DOE Oversight Bureau, New Mexico Environment Department

Groundwater Monitoring at Sandia National Laboratories/New Mexico Long-Term Stewardship Consolidated Groundwater Monitoring Program

Conducted by the New Mexico Environment Department DOE Oversight Bureau for FFY 2015 Q-2

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

9/3/2015

The purpose of this communication is to transmit groundwater data collected by the New Mexico Environment Department DOE Oversight Bureau from the Long-Term Stewardship Consolidated Groundwater Monitoring Program monitoring wells during the second quarter of FFY 2015.

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

Introductory

The New Mexico Environment Department (NMED) DOE Oversight Bureau has compiled and assessed groundwater data collected during January and February 2015. The Bureau collected groundwater samples from Long-Term Stewardship (LTS) Consolidated Groundwater Monitoring Program (GMP) monitoring wells MRN-3D, SFR-2S, SWTA3-MW2, SWTA3-MW3 plus duplicate, SWTA3-MW4, and TRE-1. Samples were also collected from Coyote Spring located in Arroyo del Coyote. Split samples were collected using standard Sandia sampling procedures and equipment. The samples were submitted for analysis to an independent analytical laboratory for target analyte list (TAL) metals plus uranium, anions, nitrate-nitrite, cyanide, high explosive (HE) compounds, volatile organic compounds (VOCs), gamma-emitting isotopes, gross alpha and beta, radium 226/228, and isotopic uranium. All samples were filtered in the field using in-line filters of 0.45-micron pore size, except for VOC, HE compounds, and mercury fractions which were unfiltered. An elevated concentration of beryllium was observed in the sample collected from Coyote Springs. All other sample results were detected below established limits.

Data Assessment

All groundwater samples were collected and analyzed in accordance with U.S Environmental Protection Agency (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.

Results

Analytical results for TAL metals are presented in Table 1. Samples were analyzed for dissolved metals plus uranium and total mercury. No metal concentrations were detected above established regulatory standards, except for beryllium. Beryllium was detected above the MCL of 0.004 mg/L from the sample collected at Coyote Springs at a concentration of 0.0066 mg/L.

Analytical results for anions (bromide, chloride, fluoride, and sulfate), cyanide, and nitrate-nitrite are presented in Table 2. No samples exceeded their associated MCL.

Analytical results for HE compounds are listed in Table 3. Samples collected from monitoring wells SFR-2S, SWTA3-MW3, SWTA3-MW4. and TRE-1 were submitted for HE analysis. Nitroglycerin was detected slightly above the method detection limit (MDL) at SFR-2S. The concentration was “J” and “N” flagged, indicating that the results was an estimated value and the matrix spike sample

recovery for nitroglycerin was not within the control limits. No other compounds were detected above the laboratory MDL.

Volatile organic compounds detected above the MDL are listed in Table 4. Chloroform was the only compound detected above its associated MDL at monitoring well TRE-1 at a concentration of 0.55 µg/L. No MCL exists for chloroform. The MDLs for the remaining VOCs are presented in Table-5.

Analytical results for radionuclides are listed in Table 6. Samples were analyzed for gross alpha and beta, gamma-emitting isotopes, radium 226/228, and isotopic uranium. Unadjusted gross alpha activity ranged from 2.3 ± 0.4 pCi/L at SWTA3-MW3 to 22 ± 2 pCi/L at TRE-1. 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 initial gross alpha count. Subsequently, when the total uranium activity is subtracted from the gross alpha value, the gross activity results are below the MCL. All other gamma emitters and radium isotopes were below established MCLs.

Conclusion

Groundwater samples were collected from six (6) monitoring wells (MRN-3D, SFR-2S, SWTA3-MW2, SWTA3-MW3, SWTA3-MW4 and TRE-1) and one (1) spring (Coyote Spring) during the annual sampling event from the LTS consolidated Groundwater Protection Program. Beryllium was detected above the MCL of 0.004 mg/L in the sample from Coyote Springs at a concentration of 0.0066 mg/L. Beryllium concentrations observed during this event compare well to historical values. All other sample results were detected below associated MCLs.

References

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 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Dissolved TAL Metals plus Uranium and Total Mercury

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
COYOTE SPRING 6-Feb-15	Aluminum	0.23	NE	0.05	0.017	B	SW-846:6020
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020
	Arsenic	0.0033	0.01	0.002	0.00025		SW-846:6020
	Barium	0.042	2	0.001	0.00041	B	SW-846:6020
	Beryllium	**0.0066**	0.004	0.0005	0.00013		SW-846:6020
	Cadmium	0.00018	0.005	0.0003	0.00012	J	SW-846:6020
	Calcium	280	NE	1	0.09		SW-846:6020
	Chromium	0.0013	0.1	0.01	0.0013	U	SW-846:6020
	Cobalt	0.01	NE	0.001	0.00017		SW-846:6020
	Copper	0.0028	NE	0.01	0.0028	U	SW-846:6020
	Iron	0.072	NE	0.1	0.016	J	SW-846:6020
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020
	Magnesium	62	NE	0.1	0.039		SW-846:6020
	Manganese	1.5	NE	0.002	0.00052	B	SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Mercury (Total)	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.029	NE	0.005	0.0014	B	SW-846:6020
	Potassium	29	NE	1	0.16		SW-846:6020
	Selenium	0.00054	0.05	0.001	0.00054	U	SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	400	NE	1	0.24		SW-846:6020
	Thallium	0.0014	0.002	0.0002	0.000042		SW-846:6020
	Uranium	0.0068	0.03	0.0001	0.000088		SW-846:6020
	Vanadium	0.00052	NE	0.001	0.00052	U	SW-846:6020
	Zinc	0.045	NE	0.02	0.0068	B	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-1 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Dissolved TAL Metals plus Uranium and Total Mercury

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
MRN-3D 29-Jan-15	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	0.00088	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.13	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	61	NE	1	0.09		SW-846:6020
	Chromium	0.0013	0.1	0.01	0.0013	J	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	14	NE	0.1	0.039		SW-846:6020
	Manganese	0.00085	NE	0.002	0.00052	J	SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Mercury (Total)	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0027	NE	0.005	0.0014	JB	SW-846:6020
	Potassium	4.3	NE	1	0.16		SW-846:6020
	Selenium	0.0009	0.05	0.001	0.00054	J	SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	28	NE	1	0.24		SW-846:6020
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020
	Uranium	0.0039	0.03	0.0001	0.000088		SW-846:6020
	Vanadium	0.0054	NE	0.001	0.00052		SW-846:6020
	Zinc	0.037	NE	0.02	0.0068	B	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-1 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Dissolved TAL Metals plus Uranium and Total Mercury

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
SFR-2S 27-Jan-15	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	0.00072	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.061	2	0.001	0.00041		SW-846:6020
	Beryllium	0.00013	0.004	0.0005	0.00013	U	SW-846:6020
	Cadmium	0.0012	0.005	0.0003	0.00012		SW-846:6020
	Calcium	140	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	0.024	NE	0.1	0.016	J	SW-846:6020
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020
	Magnesium	39	NE	0.1	0.039		SW-846:6020
	Manganese	0.0016	NE	0.002	0.00052	J	SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Mercury (Total)	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.01	NE	0.005	0.0014	B	SW-846:6020
	Potassium	7.7	NE	1	0.16		SW-846:6020
	Selenium	0.0018	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	87	NE	1	0.24		SW-846:6020
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020
	Uranium	0.016	0.03	0.0001	0.000088		SW-846:6020
	Vanadium	0.0035	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-1 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Dissolved TAL Metals plus Uranium and Total Mercury

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
SWTA3-MW2 5-Feb-15	Aluminum	0.017	NE	0.05	0.017	U	SW-846:6020
	Antimony	0.00019	0.006	0.0003	0.00017	J	SW-846:6020
	Arsenic	0.00085	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.078	2	0.001	0.00041	B	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	44	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	14	NE	0.1	0.039		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
	Mercury (Total)	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0016	NE	0.005	0.0014	JB	SW-846:6020
	Potassium	3.9	NE	1	0.16		SW-846:6020
	Selenium	0.0013	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	36	NE	1	0.24		SW-846:6020
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020
	Uranium	0.0032	0.03	0.0001	0.000088		SW-846:6020
	Vanadium	0.0054	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-1 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Dissolved TAL Metals plus Uranium and Total Mercury

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
SWTA3-MW3 3-Feb-15	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	0.00083	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.069	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	43	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	12	NE	0.1	0.039		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
	Mercury (Total)	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0024	NE	0.005	0.0014	JB	SW-846:6020
	Potassium	5	NE	1	0.16		SW-846:6020
	Selenium	0.00088	0.05	0.001	0.00054	J	SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	56	NE	1	0.24		SW-846:6020
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020
	Uranium	0.0026	0.03	0.0001	0.000088		SW-846:6020
	Vanadium	0.0082	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-1 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Dissolved TAL Metals plus Uranium and Total Mercury

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
SWTA3-MW3 3-Feb-15 DUP	Aluminum	0.017	NE	0.05	0.017	J	SW-846:6020
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020
	Arsenic	0.00071	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.063	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	40	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	11	NE	0.1	0.039		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
	Mercury (Total)	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.002	NE	0.005	0.0014	JB	SW-846:6020
	Potassium	4.6	NE	1	0.16		SW-846:6020
	Selenium	0.0013	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	52	NE	1	0.24		SW-846:6020
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020
	Uranium	0.0024	0.03	0.0001	0.000088		SW-846:6020
	Vanadium	0.0079	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-1 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Dissolved TAL Metals plus Uranium and Total Mercury

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
SWTA3-MW4 4-Feb-15	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	0.00079	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.055	2	0.001	0.00041	B	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	35	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	0.017	NE	0.1	0.016	J	SW-846:6020
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020
	Magnesium	10	NE	0.1	0.039		SW-846:6020
	Manganese	0.0017	NE	0.002	0.00052	JB	SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Mercury (Total)	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0023	NE	0.005	0.0014	JB	SW-846:6020
	Potassium	4.1	NE	1	0.16		SW-846:6020
	Selenium	0.0017	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	57	NE	1	0.24		SW-846:6020
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020
	Uranium	0.0022	0.03	0.0001	0.000088		SW-846:6020
	Vanadium	0.0074	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-1 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Dissolved TAL Metals plus Uranium and Total Mercury

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TRE-1 26-Jan-15	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	0.00072	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.049	2	0.001	0.00041		SW-846:6020
	Beryllium	0.00014	0.004	0.0005	0.00013	J	SW-846:6020
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020
	Calcium	170	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	39	NE	0.1	0.039		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
	Mercury (Total)	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0015	NE	0.005	0.0014	JB	SW-846:6020
	Potassium	7.4	NE	1	0.16		SW-846:6020
	Selenium	0.0019	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	110	NE	1	0.24		SW-846:6020
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020
	Uranium	0.018	0.03	0.0001	0.000088		SW-846:6020
	Vanadium	0.003	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-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Anions, Total Cyanide and Nitrate-Nitrite

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
COYOTE SPRING 6-Feb-15	Bromide	2.1	NE	1	0.3		EPA:300.0
	Chloride	530	NE	10	3.1		EPA:300.0
	Cyanide (Total)	0.003	200	0.01	0.003	U	SW-846:9014
	Fluoride	1.7	4	0.5	0.15		EPA:300.0
	Nitrate-Nitrite as N	0.5	10	0.01	0.003		EPA:353.2
	Sulfate	120	NE	5	1.5		EPA:300.0
MRN-3D 29-Jan-15	Bromide	0.2	NE	0.2	0.06		EPA:300.0
	Chloride	17	NE	0.2	0.062		EPA:300.0
	Cyanide (Total)	0.003	200	0.01	0.003	U	SW-846:9014
	Fluoride	0.39	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as N	2.3	10	0.05	0.015		EPA:353.2
	Sulfate	80	NE	1	0.3		EPA:300.0
SFR-2S 27-Jan-15	Bromide	0.66	NE	0.2	0.06		EPA:300.0
	Chloride	140	NE	2	0.62		EPA:300.0
	Cyanide (Total)	0.003	200	0.01	0.003	U	SW-846:9014
	Fluoride	1.6	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as N	0.9	10	0.01	0.003		EPA:353.2
	Sulfate	78	NE	1	0.3		EPA:300.0
SWTA3-MW2 5-Feb-15	Bromide	0.06	NE	0.2	0.06	U	EPA:300.0
	Chloride	18	NE	0.2	0.062		EPA:300.0
	Cyanide (Total)	0.003	200	0.01	0.003	U	SW-846:9014
	Fluoride	0.93	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as N	0.86	10	0.01	0.003		EPA:353.2
	Sulfate	58	NE	1	0.3		EPA:300.0
SWTA3-MW3 3-Feb-15	Bromide	0.06	NE	0.2	0.06	U	EPA:300.0
	Chloride	15	NE	0.2	0.062		EPA:300.0
	Cyanide (Total)	0.003	200	0.01	0.003	U	SW-846:9014
	Fluoride	1.2	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as N	0.57	10	0.01	0.003		EPA:353.2
	Sulfate	66	NE	1	0.3		EPA:300.0
SWTA3-MW3 3-Feb-15 DUP	Bromide	0.06	NE	0.2	0.06	U	EPA:300.0
	Chloride	15	NE	0.2	0.062		EPA:300.0
	Cyanide (Total)	0.003	200	0.01	0.003	U	SW-846:9014
	Fluoride	1.2	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as N	0.56	10	0.01	0.003		EPA:353.2
	Sulfate	66	NE	1	0.3		EPA:300.0

NE = Not Established

U = the analyte was analyzed for but not detected

Table-2 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Anions, Total Cyanide and Nitrate-Nitrite

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
SWTA3-MW4 4-Feb-15	Bromide	0.06	NE	0.2	0.06	U	EPA:300.0
	Chloride	20	NE	1	0.31		EPA:300.0
	Cyanide (Total)	0.003	200	0.01	0.003	U	SW-846:9014
	Fluoride	1.5	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as N	0.96	10	0.01	0.003		EPA:353.2
	Sulfate	52	NE	1	0.3		EPA:300.0
TRE-1 26-Jan-15	Bromide	0.79	NE	0.2	0.06		EPA:300.0
	Chloride	150	NE	2	0.62		EPA:300.0
	Cyanide (Total)	0.003	200	0.01	0.003	U	SW-846:9014
	Fluoride	1.6	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as N	2.1	10	0.05	0.015		EPA:353.2
	Sulfate	110	NE	10	3		EPA:300.0

NE = Not Established

U = the analyte was analyzed for but not detected

Table-3 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Hgih Explosive Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
SFR-2S 27-Jan-15	3,5-Dinitroaniline	0.015	0.12	0.015	U	SW-846:8330
	Amino-2,6-dinitrotoluene[4-]	0.018	0.12	0.018	U	SW-846:8330
	Amino-4,6-dinitrotoluene[2-]	0.0099	0.12	0.0099	U	SW-846:8330
	Dinitrobenzene[1,3-]	0.0095	0.12	0.0095	U	SW-846:8330
	Dinitrotoluene[2,4-]	0.011	0.12	0.011	U	SW-846:8330
	Dinitrotoluene[2,6-]	0.06	0.23	0.06	U	SW-846:8330
	HMX	0.012	0.12	0.012	U	SW-846:8330
	Nitrobenzene	0.015	0.12	0.015	U	SW-846:8330
	Nitroglycerin	0.75	1.2	0.44	JN	SW-846:8330
	Nitrotoluene[2-]	0.036	0.12	0.036	U	SW-846:8330
	Nitrotoluene[3-]	0.0072	0.12	0.0072	U	SW-846:8330
	Nitrotoluene[4-]	0.0067	0.12	0.0067	U	SW-846:8330
	PETN	0.2	0.56	0.2	U	SW-846:8330
	RDX	0.019	0.12	0.019	U	SW-846:8330
	Tetryl	0.047	0.12	0.047	U	SW-846:8330
	Trinitrobenzene[1,3,5-]	0.056	0.23	0.056	U	SW-846:8330
	Trinitrotoluene[2,4,6-]	0.027	0.12	0.027	U	SW-846:8330
SWTA3-MW3 3-Feb-15	Amino-2,6-dinitrotoluene[4-]	0.018	0.12	0.018	U	SW-846:8330
	Amino-4,6-dinitrotoluene[2-]	0.011	0.12	0.011	U	SW-846:8330
	Dinitrobenzene[1,3-]	0.0096	0.12	0.0096	U	SW-846:8330
	Dinitrotoluene[2,4-]	0.011	0.12	0.011	U	SW-846:8330
	Dinitrotoluene[2,6-]	0.061	0.23	0.061	U	SW-846:8330
	HMX	0.012	0.12	0.012	U	SW-846:8330
	Nitrobenzene	0.015	0.12	0.015	U	SW-846:8330
	Nitrotoluene[2-]	0.036	0.12	0.036	U	SW-846:8330
	Nitrotoluene[3-]	0.0072	0.12	0.0072	U	SW-846:8330
	Nitrotoluene[4-]	0.0068	0.12	0.0068	U	SW-846:8330
	RDX	0.02	0.12	0.02	U	SW-846:8330
	Tetryl	0.048	0.12	0.048	U	SW-846:8330
	Trinitrobenzene[1,3,5-]	0.057	0.23	0.057	U	SW-846:8330
	Trinitrotoluene[2,4,6-]	0.027	0.12	0.027	U	SW-846:8330

J = The result is an estimated value.

N = The Matrix Spike sample recovery is not within control limits.

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

Table-3 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program Groundwater Quality Results: Hgih Explosive Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
SWTA3-MW3 3-Feb-15 DUP	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
	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
	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
SWTA3-MW4 4-Feb-15	Amino-2,6-dinitrotoluene[4-]	0.018	0.12	0.018	U	SW-846:8330
	Amino-4,6-dinitrotoluene[2-]	0.0099	0.12	0.0099	U	SW-846:8330
	Dinitrobenzene[1,3-]	0.0095	0.12	0.0095	U	SW-846:8330
	Dinitrotoluene[2,4-]	0.011	0.12	0.011	U	SW-846:8330
	Dinitrotoluene[2,6-]	0.06	0.23	0.06	U	SW-846:8330
	HMX	0.012	0.12	0.012	U	SW-846:8330
	Nitrobenzene	0.015	0.12	0.015	U	SW-846:8330
	Nitrotoluene[2-]	0.036	0.12	0.036	U	SW-846:8330
	Nitrotoluene[3-]	0.0072	0.12	0.0072	U	SW-846:8330
	Nitrotoluene[4-]	0.0067	0.12	0.0067	U	SW-846:8330
	RDX	0.019	0.12	0.019	U	SW-846:8330
	Tetryl	0.047	0.12	0.047	U	SW-846:8330
	Trinitrobenzene[1,3,5-]	0.056	0.23	0.056	U	SW-846:8330
	Trinitrotoluene[2,4,6-]	0.027	0.12	0.027	U	SW-846:8330

J = The result is an estimated value.

N = The Matrix Spike sample recovery is not within control limits.

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

Table-3 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program Groundwater Quality Results: Hgih Explosive Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
TRE-1 26-Jan-15	3,5-Dinitroaniline	0.014	0.11	0.014	U	SW-846:8330
	Amino-2,6-dinitrotoluene[4-]	0.017	0.11	0.017	U	SW-846:8330
	Amino-4,6-dinitrotoluene[2-]	0.0091	0.11	0.0091	U	SW-846:8330
	Dinitrobenzene[1,3-]	0.0087	0.11	0.0087	U	SW-846:8330
	Dinitrotoluene[2,4-]	0.0093	0.11	0.0093	U	SW-846:8330
	Dinitrotoluene[2,6-]	0.056	0.21	0.056	U	SW-846:8330
	HMX	0.011	0.11	0.011	U	SW-846:8330
	Nitrobenzene	0.014	0.11	0.014	U	SW-846:8330
	Nitroglycerin	0.4	1.1	0.4	U	SW-846:8330
	Nitrotoluene[2-]	0.033	0.11	0.033	U	SW-846:8330
	Nitrotoluene[3-]	0.0066	0.11	0.0066	U	SW-846:8330
	Nitrotoluene[4-]	0.0062	0.11	0.0062	U	SW-846:8330
	PETN	0.19	0.52	0.19	U	SW-846:8330
	RDX	0.018	0.11	0.018	U	SW-846:8330
	Tetryl	0.043	0.11	0.043	U	SW-846:8330
	Trinitrobenzene[1,3,5-]	0.052	0.21	0.052	U	SW-846:8330
	Trinitrotoluene[2,4,6-]	0.025	0.11	0.025	U	SW-846:8330

J = The result is an estimated value.

N = The Matrix Spike sample recovery is not within control limits.

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

Table-4 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Detected Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	EPA (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
TRE-1 26-Jan-15	Chloroform	0.55	NE	1	0.3	J	SW-846:8260B_25

J = The result is an estimated value.

NE = Not Established

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

Table-5 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program
Groundwater Quality Results: Method Detection Limits for Volatile Organic Compounds
(EPA Method SW-846:8260B)

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

Analyte	MDL (µg/L)
Hexachlorobutadiene	0.3
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-6 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program Groundwater Quality Results: Gamma Spectroscopy, Gross Alpha, Gross Beta, Isotopic Uranium, Radium 226 and Radium 228

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
COYOTE SPRING 6-Feb-15	Actinium-228	19	±	5.3	16		EPA:901.1
	Americium-241	20	±	11	37	U	EPA:901.1
	Beryllium-7	-10	±	13	45	U	EPA:901.1
	Bismuth-212	31	±	19	61	U	EPA:901.1
	Bismuth-214	-6.6	±	7.3	24	UJ	EPA:901.1
	Cesium-134	-3.7	±	1.3	4.7	U	EPA:901.1
	Cesium-137	0.82	±	1.4	4.7	U	EPA:901.1
	Cobalt-60	-5	±	1.5	5.6	U	EPA:901.1
	Gross alpha	8.7	±	2.6	7.8		EPA:900
	Gross beta	28	±	4.1	11		EPA:900
	Iodine-131	7.7	±	6.5	21	U	EPA:901.1
	Lead-212	-0.82	±	4	13	U	EPA:901.1
	Lead-214	-8.3	±	5.6	19	UJ	EPA:901.1
	Potassium-40	21	±	37	120	U	EPA:901.1
	Protactinium-234m	290	±	230	770	U	EPA:901.1
	Ra-226	0.26	±	0.071	0.1		EPA:903.1
	Ra-228	0.72	±	0.15	0.45		EPA:904
	Sodium-22	-3	±	1.5	5.5	U	EPA:901.1
	Thallium-208	0.74	±	2.8	9.6	U	EPA:901.1
	Thorium-234	23	±	49	160	U	EPA:901.1
	Uranium-234	11	±	0.95	0.053		HASL-300:ISOU
	Uranium-235	0.29	±	0.062	0.062		HASL-300:ISOU
	Uranium-238	2.2	±	0.23	0.053		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.

Table-6 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program Groundwater Quality Results: Gamma Spectroscopy, Gross Alpha, Gross Beta, Isotopic Uranium, Radium 226 and Radium 228

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
MRN-3D 29-Jan-15	Actinium-228	19	±	3.8	17		EPA:901.1
	Americium-241	-2.1	±	7.8	26	U	EPA:901.1
	Beryllium-7	1.7	±	11	36	U	EPA:901.1
	Bismuth-212	4.9	±	19	64	U	EPA:901.1
	Bismuth-214	4.5	±	4.8	20	UJ	EPA:901.1
	Cesium-134	-0.4	±	2.1	7.2	U	EPA:901.1
	Cesium-137	0.061	±	1.3	4.4	U	EPA:901.1
	Cobalt-60	-0.67	±	1.7	5.9	U	EPA:901.1
	Gross alpha	3.8	±	0.51	1.1		EPA:900
	Gross beta	4.8	±	0.58	1.3		EPA:900
	Iodine-131	-2.7	±	2.4	8.3	U	EPA:901.1
	Lead-212	-0.79	±	4.1	14	U	EPA:901.1
	Lead-214	6.8	±	5.1	17	UJ	EPA:901.1
	Potassium-40	11	±	42	140	U	EPA:901.1
	Protactinium-234m	140	±	250	830	U	EPA:901.1
	Ra-226	0.09	±	0.048	0.14	U	EPA:903.1
	Ra-228	0.48	±	0.16	0.62	U	EPA:904
	Sodium-22	1	±	1.6	5.5	U	EPA:901.1
	Thallium-208	3.7	±	1.4	4.6	U	EPA:901.1
	Thorium-234	-4.3	±	34	110	U	EPA:901.1

J = the activity is an estimated value.

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

Table-6 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program Groundwater Quality Results: Gamma Spectroscopy, Gross Alpha, Gross Beta, Isotopic Uranium, Radium 226 and Radium 228

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
SFR-2S 27-Jan-15	Actinium-228	0.26	±	10	34	U	EPA:901.1
	Americium-241	-0.73	±	40	140	U	EPA:901.1
	Beryllium-7	3.9	±	9.8	33	U	EPA:901.1
	Bismuth-212	7.7	±	24	81	U	EPA:901.1
	Bismuth-214	7.5	±	5.6	18	UJ	EPA:901.1
	Cesium-134	-1.6	±	1.2	4.1	U	EPA:901.1
	Cesium-137	0.86	±	1.1	3.8	U	EPA:901.1
	Cobalt-60	0.066	±	1.1	3.9	U	EPA:901.1
	Gross alpha	17	±	1.6	1.7		EPA:900
	Gross beta	9.2	±	1	2.1		EPA:900
	Iodine-131	-1.3	±	2.5	8.6	U	EPA:901.1
	Lead-212	-3.5	±	4.1	14	U	EPA:901.1
	Lead-214	5.8	±	4.8	16	UJ	EPA:901.1
	Potassium-40	-27	±	37	120	U	EPA:901.1
	Protactinium-234m	300	±	200	640	U	EPA:901.1
	Ra-226	0.27	±	0.081	0.17		EPA:903.1
	Ra-228	0.37	±	0.15	0.58	U	EPA:904
	Sodium-22	-0.15	±	1.2	4	U	EPA:901.1
	Thallium-208	3.9	±	1.2	3.8		EPA:901.1
	Thorium-234	-4.4	±	70	230	U	EPA:901.1
	Uranium-234	18	±	1.6	0.11		HASL-300:ISOU
	Uranium-235	0.29	±	0.066	0.1		HASL-300:ISOU
	Uranium-238	5	±	0.47	0.068		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.

Table-6 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program Groundwater Quality Results: Gamma Spectroscopy, Gross Alpha, Gross Beta, Isotopic Uranium, Radium 226 and Radium 228

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
SWTA3-MW2 5-Feb-15	Actinium-228	19	±	4.8	14		EPA:901.1
	Americium-241	22	±	32	110	U	EPA:901.1
	Beryllium-7	24	±	12	38	U	EPA:901.1
	Bismuth-212	22	±	17	56	U	EPA:901.1
	Bismuth-214	-13	±	6.4	21	UJ	EPA:901.1
	Cesium-134	-0.68	±	2	6.9	U	EPA:901.1
	Cesium-137	0.69	±	1.3	4.5	U	EPA:901.1
	Cobalt-60	1.9	±	1.2	4	U	EPA:901.1
	Gross alpha	3	±	0.43	0.95		EPA:900
	Gross beta	5	±	0.61	1.4		EPA:900
	Iodine-131	-6.2	±	10	35	U	EPA:901.1
	Lead-212	2.8	±	4.1	14	U	EPA:901.1
	Lead-214	-9.1	±	5.2	18	UJ	EPA:901.1
	Potassium-40	45	±	34	110	U	EPA:901.1
	Protactinium-234m	-180	±	330	1100	U	EPA:901.1
	Ra-226	0.16	±	0.054	0.099		EPA:903.1
	Ra-228	0.44	±	0.12	0.42		EPA:904
	Sodium-22	0.74	±	1.3	4.3	U	EPA:901.1
	Thallium-208	3.2	±	1.3	4.1	U	EPA:901.1
	Thorium-234	32	±	65	210	U	EPA:901.1

J = the activity is an estimated value.

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

Table-6 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program Groundwater Quality Results: Gamma Spectroscopy, Gross Alpha, Gross Beta, Isotopic Uranium, Radium 226 and Radium 228

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
SWTA3-MW3 3-Feb-15	Actinium-228	12	±	4.1	17	U	EPA:901.1
	Americium-241	1.4	±	7.8	26	U	EPA:901.1
	Beryllium-7	21	±	12	38	U	EPA:901.1
	Bismuth-212	19	±	20	66	U	EPA:901.1
	Bismuth-214	0.47	±	6.8	23	UJ	EPA:901.1
	Cesium-134	-0.21	±	2.2	7.3	U	EPA:901.1
	Cesium-137	-0.82	±	1.4	4.7	U	EPA:901.1
	Cobalt-60	0.92	±	1.7	5.7	U	EPA:901.1
	Gross alpha	2.3	±	0.4	0.98		EPA:900
	Gross beta	4.3	±	0.59	1.5		EPA:900
	Iodine-131	10	±	4.7	15	U	EPA:901.1
	Lead-212	2.7	±	3.1	10	U	EPA:901.1
	Lead-214	-5	±	5.2	17	UJ	EPA:901.1
	Potassium-40	-2.9	±	46	150	U	EPA:901.1
	Protactinium-234m	590	±	250	810	U	EPA:901.1
	Ra-226	0.41	±	0.093	0.1		EPA:903.1
	Ra-228	0.15	±	0.12	0.54	U	EPA:904
	Sodium-22	-1.2	±	1.7	5.7	U	EPA:901.1
	Thallium-208	1.4	±	2.7	8.9	U	EPA:901.1
	Thorium-234	-71	±	39	130	U	EPA:901.1

J = the activity is an estimated value.

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

Table-6 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program Groundwater Quality Results: Gamma Spectroscopy, Gross Alpha, Gross Beta, Isotopic Uranium, Radium 226 and Radium 228

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
SWTA3-MW3 3-Feb-15 Dup	Actinium-228	14	±	4.6	17	U	EPA:901.1
	Americium-241	-16	±	12	40	U	EPA:901.1
	Beryllium-7	16	±	8.5	28	U	EPA:901.1
	Bismuth-212	46	±	20	65	U	EPA:901.1
	Bismuth-214	-0.39	±	6.7	22	UJ	EPA:901.1
	Cesium-134	-2	±	1.4	4.8	U	EPA:901.1
	Cesium-137	0.12	±	1.4	4.8	U	EPA:901.1
	Cobalt-60	-0.84	±	1.4	4.9	U	EPA:901.1
	Gross alpha	3.5	±	0.43	0.76		EPA:900
	Gross beta	3.8	±	0.45	1		EPA:900
	Iodine-131	5.9	±	5.7	19	U	EPA:901.1
	Lead-212	3.7	±	4.2	14	U	EPA:901.1
	Lead-214	-5.2	±	5.8	19	UJ	EPA:901.1
	Potassium-40	120	±	51	160	U	EPA:901.1
	Protactinium-234m	180	±	240	810	U	EPA:901.1
	Ra-226	0.12	±	0.047	0.1		EPA:903.1
	Ra-228	0.18	±	0.13	0.57	U	EPA:904
	Sodium-22	2.5	±	1.6	5.2	U	EPA:901.1
	Thallium-208	4.3	±	1.5	4.8	U	EPA:901.1
	Thorium-234	10	±	47	160	U	EPA:901.1

J = the activity is an estimated value.

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

Table-6 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program Groundwater Quality Results: Gamma Spectroscopy, Gross Alpha, Gross Beta, Isotopic Uranium, Radium 226 and Radium 228

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
SWTA3-MW4 4-Feb-15	Actinium-228	12	±	7.5	32	U	EPA:901.1
	Americium-241	-8.8	±	11	39	U	EPA:901.1
	Beryllium-7	12	±	13	42	U	EPA:901.1
	Bismuth-212	-0.21	±	20	68	U	EPA:901.1
	Bismuth-214	-2.5	±	6.6	22	UJ	EPA:901.1
	Cesium-134	-1.9	±	1.4	4.8	U	EPA:901.1
	Cesium-137	0.12	±	1.3	4.6	U	EPA:901.1
	Cobalt-60	-0.98	±	1.3	4.6	U	EPA:901.1
	Gross alpha	2.5	±	0.4	0.94		EPA:900
	Gross beta	4.9	±	0.6	1.4		EPA:900
	Iodine-131	2.2	±	8.5	29	U	EPA:901.1
	Lead-212	0.49	±	4.3	14	U	EPA:901.1
	Lead-214	7.2	±	2.8	9.1	UJ	EPA:901.1
	Potassium-40	20	±	47	160	U	EPA:901.1
	Protactinium-234m	72	±	220	760	U	EPA:901.1
	Ra-226	0.053	±	0.038	0.12	U	EPA:903.1
	Ra-228	0.25	±	0.11	0.43	U	EPA:904
	Sodium-22	3.3	±	1.4	4.4	U	EPA:901.1
	Thallium-208	5.4	±	1.5	4.6		EPA:901.1
	Thorium-234	3.4	±	43	140	U	EPA:901.1

J = the activity is an estimated value.

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

Table-6 NMED DOE OB FFY 2015 Q-2 Long-Term Stewardship Consolidated Groundwater Monitoring Program Groundwater Quality Results: Gamma Spectroscopy, Gross Alpha, Gross Beta, Isotopic Uranium, Radium 226 and Radium 228

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
TRE-1 26-Jan-15	Actinium-228	13	±	6.8	22	U	EPA:901.1
	Americium-241	4.9	±	8.9	30	U	EPA:901.1
	Beryllium-7	-10	±	14	48	U	EPA:901.1
	Bismuth-212	-2.9	±	24	81	U	EPA:901.1
	Bismuth-214	10	±	7.3	24	UJ	EPA:901.1
	Cesium-134	-3.7	±	2.6	9	U	EPA:901.1
	Cesium-137	-1.6	±	1.7	5.8	U	EPA:901.1
	Cobalt-60	-3.8	±	2.3	8	U	EPA:901.1
	Gross alpha	22	±	2	1.9		EPA:900
	Gross beta	7.9	±	1	2.5		EPA:900
	Iodine-131	-4.7	±	3.8	13	U	EPA:901.1
	Lead-212	8	±	4.5	15	U	EPA:901.1
	Lead-214	16	±	5.3	20	UJ	EPA:901.1
	Potassium-40	20	±	54	180	U	EPA:901.1
	Protactinium-234m	540	±	310	1000	U	EPA:901.1
	Ra-226	0.2	±	0.063	0.11		EPA:903.1
	Ra-228	0.62	±	0.16	0.59		EPA:904
	Sodium-22	0.34	±	2.1	7.1	U	EPA:901.1
	Thallium-208	4.8	±	1.8	5.8	U	EPA:901.1
	Thorium-234	10	±	45	150	U	EPA:901.1
	Uranium-234	24	±	2	0.098		HASL-300:ISOU
	Uranium-235	0.37	±	0.074	0.067		HASL-300:ISOU
	Uranium-238	6.1	±	0.56	0.069		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.