

DOE Oversight Bureau, New Mexico Environment Department

**Groundwater Monitoring at
Sandia National Laboratories/New Mexico
Solid Waste Management Unit 8/58**

**Conducted by the
New Mexico Environment Department DOE Oversight Bureau
for FFY 2015 Q-1**

**Prepared by Chris Armijo, Environmental Scientist
Sandia Oversight Section
P.O. Box 5400 MS 1396
Albuquerque, NM 87185-5400
(505) 845-5823
chris.armijo1@state.nm.us**

Final Report

9/11/2015

The purpose of this communication is to transmit groundwater data collected by New Mexico Environment Department DOE Oversight Bureau from Solid Waste Management Unit 8/58 Coyote Canyon Blast Area groundwater monitoring well CCBA-MW2 during first quarter FFY 2015.

Acknowledgment: "This material is based upon work supported by the Department of Energy Office of Environmental Management under Award Number *DE-EM0002420*."

Disclaimer: "This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."

Introduction

The New Mexico Environment Department (NMED) DOE Oversight Bureau (DOE-OB or the Bureau) has compiled and assessed groundwater data collected during October 2014. The Bureau collected groundwater samples from Solid Waste Management Unit (SWMU) 8/58 Coyote Canyon Blast Area (CCBA) groundwater monitoring well CCBA-MW2 (Figure 1).

Split samples were collected using standard Sandia sampling procedures and equipment. Bureau samples were submitted to an independent analytical laboratory where they were analyzed for total metals, anions, cations, total cyanide, nitrate-nitrite, perchlorate, high explosive (HE) compounds, volatile and semi-volatile organic compounds, gross alpha/beta and gamma emitting isotopes. No samples exceeded associated U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) during this sampling event.

Data Assessment

All groundwater samples were collected and analyzed in accordance with U.S. EPA protocols. Data results are compared to applicable Maximum Contaminant Levels (MCLs) established by the U.S. EPA National Primary Drinking Water Regulations (40 CFR 141), National Primary Drinking Water Standards, EPA, July 2002. Perchlorate results are compared to the *Compliance Order on Consent (COOC) Pursuant to the New Mexico Hazardous Waste Act 74-4-10: Sandia National Laboratories Consent Order*, New Mexico Environment Department, April 19, 2004.

Results

Analytical results for total target analyte list (TAL) metals plus uranium are listed in Table 1. All metal concentrations were below established MCLs.

Analytical results for major anions (as bromide, chloride, fluoride, and sulfate), cations (calcium, lithium, magnesium, potassium, sodium and strontium), total cyanide, nitrate-nitrite and perchlorate are listed in Table 2. All analytes were below established MCLs. Perchlorate was not detected above the laboratory method detection limit (MDL).

Analytical results for HE are listed in Table 3. No HE compounds were detected above their associated MDL.

Analytical results for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) are presented in Table 4 and Table- , respectively. No compounds were detected above the laboratory MDL.

Analytical results for radiochemistry samples are listed in Table 6. Samples were analyzed for gross alpha, gross beta and gamma emitting isotopes. No isotopes were detected above U.S. EPA MCLs.

Conclusion

Samples were collected from SWMU 8/58 monitoring well CCBA-MW2. Samples were analyzed for total metals, anions, cations, total cyanide, nitrate-nitrite, perchlorate, high explosive compounds, volatile and semi-volatile organic compounds, gross alpha/beta and gamma emitting isotopes. No samples exceeded associated U.S. EPA MCLs during this sampling event.

References

New Mexico Environment Department, Compliance Order on Consent (COOC) Pursuant to the New Mexico Hazardous Waste Act 74-4-10: Sandia National Laboratories Consent Order, April 19, 2004.

Sandia National Laboratories, New Mexico Environmental Geographic Information System, Annual Groundwater Monitoring Report, Calendar Year 2013

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

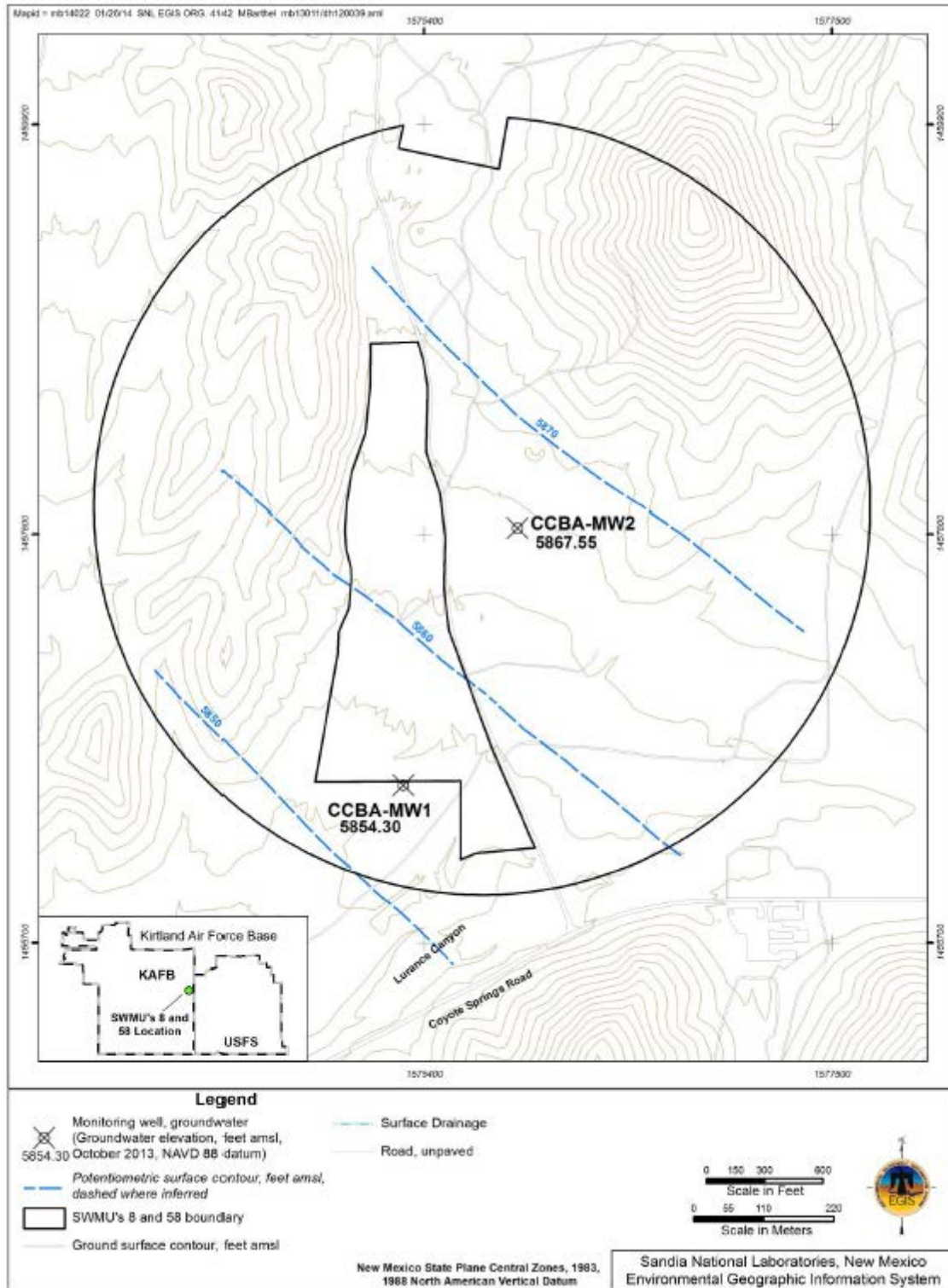


Figure 1. Groundwater Monitoring Well CCBA-MW2 at SWMU 8/58

***** This page intentionally left blank. *****

Table-1 NMED DOE OB FFY 2015 Q-1 Solid Waste Management Unit 8/58 Groundwater Quality Results: Total TAL Metals plus Uranium

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CCBA-MW2 14-Oct-14	Aluminum	0.017	NE	0.05	0.017	U	SW-846:6020
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020
	Arsenic	0.0015	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.047	2	0.001	0.00041		SW-846:6020
	Beryllium	0.00013	0.004	0.0005	0.00013	U	SW-846:6020
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020
	Calcium	78	NE	1	0.09		SW-846:6020
	Chromium	0.0013	0.1	0.01	0.0013	U	SW-846:6020
	Cobalt	0.00017	NE	0.001	0.00017	U	SW-846:6020
	Copper	0.0028	NE	0.01	0.0028	U	SW-846:6020
	Iron	0.016	NE	0.1	0.016	U	SW-846:6020
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020
	Magnesium	16	NE	0.1	0.039	B	SW-846:6020
	Manganese	0.00052	NE	0.002	0.00052	U	SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0081	NE	0.005	0.0014	B	SW-846:6020
	Potassium	1.2	NE	1	0.16		SW-846:6020
	Selenium	0.0036	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	50	NE	1	0.24		SW-846:6020
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020
Uranium	0.0049	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0099	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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-2 NMED DOE OB FFY 2015 Q-1 SWMU 8/58 Groundwater Quality Results: Anions, Cations, Cyanide, Nitrate-Nitrite and Perchlorate

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
CCBA-MW2 14-Oct-14	Bromide	0.56	NE	0.2	0.06		EPA:300.0
	Chloride	41	NE	1	0.31		EPA:300.0
	Fluoride	1.6	4	0.1	0.03		EPA:300.0
	Sulfate	99	NE	1	0.3		EPA:300.0
	Nitrate-Nitrite as N	3.1	10	0.05	0.015		EPA:353.2
	Perchlorate	0.0012	NE	0.004	0.0012	U	EPA314.0
	Silicon	13	NE	0.05	0.012	B	SW-846:6010B_3005A
	Calcium	77	NE	1	0.09		SW-846:6020
	Lithium	0.017	NE	0.01	0.0015		SW-846:6020
	Magnesium	17	NE	0.1	0.039		SW-846:6020
	Potassium	1.3	NE	1	0.16		SW-846:6020
	Sodium	50	NE	1	0.24		SW-846:6020
	Strontium	0.39	NE	0.001	0.00032		SW-846:6020
Cyanide (Total)	0.015	200	0.01	0.003		SW-846:9014	

B = Compound was found in the blank and sample.

NE = Not Established

U = the analyte was analyzed for but not detected

Table-3 NMED DOE OB FFY 2015 Q-1 Solid Waste Management Unit 8/58 Groundwater Quality Results: High Explosive Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CCBA-MW2 14-Oct-14	3,5-Dinitroaniline	0.015	0.11	0.015	U	SW-846:8330
	Amino-2,6-dinitrotoluene[4-]	0.018	0.11	0.018	U	SW-846:8330
	Amino-4,6-dinitrotoluene[2-]	0.0098	0.11	0.0098	U	SW-846:8330
	Dinitrobenzene[1,3-]	0.0094	0.11	0.0094	U	SW-846:8330
	Dinitrotoluene[2,4-]	0.01	0.11	0.01	U	SW-846:8330
	Dinitrotoluene[2,6-]	0.06	0.22	0.06	U	SW-846:8330
	HMX	0.011	0.11	0.011	U	SW-846:8330
	Nitrobenzene	0.015	0.11	0.015	U	SW-846:8330
	Nitroglycerin	0.43	1.1	0.43	U	SW-846:8330
	Nitrotoluene[2-]	0.036	0.11	0.036	U	SW-846:8330
	Nitrotoluene[3-]	0.0071	0.11	0.0071	U	SW-846:8330
	Nitrotoluene[4-]	0.0066	0.11	0.0066	U	SW-846:8330
	PETN	0.2	0.55	0.2	U	SW-846:8330
	RDX	0.019	0.11	0.019	U	SW-846:8330
	Tetryl	0.047	0.11	0.047	U	SW-846:8330
	Trinitrobenzene[1,3,5-]	0.055	0.22	0.055	U	SW-846:8330
Trinitrotoluene[2,4,6-]	0.027	0.11	0.027	U	SW-846:8330	

U = the analyte was analyzed for but not detected

Table-4 NMED DOE OB FFY 2015 Q-1 Solid Waste Management Unit 8/58 Groundwater Quality Results: Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CCBA-MW2 14-Oct-14	Acetone	3	10	3	U	SW-846:8260B_25
	Benzene	0.3	1	0.3	U	SW-846:8260B_25
	Bromobenzene	0.3	1	0.3	U	SW-846:8260B_25
	Bromochloromethane	0.3	1	0.3	U	SW-846:8260B_25
	Bromodichloromethane	0.3	1	0.3	U	SW-846:8260B_25
	Bromoform	0.3	1	0.3	U	SW-846:8260B_25
	Bromomethane	0.3	1	0.3	U	SW-846:8260B_25
	Butanone[2-]	3	10	3	U	SW-846:8260B_25
	Butylbenzene[n-]	0.3	1	0.3	U	SW-846:8260B_25
	Butylbenzene[sec-]	0.3	1	0.3	U	SW-846:8260B_25
	Butylbenzene[tert-]	0.3	1	0.3	U	SW-846:8260B_25
	Carbon Disulfide	0.3	1	0.3	U	SW-846:8260B_25
	Carbon Tetrachloride	0.3	1	0.3	U	SW-846:8260B_25
	Chlorobenzene	0.3	1	0.3	U	SW-846:8260B_25
	Chlorodibromomethane	0.3	1	0.3	U	SW-846:8260B_25
	Chloroethane	0.3	1	0.3	U	SW-846:8260B_25
	Chloroform	0.3	1	0.3	U	SW-846:8260B_25
	Chlorohexane[1-]	0.3	1	0.3	U	SW-846:8260B_25
	Chloromethane	0.3	1	0.3	U	SW-846:8260B_25
	Chlorotoluene[2-]	0.3	1	0.3	U	SW-846:8260B_25
	Chlorotoluene[4-]	0.3	1	0.3	U	SW-846:8260B_25
	Dibromo-3-Chloropropane[1,2-]	0.6	2	0.6	U	SW-846:8260B_25
	Dibromoethane[1,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Dibromomethane	0.3	1	0.3	U	SW-846:8260B_25
	Dichlorobenzene[1,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichlorobenzene[1,3-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichlorobenzene[1,4-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichlorodifluoromethane	0.3	1	0.3	U	SW-846:8260B_25
	Dichloroethane[1,1-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichloroethane[1,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichloroethene[1,1-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichloroethene[cis-1,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichloroethene[trans-1,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichloropropane[1,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichloropropane[1,3-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichloropropane[2,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichloropropene[1,1-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichloropropene[cis-1,3-]	0.3	1	0.3	U	SW-846:8260B_25
	Dichloropropene[trans-1,3-]	0.3	1	0.3	U	SW-846:8260B_25
	Ethylbenzene	0.3	1	0.3	U	SW-846:8260B_25
Hexachlorobutadiene	0.3	1	0.3	U	SW-846:8260B_25	
Hexanone[2-]	3	10	3	U	SW-846:8260B_25	
Iodomethane	0.3	1	0.3	U	SW-846:8260B_25	
Isopropylbenzene	0.3	1	0.3	U	SW-846:8260B_25	

U = Not Detected at or above the client requested detection limit.

Table-4 NMED DOE OB FFY 2015 Q-1 Solid Waste Management Unit 8/58 Groundwater Quality Results: Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
CCBA-MW2 14-Oct-14	Isopropyltoluene[4-]	0.3	1	0.3	U	SW-846:8260B_25
	Methyl tert-Butyl Ether	0.3	1	0.3	U	SW-846:8260B_25
	Methyl-2-pentanone[4-]	3	10	3	U	SW-846:8260B_25
	Methylene Chloride	0.43	1	0.43	U	SW-846:8260B_25
	Naphthalene	0.3	1	0.3	U	SW-846:8260B_25
	Propylbenzene[1-]	0.3	1	0.3	U	SW-846:8260B_25
	Styrene	0.3	1	0.3	U	SW-846:8260B_25
	Tetrachloroethane[1,1,1,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Tetrachloroethane[1,1,2,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Tetrachloroethene	0.2	1	0.2	U	SW-846:8260B_25
	Toluene	0.3	1	0.3	U	SW-846:8260B_25
	Trichloro-1,2,2-trifluoroethane[1,1,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Trichlorobenzene[1,2,3-]	0.3	1	0.3	U	SW-846:8260B_25
	Trichlorobenzene[1,2,4-]	0.3	1	0.3	U	SW-846:8260B_25
	Trichloroethane[1,1,1-]	0.3	1	0.3	U	SW-846:8260B_25
	Trichloroethane[1,1,2-]	0.3	1	0.3	U	SW-846:8260B_25
	Trichloroethene	0.3	1	0.3	U	SW-846:8260B_25
	Trichlorofluoromethane	0.3	1	0.3	U	SW-846:8260B_25
	Trichloropropane[1,2,3-]	0.3	1	0.3	U	SW-846:8260B_25
	Trimethylbenzene[1,2,4-]	0.3	1	0.3	U	SW-846:8260B_25
	Trimethylbenzene[1,3,5-]	0.3	1	0.3	U	SW-846:8260B_25
	Vinyl acetate	0.68	2	0.68	U	SW-846:8260B_25
	Vinyl Chloride	0.3	1	0.3	U	SW-846:8260B_25
	Xylene[1,2-]	0.3	1	0.3	U	SW-846:8260B_25
Xylene[1,3-]+Xylene[1,4-]	0.3	1	0.3	U	SW-846:8260B_25	

U = Not Detected at or above the client requested detection limit.

Table-5 NMED DOE OB FFY 2015 Q-1 Solid Waste Management Unit 8/58 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
CCBA-MW2 14-Oct-14	Acenaphthene	3.2	11	3.2	U	SW-846:8270D
	Acenaphthylene	3.2	11	3.2	U	SW-846:8270D
	Aniline	4.4	11	4.4	U	SW-846:8270D
	Anthracene	3.2	11	3.2	U	SW-846:8270D
	Azobenzene	3.2	11	3.2	U	SW-846:8270D
	Benzo(a)anthracene	3.2	11	3.2	U	SW-846:8270D
	Benzo(a)pyrene	3.2	11	3.2	U	SW-846:8270D
	Benzo(b)fluoranthene	3.2	11	3.2	U	SW-846:8270D
	Benzo(g,h,i)perylene	3.2	11	3.2	U	SW-846:8270D
	Benzo(k)fluoranthene	3.2	11	3.2	U	SW-846:8270D
	Benzoic Acid	22	54	22	U	SW-846:8270D
	Benzyl Alcohol	3.2	11	3.2	U	SW-846:8270D
	Bis(2-chloroethoxy)methane	3.2	11	3.2	U	SW-846:8270D
	Bis(2-chloroethyl)ether	3.2	11	3.2	U	SW-846:8270D
	Bis(2-ethylhexyl)phthalate	3.2	11	3.2	U	SW-846:8270D
	Bromophenyl-phenylether[4-]	3.2	11	3.2	U	SW-846:8270D
	Butylbenzylphthalate	3.2	11	3.2	U	SW-846:8270D
	Carbazole	3.2	11	3.2	U	SW-846:8270D
	Chloro-3-methylphenol[4-]	3.2	11	3.2	U	SW-846:8270D
	Chloroaniline[4-]	3.7	11	3.7	U	SW-846:8270D
	Chloronaphthalene[2-]	3.2	11	3.2	U	SW-846:8270D
	Chlorophenol[2-]	3.2	11	3.2	U	SW-846:8270D
	Chlorophenyl-phenyl[4-] Ether	3.2	11	3.2	U	SW-846:8270D
	Chrysene	3.2	11	3.2	U	SW-846:8270D
	Dibenz(a,h)anthracene	3.2	11	3.2	U	SW-846:8270D
	Dibenzofuran	3.2	11	3.2	U	SW-846:8270D
	Dichlorobenzene[1,2-]	3.2	11	3.2	U	SW-846:8270D
	Dichlorobenzene[1,3-]	3.2	11	3.2	U	SW-846:8270D
	Dichlorobenzene[1,4-]	3.2	11	3.2	U	SW-846:8270D
	Dichlorobenzidine[3,3'-]	3.2	11	3.2	U	SW-846:8270D
	Dichlorophenol[2,4-]	3.2	11	3.2	U	SW-846:8270D
	Diethylphthalate	3.2	11	3.2	U	SW-846:8270D
	Dimethyl Phthalate	3.2	11	3.2	U	SW-846:8270D
	Dimethylphenol[2,4-]	3.2	11	3.2	U	SW-846:8270D
	Di-n-butylphthalate	3.2	11	3.2	U	SW-846:8270D
	Dinitro-2-methylphenol[4,6-]	3.2	22	3.2	U	SW-846:8270D
	Dinitrophenol[2,4-]	5.8	22	5.8	U	SW-846:8270D
	Dinitrotoluene[2,4-]	3.2	11	3.2	U	SW-846:8270D
	Dinitrotoluene[2,6-]	3.2	11	3.2	U	SW-846:8270D

U = the analyte was analyzed for but not detected

Table-5 NMED DOE OB FFY 2015 Q-1 Solid Waste Management Unit 8/58 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
CCBA-MW2 14-Oct-14	Di-n-octylphthalate	3.2	11	3.2	U	SW-846:8270D
	Fluoranthene	3.2	11	3.2	U	SW-846:8270D
	Fluorene	3.2	11	3.2	U	SW-846:8270D
	Hexachlorobenzene	3.2	11	3.2	U	SW-846:8270D
	Hexachlorobutadiene	3.2	11	3.2	U	SW-846:8270D
	Hexachlorocyclopentadiene	5.1	11	5.1	U	SW-846:8270D
	Hexachloroethane	3.2	11	3.2	U	SW-846:8270D
	Indeno(1,2,3-cd)pyrene	3.2	11	3.2	U	SW-846:8270D
	Isophorone	3.2	11	3.2	U	SW-846:8270D
	Methylnaphthalene[1-]	3.2	11	3.2	U	SW-846:8270D
	Methylnaphthalene[2-]	3.2	11	3.2	U	SW-846:8270D
	Methylphenol[2-]	3.2	11	3.2	U	SW-846:8270D
	Methylphenol[3-]	3.2	11	3.2	U	SW-846:8270D
	Naphthalene	3.2	11	3.2	U	SW-846:8270D
	Nitroaniline[2-]	6.5	22	6.5	U	SW-846:8270D
	Nitroaniline[3-]	3.2	22	3.2	U	SW-846:8270D
	Nitroaniline[4-]	3.2	22	3.2	U	SW-846:8270D
	Nitrobenzene	3.2	11	3.2	U	SW-846:8270D
	Nitrophenol[2-]	3.2	11	3.2	U	SW-846:8270D
	Nitrophenol[4-]	3.2	22	3.2	U	SW-846:8270D
	Nitrosodimethylamine[N-]	3.2	11	3.2	U	SW-846:8270D
	Nitroso-di-n-propylamine[N-]	3.2	11	3.2	U	SW-846:8270D
	Nitrosodiphenylamine[N-]	3.2	11	3.2	U	SW-846:8270D
	Oxybis(1-chloropropane)[2,2'-]	3.2	11	3.2	U	SW-846:8270D
	Pentachlorophenol	4.4	22	4.4	U	SW-846:8270D
	Phenanthrene	3.2	11	3.2	U	SW-846:8270D
	Phenol	3.2	11	3.2	U	SW-846:8270D
	Pyrene	3.2	11	3.2	U	SW-846:8270D
	Pyridine	4	11	4	U	SW-846:8270D
	Tetrachlorophenol[2,3,4,6-]	3.4	11	3.4	U	SW-846:8270D
	Trichlorobenzene[1,2,4-]	3.2	11	3.2	U	SW-846:8270D
	Trichlorophenol[2,4,5-]	3.2	11	3.2	U	SW-846:8270D
	Trichlorophenol[2,4,6-]	3.2	11	3.2	U	SW-846:8270D

U = the analyte was analyzed for but not detected

Table-6 NMED DOE OB FFY 2015 Q-1 Solid Waste Management Unit 8/58 Groundwater Quality Results: Gross Alpha, Gross Beta, and Gamma Emitting Isotopes

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Qualifier	Analytical Method
CCBA-MW2 14-Oct-14	Actinium-228	15 ± 4.2	13		EPA:901.1
	Americium-241	-56 ± 39	130	U	EPA:901.1
	Beryllium-7	18 ± 11	36	U	EPA:901.1
	Bismuth-212	23 ± 15	50	U	EPA:901.1
	Bismuth-214	4.2 ± 5.7	19	UJ	EPA:901.1
	Cesium-134	0.45 ± 1.7	5.6	U	EPA:901.1
	Cesium-137	-0.86 ± 1.2	4	U	EPA:901.1
	Cobalt-60	-1.2 ± 1.1	3.9	U	EPA:901.1
	Gross alpha	7.2 ± 0.75	1.1		EPA:900
	Gross beta	3.5 ± 0.55	1.5		EPA:900
	Iodine-131	-3.9 ± 8.7	30	U	EPA:901.1
	Lead-212	-3.1 ± 4.3	14	U	EPA:901.1
	Lead-214	-3.7 ± 5.2	17	UJ	EPA:901.1
	Potassium-40	7.3 ± 36	120	U	EPA:901.1
	Protactinium-234m	290 ± 190	620	U	EPA:901.1
	Sodium-22	-0.091 ± 1.1	3.9	U	EPA:901.1
	Thallium-208	3.5 ± 1.2	3.8	U	EPA:901.1
Thorium-234	-46 ± 59	200	U	EPA:901.1	

J = Indicating the activity values to be an estimated value.

U = This flag indicates that the compound was analyzed for but not detected.