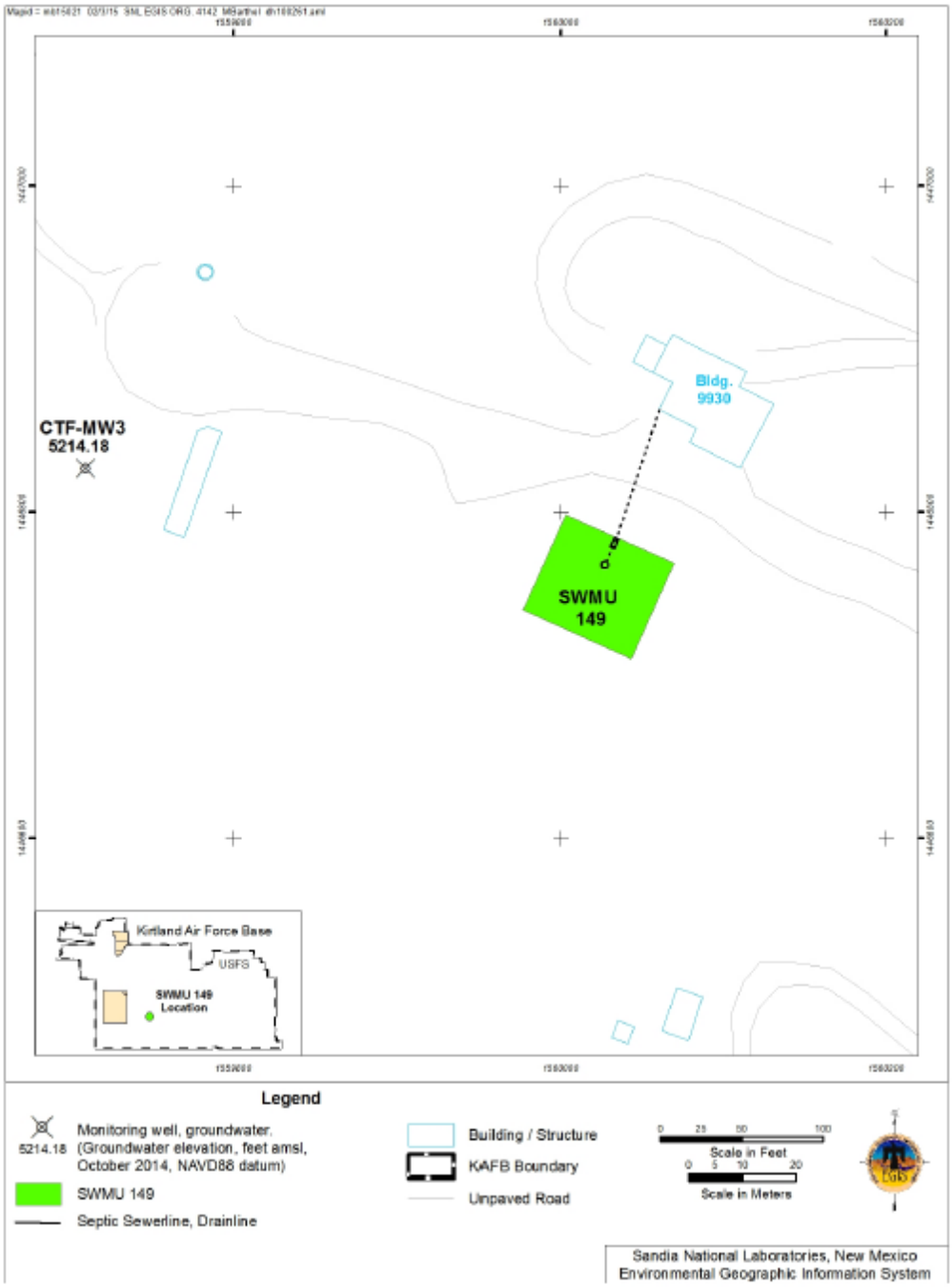

Figure 1. Location of Monitoring Well CTF-MW3 near SWMU 149
(Sandia National Laboratories, New Mexico Environmental Geographic Information System, Annual Groundwater Monitoring Report, Calendar Year 2014)

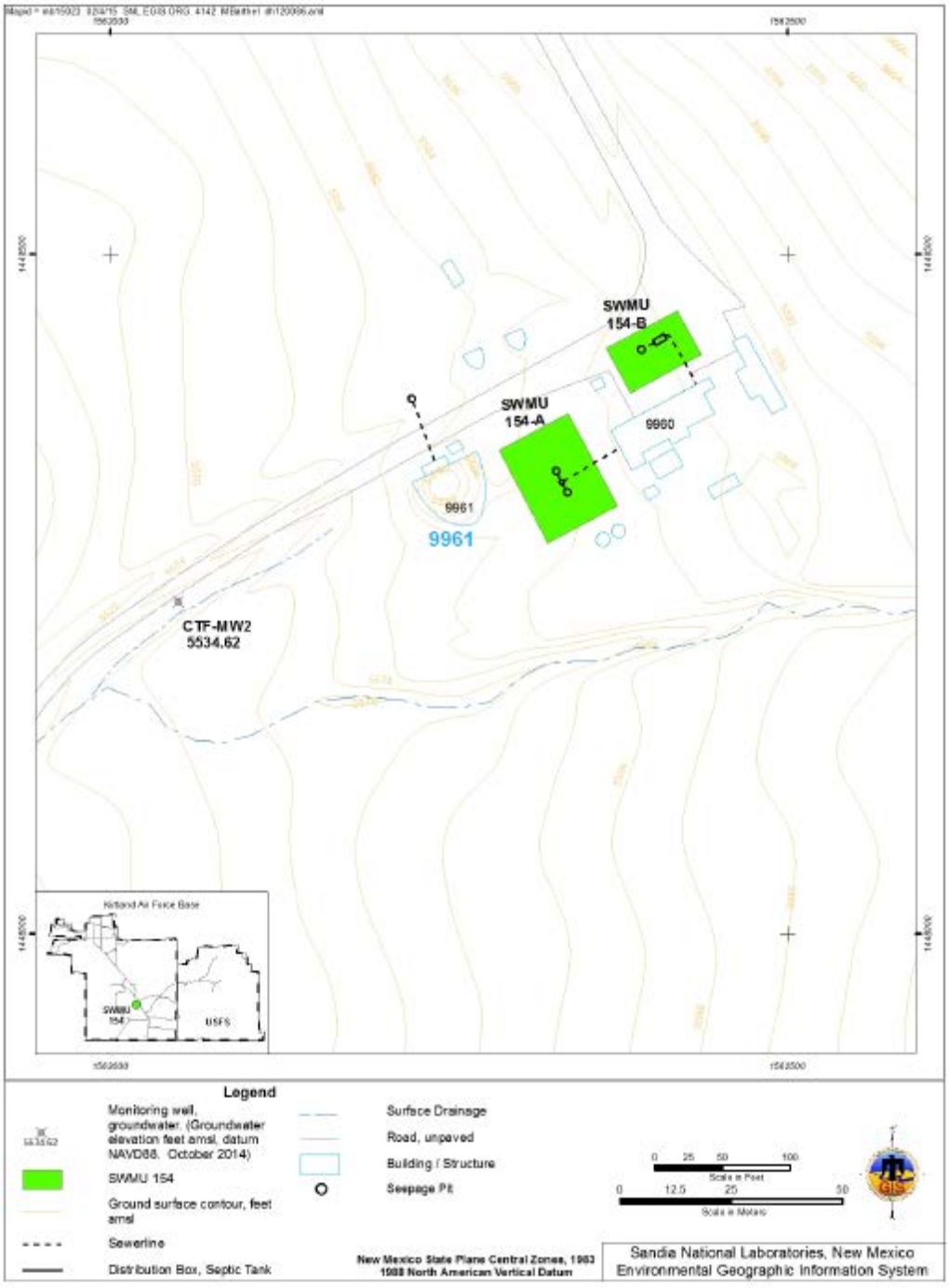

Figure 2. Location of Monitoring Well CTF-MW2 near SWMU 154 (Sandia National Laboratories, New Mexico Environmental Geographic Information System, Annual Groundwater Monitoring Report, Calendar Year 2014)

No volatile organic compounds (VOCs) were detected above their associated MCL. Table 5 summarizes those VOCs detected at concentrations above the MDLs. Table 6 list the laboratory MDLs for the remaining VOCs.

Analytical results for semi-volatile organic compounds (SVOCs) are listed in Table 7. No SVOCs were detected above their associated MDLs.

The results for gross alpha and gross beta activity, gamma-emitting radionuclides activity, and isotopic uranium analyses are presented in Table 8. Uncorrected gross alpha at CTF-MW2 was 66 ± 7.5 pCi/L. The EPA MCL for gross alpha activity of 15 pCi/L is based on a corrected gross alpha value, which excludes both total uranium and radon from the initial gross alpha count. When the total uranium activity was subtracted from the gross alpha value, the gross activity at CTF-MW2 was below the MCL. All other gamma emitters were below established MCLs.

Conclusion

Groundwater samples were collected from CTF monitoring well CTF-MW3, located near SWMU-149 and also monitoring well CTF-MW2, located near SWMU-154 at SNL/NM. Elevated levels of arsenic were measured at SWMU-154 monitoring well CTF-MW2. Arsenic exceeded the MCL of 0.010 mg/L in both unfiltered and filtered monitoring well CTF-MW2 groundwater samples at concentrations of 0.043 mg/L, and 0.04 mg/L, respectively. These concentrations compare well to those collected by SNL/NM for the same event. CTF-MW2 was installed in August 2001 and arsenic levels have consistently been detected above the EPA MCL. Arsenic levels are most likely attributed to naturally occurring background and not caused from activities at SWMU 154. CTF-MW2 is screened in a highly fractured interval of Precambrian granite and gneiss (Sandia 2014).

The HE compound hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) was detected above the MDL in monitoring well CTF-MW2 at a concentration of 0.39 µg/L. RDX was also detected in the samples collected by SNL/NM. No MCL currently exists for RDX.

References

Sandia National Laboratories/New Mexico, Annual Groundwater Monitoring Report, Calendar Year 2014

U.S. EPA National Primary Drinking Water Regulations (40 CFR 141), National Primary Drinking Water Standards, EPA, July 2002.

Table-1 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: Total TAL Metals plus Uranium

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CTF-MW2 18-Mar-14	Aluminum	0.15	NE	0.1	0.018		SW-846:6010B_3005A
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	**0.043**	0.01	0.002	0.00025		SW-846:6020B
	Barium	0.073	2	0.002	0.00022	B	SW-846:6010B_3005A
	Beryllium	0.0029	0.004	0.001	0.00018		SW-846:6010B_3005A
	Cadmium	0.00015	0.005	0.0003	0.00012	J	SW-846:6020B
	Calcium	370	NE	0.5	0.014	B	SW-846:6010B_3005A
	Chromium	0.00062	0.1	0.005	0.00062	U	SW-846:6010B_3005A
	Cobalt	0.0076	NE	0.002	0.00057		SW-846:6010B_3005A
	Copper	0.0011	NE	0.002	0.0011	U	SW-846:6010B_3005A
	Iron	1.7	NE	0.06	0.0057	B	SW-846:6010B_3005A
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020B
	Magnesium	73	NE	0.5	0.015	B	SW-846:6010B_3005A
	Manganese	2.7	NE	0.002	0.00017	B	SW-846:6010B_3005A
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.011	NE	0.005	0.0012	B	SW-846:6010B_3005A
	Potassium	68	NE	0.5	0.12		SW-846:6010B_3005A
	Selenium	0.00054	0.05	0.001	0.00054	U	SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	460	NE	2.5	0.062	B	SW-846:6010B_3005A
	Thallium	0.0014	0.002	0.0002	0.000042		SW-846:6020B
	Uranium	0.027	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.00062	NE	0.005	0.00062	U	SW-846:6010B_3005A
	Zinc	0.096	NE	0.006	0.0011	B	SW-846:6010B_3005A

B = Compound was found in the blank and sample.

J = the reported value was obtained from a reading that was less than the Reporting Limit but greater than or equal to the Method Detection Limit (MDL).

NE = Not Established

U = the analyte was analyzed for but not detected

Table-1 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: Total TAL Metals plus Uranium

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CTF-MW3 14-Mar-14	Aluminum	0.03	NE	0.1	0.018	J	SW-846:6010B_3005A
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.00033	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.032	2	0.002	0.00022	B	SW-846:6010B_3005A
	Beryllium	0.00026	0.004	0.001	0.00018	J	SW-846:6010B_3005A
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	200	NE	0.5	0.014	B	SW-846:6010B_3005A
	Chromium	0.0016	0.1	0.005	0.00062	JB	SW-846:6010B_3005A
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B_3005A
	Copper	0.0011	NE	0.002	0.0011	U	SW-846:6010B_3005A
	Iron	0.024	NE	0.06	0.0057	JB	SW-846:6010B_3005A
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020B
	Magnesium	47	NE	0.5	0.015		SW-846:6010B_3005A
	Manganese	0.0035	NE	0.002	0.00017	B	SW-846:6010B_3005A
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0012	NE	0.005	0.0012	U	SW-846:6010B_3005A
	Potassium	14	NE	0.5	0.12		SW-846:6010B_3005A
	Selenium	0.026	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	150	NE	0.5	0.012	B	SW-846:6010B_3005A
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0089	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.00062	NE	0.005	0.00062	U	SW-846:6010B_3005A
	Zinc	0.0043	NE	0.006	0.0011	JB	SW-846:6010B_3005A

B = Compound was found in the blank and sample.

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NE = Not Established

U = the analyte was analyzed for but not detected

Table-2 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: Dissolved TAL Metals plus Uranium

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CTF-MW2 18-Mar-14	Aluminum	0.14	NE	0.1	0.018		SW-846:6010B_3005A
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	**0.04**	0.01	0.002	0.00025		SW-846:6020B
	Barium	0.072	2	0.002	0.00022	B	SW-846:6010B_3005A
	Beryllium	0.0027	0.004	0.001	0.00018		SW-846:6010B_3005A
	Cadmium	0.00017	0.005	0.0003	0.00012	J	SW-846:6020B
	Calcium	370	NE	0.5	0.014	B	SW-846:6010B_3005A
	Chromium	0.00088	0.1	0.005	0.00062	J	SW-846:6010B_3005A
	Cobalt	0.0068	NE	0.002	0.00057		SW-846:6010B_3005A
	Copper	0.0011	NE	0.002	0.0011	U	SW-846:6010B_3005A
	Iron	1.7	NE	0.06	0.0057	B	SW-846:6010B_3005A
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020B
	Magnesium	72	NE	0.5	0.015	B	SW-846:6010B_3005A
	Manganese	2.6	NE	0.002	0.00017	B	SW-846:6010B_3005A
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.012	NE	0.005	0.0012	B	SW-846:6010B_3005A
	Potassium	67	NE	0.5	0.12		SW-846:6010B_3005A
	Selenium	0.00054	0.05	0.001	0.00054	U	SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	460	NE	2.5	0.062	B	SW-846:6010B_3005A
	Thallium	0.0014	0.002	0.0002	0.000042		SW-846:6020B
	Uranium-238	0.027	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.00062	NE	0.005	0.00062	U	SW-846:6010B_3005A
	Zinc	0.19	NE	0.006	0.0011	B	SW-846:6010B_3005A

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NE = Not Established

U = the analyte was analyzed for but not detected

Table-2 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: Dissolved TAL Metals plus Uranium

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CTF-MW3 14-Mar-14	Aluminum	0.018	NE	0.1	0.018	U	SW-846:6010B_3005A
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.00043	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.032	2	0.002	0.00022	B	SW-846:6010B_3005A
	Beryllium	0.00026	0.004	0.001	0.00018	J	SW-846:6010B_3005A
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	200	NE	0.5	0.014	B	SW-846:6010B_3005A
	Chromium	0.00062	0.1	0.005	0.00062	U	SW-846:6010B_3005A
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B_3005A
	Copper	0.0011	NE	0.002	0.0011	U	SW-846:6010B_3005A
	Iron	0.0057	NE	0.06	0.0057	U	SW-846:6010B_3005A
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020B
	Magnesium	47	NE	0.5	0.015		SW-846:6010B_3005A
	Manganese	0.00064	NE	0.002	0.00017	JB	SW-846:6010B_3005A
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0012	NE	0.005	0.0012	U	SW-846:6010B_3005A
	Potassium	15	NE	0.5	0.12		SW-846:6010B_3005A
	Selenium	0.028	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	150	NE	0.5	0.012	B	SW-846:6010B_3005A
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium-238	0.0098	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.00062	NE	0.005	0.00062	U	SW-846:6010B_3005A
	Zinc	0.0037	NE	0.006	0.0011	JB	SW-846:6010B_3005A

B = Compound was found in the blank and sample.

J = the reported value was obtained from a reading that was less than the Reporting Limit but greater than or equal to the Method Detection Limit (MDL).

NE = Not Established

U = the analyte was analyzed for but not detected

Table-3 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: Anions, Nitrate ande Perchlorate

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CTF-MW2 18-Mar-14	Bromide	1.2	NE	1	0.3		EPA:300
	Chloride	480	NE	10	3.1		EPA:300
	Fluoride	1.8	4	0.5	0.15		EPA:300
	Sulfate	140	NE	5	1.5		EPA:300
	Nitrate-Nitrite as Nitrogen	0.019	10	0.01	0.003		EPA:353.2
	PERCHLORATE	0.0012	NE	0.004	0.0012	U	EPA314.0
CTF-MW3 14-Mar-14	Bromide	1.1	NE	0.2	0.06		EPA:300
	Chloride	130	NE	4	1.2		EPA:300
	Fluoride	2.7	4	0.1	0.03		EPA:300
	Sulfate	470	NE	20	6		EPA:300
	Nitrate-Nitrite as Nitrogen	5.5	10	0.05	0.015		EPA:353.2
	PERCHLORATE	0.0012	NE	0.004	0.0012	U	EPA314.0

NE = Not Established

U = Analyte not detected at or above the reporting limit or MDL

Table-4 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: High Explosives

Monitoring Well/ Sample Date	Analyte	Result (ug/L)	Quantitation Limit (ug/L)	MDL (ug/L)	Laboratory Qualifier	Analytical Method
CTF-MW2 18-Mar-14	1,3,5-trinitrobenzene	0.021	0.12	0.021	U	SW-846:8321A
	1,3-Dinitrobenzene	0.017	0.12	0.017	U	SW-846:8321A
	2,4,6-Trinitrotoluene	0.027	0.12	0.027	U	SW-846:8321A
	2,4-Dinitrotoluene	0.023	0.12	0.023	U	SW-846:8321A
	2,6-Dinitrotoluene	0.027	0.12	0.027	U	SW-846:8321A
	2-Amino-4,6-dinitrotoluene	0.026	0.12	0.026	U	SW-846:8321A
	4-Amino-2,6-dinitrotoluene	0.023	0.12	0.023	U	SW-846:8321A
	HMX	0.023	0.12	0.023	U	SW-846:8321A
	m-Nitrotoluene	0.03	0.12	0.03	U	SW-846:8321A
	Nitrobenzene	0.04	0.12	0.04	U	SW-846:8321A
	Nitroglycerin	0.055	0.17	0.055	U	SW-846:8321A
	o-Nitrotoluene	0.027	0.12	0.027	U	SW-846:8321A
	PETN	0.022	0.12	0.022	U	SW-846:8321A
	p-Nitrotoluene	0.032	0.12	0.032	U	SW-846:8321A
	RDX	0.39	0.12	0.026		SW-846:8321A
	Tetryl	0.026	0.12	0.026	U	SW-846:8321A

U = the analyte was analyzed for but not detected

Table-5 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: Detected Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	EPA MCL (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CTF-MW3 14-Mar-14	Bromodichloromethane	0.49	NE	1	0.3	J	SW-846:8260B_25
	Chlorodibromomethane	0.38	NE	1	0.3	J	SW-846:8260B_25
	Chloroform	0.66	NE	1	0.3	J	SW-846:8260B_25

J = The reported value was obtained from the reading that was less than the Reporting Limit but greater than or equal to the Method Detection Limit (MDL).

NE = Not Established

Table-6 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: Method Detection Limits for Volatile Organic Compounds by Method SW-846:8260B_25

Analyte	MDL (µg/L)
Acetone	3
Benzene	0.3
Bromobenzene	0.3
Bromochloromethane	0.3
Bromodichloromethane	0.3
Bromoform	0.3
Bromomethane	0.3
Butanone[2-]	3
Butylbenzene[n-]	0.3
Butylbenzene[sec-]	0.3
Butylbenzene[tert-]	0.3
Carbon Disulfide	0.3
Carbon Tetrachloride	0.3
Chlorobenzene	0.3
Chlorodibromomethane	0.3
Chloroethane	0.3
Chloroform	0.3
Chlorohexane[1-]	0.3
Chloromethane	0.3
Chlorotoluene[2-]	0.3
Chlorotoluene[4-]	0.3
Dibromo-3-Chloropropane[1,2-]	0.6
Dibromoethane[1,2-]	0.3
Dibromomethane	0.3
Dichlorobenzene[1,2-]	0.3
Dichlorobenzene[1,3-]	0.3
Dichlorobenzene[1,4-]	0.3
Dichlorodifluoromethane	0.3
Dichloroethane[1,1-]	0.3
Dichloroethane[1,2-]	0.3
Dichloroethene[1,1-]	0.3
Dichloroethene[cis-1,2-]	0.3
Dichloroethene[trans-1,2-]	0.3
Dichloropropane[1,2-]	0.3
Dichloropropane[1,3-]	0.3
Dichloropropane[2,2-]	0.3
Dichloropropene[1,1-]	0.3
Dichloropropene[cis-1,3-]	0.3
Dichloropropene[trans-1,3-]	0.3
Ethylbenzene	0.3
Hexachlorobutadiene	0.3

Analyte	MDL (µg/L)
Hexanone[2-]	3
Iodomethane	0.3
Isopropylbenzene	0.3
Isopropyltoluene[4-]	0.3
Methyl tert-Butyl Ether	0.3
Methyl-2-pentanone[4-]	3
Methylene Chloride	0.43
Naphthalene	0.3
Propylbenzene[1-]	0.3
Styrene	0.3
Tetrachloroethane[1,1,1,2-]	0.3
Tetrachloroethane[1,1,2,2-]	0.3
Tetrachloroethene	0.2
Toluene	0.3
Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.3
Trichlorobenzene[1,2,3-]	0.3
Trichlorobenzene[1,2,4-]	0.3
Trichloroethane[1,1,1-]	0.3
Trichloroethane[1,1,2-]	0.3
Trichloroethene	0.3
Trichlorofluoromethane	0.3
Trichloropropane[1,2,3-]	0.3
Trimethylbenzene[1,2,4-]	0.3
Trimethylbenzene[1,3,5-]	0.3
Vinyl acetate	0.68
Vinyl Chloride	0.3
Xylene[1,2-]	0.3
Xylene[1,3-]+Xylene[1,4-]	0.3

Table-7 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: Semi-Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CTF-MW2 18-Mar-14	Acenaphthene	3.4	11	3.4	U	SW-846:8270C
	Acenaphthylene	3.4	11	3.4	U	SW-846:8270C
	Aniline	4.7	11	4.7	U	SW-846:8270C
	Anthracene	3.4	11	3.4	U	SW-846:8270C
	Azobenzene	3.4	11	3.4	U	SW-846:8270C
	Benzo(a)anthracene	3.4	11	3.4	U	SW-846:8270C
	Benzo(a)pyrene	3.4	11	3.4	U	SW-846:8270C
	Benzo(b)fluoranthene	3.4	11	3.4	U	SW-846:8270C
	Benzo(g,h,i)perylene	3.4	11	3.4	U	SW-846:8270C
	Benzo(k)fluoranthene	3.4	11	3.4	U	SW-846:8270C
	Benzoic Acid	11	57	11	U	SW-846:8270C
	Benzyl Alcohol	3.4	11	3.4	U	SW-846:8270C
	Bis(2-chloroethoxy)methane	3.4	11	3.4	U	SW-846:8270C
	Bis(2-chloroethyl)ether	3.4	11	3.4	U	SW-846:8270C
	Bis(2-ethylhexyl)phthalate	3.4	11	3.4	U	SW-846:8270C
	Bromophenyl-phenylether[4-]	3.4	11	3.4	U	SW-846:8270C
	Butylbenzylphthalate	3.4	11	3.4	U	SW-846:8270C
	Carbazole	3.4	11	3.4	U	SW-846:8270C
	Chloro-3-methylphenol[4-]	3.4	11	3.4	U	SW-846:8270C
	Chloroaniline[4-]	3.9	11	3.9	U	SW-846:8270C
	Chloronaphthalene[2-]	3.4	11	3.4	U	SW-846:8270C
	Chlorophenol[2-]	3.4	11	3.4	U	SW-846:8270C
	Chlorophenyl-phenyl[4-] Ether	3.4	11	3.4	U	SW-846:8270C
	Chrysene	3.4	11	3.4	U	SW-846:8270C
	Dibenz(a,h)anthracene	3.4	11	3.4	U	SW-846:8270C
	Dibenzofuran	3.4	11	3.4	U	SW-846:8270C
	Dichlorobenzene[1,2-]	3.4	11	3.4	U	SW-846:8270C
	Dichlorobenzene[1,3-]	3.4	11	3.4	U	SW-846:8270C
	Dichlorobenzene[1,4-]	3.4	11	3.4	U	SW-846:8270C
	Dichlorobenzidine[3,3'-]	3.4	11	3.4	U	SW-846:8270C
	Dichlorophenol[2,4-]	3.4	11	3.4	U	SW-846:8270C
	Diethylphthalate	3.4	11	3.4	U	SW-846:8270C
	Dimethyl Phthalate	3.4	11	3.4	U	SW-846:8270C
	Dimethylphenol[2,4-]	3.4	11	3.4	U	SW-846:8270C
	Di-n-butylphthalate	3.4	11	3.4	U	SW-846:8270C
	Dinitro-2-methylphenol[4,6-]	3.4	23	3.4	U	SW-846:8270C
	Dinitrophenol[2,4-]	6.1	23	6.1	U	SW-846:8270C
	Dinitrotoluene[2,4-]	3.4	11	3.4	U	SW-846:8270C
	Dinitrotoluene[2,6-]	3.4	11	3.4	U	SW-846:8270C
	Di-n-octylphthalate	3.4	11	3.4	U	SW-846:8270C

U = Analyte not detected at or above the reporting limit or MDL

Table-7 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: Semi-Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CTF-MW2 18-Mar-14	Fluoranthene	3.4	11	3.4	U	SW-846:8270C
	Fluorene	3.4	11	3.4	U	SW-846:8270C
	Hexachlorobenzene	3.4	11	3.4	U	SW-846:8270C
	Hexachlorobutadiene	3.4	11	3.4	U	SW-846:8270C
	Hexachlorocyclopentadiene	5.3	11	5.3	U	SW-846:8270C
	Hexachloroethane	3.4	11	3.4	U	SW-846:8270C
	Indeno(1,2,3-cd)pyrene	3.4	11	3.4	U	SW-846:8270C
	Isophorone	3.4	11	3.4	U	SW-846:8270C
	Methylnaphthalene[1-]	3.4	11	3.4	U	SW-846:8270C
	Methylnaphthalene[2-]	3.4	11	3.4	U	SW-846:8270C
	Methylphenol[2-]	3.4	11	3.4	U	SW-846:8270C
	Methylphenol[3-]	3.4	11	3.4	U	SW-846:8270C
	Naphthalene	3.4	11	3.4	U	SW-846:8270C
	Nitroaniline[2-]	6.8	23	6.8	U	SW-846:8270C
	Nitroaniline[3-]	3.4	23	3.4	U	SW-846:8270C
	Nitroaniline[4-]	3.4	23	3.4	U	SW-846:8270C
	Nitrobenzene	3.4	11	3.4	U	SW-846:8270C
	Nitrophenol[2-]	3.4	11	3.4	U	SW-846:8270C
	Nitrophenol[4-]	3.4	23	3.4	U	SW-846:8270C
	Nitrosodimethylamine[N-]	3.4	11	3.4	U	SW-846:8270C
	Nitroso-di-n-propylamine[N-]	3.4	11	3.4	U	SW-846:8270C
	Nitrosodiphenylamine[N-]	3.4	11	3.4	U	SW-846:8270C
	Oxybis(1-chloropropane)[2,2'-]	3.4	11	3.4	U	SW-846:8270C
	Pentachlorophenol	4.7	23	4.7	U	SW-846:8270C
	Phenanthrene	3.4	11	3.4	U	SW-846:8270C
	Phenol	3.4	11	3.4	U	SW-846:8270C
	Pyrene	3.4	11	3.4	U	SW-846:8270C
	Pyridine	4.2	11	4.2	U	SW-846:8270C
	Tetrachlorophenol[2,3,4,6-]	3.6	11	3.6	U	SW-846:8270C
	Trichlorobenzene[1,2,4-]	3.4	11	3.4	U	SW-846:8270C
	Trichlorophenol[2,4,5-]	3.4	11	3.4	U	SW-846:8270C
	Trichlorophenol[2,4,6-]	3.4	11	3.4	U	SW-846:8270C

U = Analyte not detected at or above the reporting limit or MDL

Table-8 NMED DOE OB FFY 2014 Q-2 SWMU 149/154 Groundwater Quality Results: Gamma Emitting Isotopes, Gross Alpha, Gross Beta and Isotopic Uranium

Monitoring Well/ Sample Date	Analyte	Result (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
CTF-MW2 18-Mar-14	Actinium-228	18	±	4.6	18		EPA:901.1
	Americium-241	4.4	±	1.6	5.1	U	EPA:901.1
	Beryllium-7	-2.3	±	9.4	32	U	EPA:901.1
	Bismuth-212	48	±	20	63	U	EPA:901.1
	Bismuth-214	7	±	5.4	18	UJ	EPA:901.1
	Cesium-134	-1.8	±	1.3	4.5	U	EPA:901.1
	Cesium-137	-0.74	±	1.3	4.5	U	EPA:901.1
	Cobalt-60	-0.92	±	1.6	5.5	U	EPA:901.1
	Gross alpha	66	±	7.5	12		EPA:900
	Gross beta	62	±	8.4	21		EPA:900
	Iodine-131	4	±	2.5	8.1	U	EPA:901.1
	Lead-212	1.5	±	3.8	13	U	EPA:901.1
	Lead-214	4.4	±	2.6	8.5	UJ	EPA:901.1
	Potassium-40	42	±	42	140	U	EPA:901.1
	Protactinium-234m	-310	±	410	1400	U	EPA:901.1
	Sodium-22	-2	±	1.6	5.6	U	EPA:901.1
	Thallium-208	1.5	±	2.8	9.2	U	EPA:901.1
	Thorium-234	-19	±	23	76	U	EPA:901.1
	Uranium-234	58	±	4.8	0.052		HASL-300:ISOU
	Uranium-235	1	±	0.14	0.061		HASL-300:ISOU
	Uranium-238	9.3	±	0.81	0.052		HASL-300:ISOU

J = The activity is an estimated value.

U = Result is less than the sample specific MDC or less than the associated TPU.