DOE Oversight Bureau, New Mexico Environment Department

Groundwater Monitoring at Sandia National Laboratories/New Mexico Technical Area-V

Conducted by the New Mexico Environment Department DOE Oversight Bureau for FFY 2014 Q-3

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Final Report

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The purpose of this communication is to transmit groundwater data collected by NMED DOE Oversight Bureau from Technical Area-V groundwater monitoring wells during third quarter FFY 2014.

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Introduction

The New Mexico Environment Department (NMED) DOE Oversight Bureau (Bureau) has compiled and assessed groundwater data collected during April and May 2014. The Bureau collected groundwater samples from Technical Area-V (TAV) groundwater monitoring wells AVN-1, LWDS-MW1, LWDS-MW2, TAV-MW2, TAV-MW6, TAV-MW8, TAV-MW9, TAV-MW13, and TAV-MW14. (See Figure 1.) Split samples were collected using standard Sandia National Laboratories/New Mexico sampling procedures and equipment. Bureau samples were submitted to an independent analytical laboratory where they were analyzed for total and dissolved target analyte list (TAL) metals plus uranium, anions, nitrate-nitrite, volatile organic compounds (VOCs), gross alpha and beta, gamma-emitting isotopes, and tritium. Nitrate-nitrite was detected at or above the U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) at monitoring well LWDS-MW1. Trichloroethylene (TCE) also exceeded the EPA MCL at monitoring wells LWDS-MW1, TAV-MW6, and TAV-MW14.

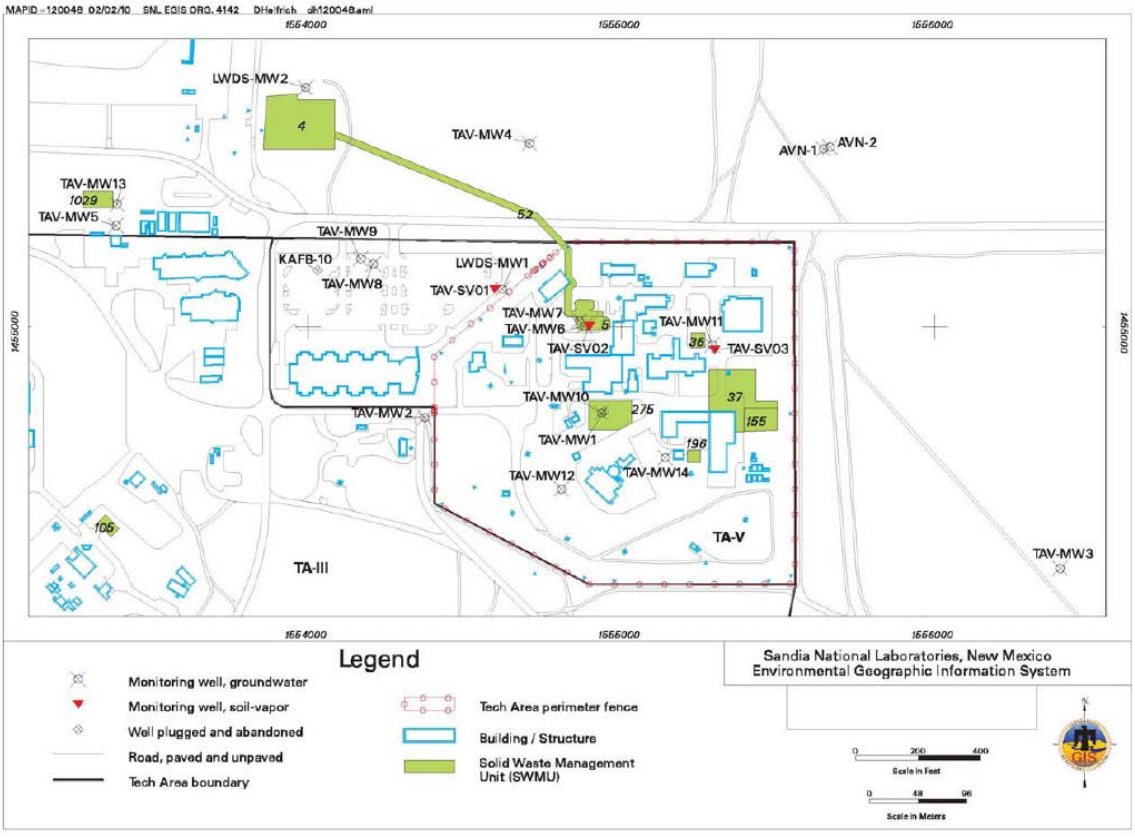

Figure 1. TA-V Monitoring Well Locations (16 Active Groundwater Monitoring Wells)
(Sandia National Laboratories, New Mexico Environmental Geographic Information System, Annual Groundwater Monitoring Report, Calendar Year 2012)

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 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 are listed in Table 1 and Table 2, respectively. All metal concentrations were below established MCLs.

Analytical results for anions (bromide, chloride, fluoride and sulfate) and nitrate-nitrite as nitrogen are listed in Table 3. Only fluoride has an MCL from the list of anions, and none of those results exceed the fluoride MCL. The nitrate-nitrite sample taken from LWDS-MW1 was detected at the MCL of 10 mg/L. All other values were below the nitrate MCL.

Analytical results for VOCs detected above the method detection limit (MDL) are listed in Table 4. Dichloroethene[cis-1,2-] was detected at low concentrations above the MDL at monitoring wells LWDS-MW1, TAV-MW6, and TAV-MW14, but the detections are below the EPA MCLs. Trichloroethylene (TCE) was detected above the MDL at monitoring wells LWDS-MW1, TAV-MW2, TAV-MW6, TAV-MW8, and TAV-MW14. Samples collected from LWDS-MW1, TAV-MW6, and TAV-MW14 exceeded the EPA MCL of 5 µg/L. Concentrations were 17 µg/L, 15 µg/L and 7.4 µg/L, respectively.

The MDLs for all the remaining VOCs are listed in Table 5.

Analytical results for tritium, gross alpha and beta activity, and gamma-emitting isotopes are presented in Table 6. All radionuclide results are below established MCLs.

Conclusions

Nitrate concentration at LWDS-MW1 was detected at the MCL of 10 mg/L. TCE results exceeded the MCL of 5 µg/L in samples collected from monitoring wells LWDS-MW1, TAV-MW6, and TAV-MW14. The maximum concentration of TCE detected during this sampling event was 17 µg/L in the sample from monitoring well LWDS-MW1.

Both TCE and nitrates have been contaminates of concern for the TA-V groundwater area of concern. The analytical results collected during this quarterly sampling event are consistent with historical detections.

References

Sandia National Laboratories, New Mexico Environmental Geographic Information System, Annual Groundwater Monitoring Report, Calendar Year 2012

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

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Table-1 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
AVN-1 7-May-14	Aluminum	0.26	NE	0.1	0.018	B	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.0014	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.086	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00018	0.004	0.001	0.00018	U	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	47	NE	0.5	0.014	B	SW-846:6010B
	Chromium	0.022	0.1	0.005	0.00062	B	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.25	NE	0.06	0.0057	B	SW-846:6010B
	Lead	0.00026	0.015	0.0005	0.00025	J	SW-846:6020B
	Magnesium	9.7	NE	0.5	0.015		SW-846:6010B
	Manganese	0.0035	NE	0.002	0.00017	B	SW-846:6010B
	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
	Potassium	3.5	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0025	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.001	NE	0.0001	0.00004		SW-846:6020B
	Sodium	35	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0019	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0074	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.027	NE	0.006	0.0011		SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-1 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
LWDS-MW1 19-May-14	Aluminum	0.018	NE	0.1	0.018	U	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.0022	0.01	0.002	0.00025		SW-846:6020B
	Barium	0.09	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00026	0.004	0.001	0.00018	J	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	69	NE	0.5	0.014		SW-846:6010B
	Chromium	0.0015	0.1	0.005	0.00062	J	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.094	NE	0.06	0.0057		SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	20	NE	0.5	0.015		SW-846:6010B
	Manganese	0.00017	NE	0.002	0.00017	U	SW-846:6010B
	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
	Potassium	3.5	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0059	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	64	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0034	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0044	NE	0.005	0.00062	JB	SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

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Table-1 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
LWDS-MW2 9-May-14	Aluminum	0.054	NE	0.1	0.018	JB	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.001	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.07	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00034	0.004	0.001	0.00018	J	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	48	NE	0.5	0.014		SW-846:6010B
	Chromium	0.0034	0.1	0.005	0.00062	JB	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.015	NE	0.06	0.0057	JB	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	13	NE	0.5	0.015		SW-846:6010B
	Manganese	0.00017	NE	0.002	0.00017	U	SW-846:6010B
	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
	Potassium	3	NE	0.5	0.12		SW-846:6010B
	Selenium	0.002	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.0017	NE	0.0001	0.00004		SW-846:6020B
	Sodium	41	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0027	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0064	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

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Table-1 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
TAV-MW2 12-May-14	Aluminum	0.063	NE	0.1	0.018	JB	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.00092	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.062	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00037	0.004	0.001	0.00018	J	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	73	NE	0.5	0.014		SW-846:6010B
	Chromium	0.0018	0.1	0.005	0.00062	JB	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.018	NE	0.06	0.0057	JB	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	23	NE	0.5	0.015		SW-846:6010B
	Manganese	0.00017	NE	0.002	0.00017	U	SW-846:6010B
	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
	Potassium	4.4	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0028	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	62	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0056	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0053	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

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Table-1 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
TAV-MW6 22-May-14	Aluminum	0.094	NE	0.1	0.018	JB	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.0011	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.068	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00018	0.004	0.001	0.00018	U	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	69	NE	0.5	0.014		SW-846:6010B
	Chromium	0.0026	0.1	0.005	0.00062	J	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.091	NE	0.06	0.0057	B	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	20	NE	0.5	0.015	B	SW-846:6010B
	Manganese	0.0017	NE	0.002	0.00017	JB	SW-846:6010B
	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
	Potassium	4.3	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0035	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	61	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0037	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0048	NE	0.005	0.00062	J	SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

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Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TAV-MW8 13-May-14	Aluminum	0.41	NE	0.1	0.018	B	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.0011	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.055	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00041	0.004	0.001	0.00018	J	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	59	NE	0.5	0.014		SW-846:6010B
	Chromium	0.0018	0.1	0.005	0.00062	JB	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.25	NE	0.06	0.0057	B	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	17	NE	0.5	0.015		SW-846:6010B
	Manganese	0.0045	NE	0.002	0.00017	B	SW-846:6010B
	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
	Potassium	4.3	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0027	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	53	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0032	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.006	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

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Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TAV-MW9 5-May-14	Aluminum	0.032	NE	0.1	0.018	J	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.00084	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.066	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00076	0.004	0.001	0.00018	JB	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	64	NE	0.5	0.014	B	SW-846:6010B
	Chromium	0.00062	0.1	0.005	0.00062	U	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.025	NE	0.06	0.0057	JB	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	19	NE	0.5	0.015	B	SW-846:6010B
	Manganese	0.0045	NE	0.002	0.00017	B	SW-846:6010B
	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
	Potassium	4.6	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0018	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	55	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0052	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0059	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.016	NE	0.006	0.0011	B	SW-846:6010B

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Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TAV-MW13 30-April-14	Aluminum	0.018	NE	0.1	0.018	U	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.0012	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.059	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00069	0.004	0.001	0.00018	JB	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	53	NE	0.5	0.014	B	SW-846:6010B
	Chromium	0.00062	0.1	0.005	0.00062	U	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.0057	NE	0.06	0.0057	U	SW-846:6010B
	Lead	0.0004	0.015	0.0005	0.00025	J	SW-846:6020B
	Magnesium	15	NE	0.5	0.015	B	SW-846:6010B
	Manganese	0.0014	NE	0.002	0.00017	JB	SW-846:6010B
	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
	Potassium	3.7	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0019	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	46	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0035	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0053	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.006	NE	0.006	0.0011	JB	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-1 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
TAV-MW14 20-May-14	Aluminum	0.056	NE	0.1	0.018	J	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.00081	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.062	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.0004	0.004	0.001	0.00018	J	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	65	NE	0.5	0.014		SW-846:6010B
	Chromium	0.0013	0.1	0.005	0.00062	J	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.1	NE	0.06	0.0057		SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	19	NE	0.5	0.015		SW-846:6010B
	Manganese	0.00057	NE	0.002	0.00017	JB	SW-846:6010B
	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
	Potassium	4.9	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0018	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	60	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0043	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0043	NE	0.005	0.00062	JB	SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-2 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
AVN-1 7-May-14	Aluminum	0.023	NE	0.1	0.018	JB	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.0012	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.084	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00018	0.004	0.001	0.00018	U	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	46	NE	0.5	0.014	B	SW-846:6010B
	Chromium	0.00062	0.1	0.005	0.00062	U	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.0057	NE	0.06	0.0057	U	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	9.5	NE	0.5	0.015		SW-846:6010B
	Manganese	0.00017	NE	0.002	0.00017	U	SW-846:6010B
	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
	Potassium	3.4	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0026	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00045	NE	0.0001	0.00004		SW-846:6020B
	Sodium	35	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0019	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0066	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.0033	NE	0.006	0.0011	J	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-2 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
LWDS-MW1 19-May-14	Aluminum	0.018	NE	0.1	0.018	U	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.0019	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.09	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00029	0.004	0.001	0.00018	J	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	70	NE	0.5	0.014		SW-846:6010B
	Chromium	0.00082	0.1	0.005	0.00062	J	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.06	NE	0.06	0.0057	J	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	21	NE	0.5	0.015		SW-846:6010B
	Manganese	0.00017	NE	0.002	0.00017	U	SW-846:6010B
	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
	Potassium	3.6	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0053	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	64	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0032	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0044	NE	0.005	0.00062	JB	SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-2 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
LWDS-MW2 9-May-14	Aluminum	0.057	NE	0.1	0.018	JB	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.0012	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.071	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00044	0.004	0.001	0.00018	J	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	48	NE	0.5	0.014		SW-846:6010B
	Chromium	0.0024	0.1	0.005	0.00062	JB	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.012	NE	0.06	0.0057	JB	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	13	NE	0.5	0.015		SW-846:6010B
	Manganese	0.00017	NE	0.002	0.00017	U	SW-846:6010B
	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
	Potassium	3	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0027	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00074	NE	0.0001	0.00004		SW-846:6020B
	Sodium	41	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0029	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.006	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-2 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
TAV-MW2 12-May-14	Aluminum	0.054	NE	0.1	0.018	JB	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.00075	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.062	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00044	0.004	0.001	0.00018	J	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	74	NE	0.5	0.014		SW-846:6010B
	Chromium	0.018	0.1	0.005	0.00062	B	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.064	NE	0.06	0.0057	B	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	23	NE	0.5	0.015		SW-846:6010B
	Manganese	0.0016	NE	0.002	0.00017	JB	SW-846:6010B
	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
	Potassium	4.3	NE	0.5	0.12		SW-846:6010B
	Selenium	0.002	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	62	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0055	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0063	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-2 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
TAV-MW6 22-May-14	Aluminum	0.018	NE	0.1	0.018	U	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.0011	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.067	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00018	0.004	0.001	0.00018	U	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	68	NE	0.5	0.014		SW-846:6010B
	Chromium	0.0019	0.1	0.005	0.00062	J	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.09	NE	0.06	0.0057	B	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	20	NE	0.5	0.015	B	SW-846:6010B
	Manganese	0.00022	NE	0.002	0.00017	JB	SW-846:6010B
	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
	Potassium	4.2	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0038	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	60	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0037	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0048	NE	0.005	0.00062	J	SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-2 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
TAV-MW8 13-May-14	Aluminum	0.054	NE	0.1	0.018	JB	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.001	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.054	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00041	0.004	0.001	0.00018	J	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	60	NE	0.5	0.014		SW-846:6010B
	Chromium	0.0026	0.1	0.005	0.00062	JB	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.0064	NE	0.06	0.0057	JB	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	17	NE	0.5	0.015		SW-846:6010B
	Manganese	0.00017	NE	0.002	0.00017	U	SW-846:6010B
	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
	Potassium	4.2	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0025	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	54	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0032	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0062	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-2 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
TAV-MW9 5-May-14	Aluminum	0.018	NE	0.1	0.018	U	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.00095	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.067	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00076	0.004	0.001	0.00018	JB	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	65	NE	0.5	0.014	B	SW-846:6010B
	Chromium	0.00062	0.1	0.005	0.00062	U	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.0057	NE	0.06	0.0057	U	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	20	NE	0.5	0.015	B	SW-846:6010B
	Manganese	0.0028	NE	0.002	0.00017	B	SW-846:6010B
	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
	Potassium	4.7	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0012	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	56	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0056	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0062	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.0042	NE	0.006	0.0011	JB	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-2 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
TAV-MW13 30-April-14	Aluminum	0.018	NE	0.1	0.018	U	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.0014	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.06	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.00073	0.004	0.001	0.00018	JB	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	53	NE	0.5	0.014	B	SW-846:6010B
	Chromium	0.00062	0.1	0.005	0.00062	U	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.016	NE	0.06	0.0057	JB	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	15	NE	0.5	0.015	B	SW-846:6010B
	Manganese	0.00017	NE	0.002	0.00017	U	SW-846:6010B
	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
	Potassium	3.7	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0029	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	46	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.0035	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0053	NE	0.005	0.00062		SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-2 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
TAV-MW14 20-May-14	Aluminum	0.018	NE	0.1	0.018	U	SW-846:6010B
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020B
	Arsenic	0.00061	0.01	0.002	0.00025	J	SW-846:6020B
	Barium	0.059	2	0.002	0.00022	B	SW-846:6010B
	Beryllium	0.0003	0.004	0.001	0.00018	J	SW-846:6010B
	Cadmium	0.00012	0.005	0.0003	0.00012	U	SW-846:6020B
	Calcium	63	NE	0.5	0.014		SW-846:6010B
	Chromium	0.0014	0.1	0.005	0.00062	J	SW-846:6010B
	Cobalt	0.00057	NE	0.002	0.00057	U	SW-846:6010B
	Copper	0.0011	1.3	0.002	0.0011	U	SW-846:6010B
	Iron	0.011	NE	0.06	0.0057	J	SW-846:6010B
	Lead	0.00025	0.015	0.0005	0.00025	U	SW-846:6020B
	Magnesium	18	NE	0.5	0.015		SW-846:6010B
	Manganese	0.00017	NE	0.002	0.00017	U	SW-846:6010B
	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
	Potassium	4.8	NE	0.5	0.12		SW-846:6010B
	Selenium	0.0023	0.05	0.001	0.00054		SW-846:6020B
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020B
	Sodium	58	NE	0.5	0.012	B	SW-846:6010B
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020B
	Uranium	0.004	0.03	0.0001	0.000088		SW-846:6020B
	Vanadium	0.0043	NE	0.005	0.00062	JB	SW-846:6010B
	Zinc	0.0011	NE	0.006	0.0011	U	SW-846:6010B

B = Analyte was detected in the blank sample.

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

U = The analyte was analyzed for but not detected.

Table-3 NMED DOE OB FFY 2014 Q-3 Technical Area-V Groundwater Quality Results: Anions 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
AVN-1 7-May-14	Bromide	0.06	NE	0.2	0.06	U	EPA:300.0
	Chloride	10	NE	0.2	0.062		EPA:300.0
	Fluoride	1.2	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	8	10	0.05	0.015		EPA:353.2
	Sulfate	31	NE	1	0.3		EPA:300.0
LWDS-MW1 19-May-14	Bromide	0.82	NE	0.2	0.06		EPA:300.0
	Chloride	82	NE	1	0.31		EPA:300.0
	Fluoride	0.59	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	**10**	10	0.1	0.03		EPA:353.2
	Sulfate	40	NE	1	0.3		EPA:300.0
LWDS-MW2 9-May-14	Bromide	0.06	NE	0.2	0.06	U	EPA:300.0
	Chloride	14	NE	0.2	0.062		EPA:300.0
	Fluoride	1.3	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	7.3	10	0.1	0.03		EPA:353.2
	Sulfate	40	NE	1	0.3		EPA:300.0
TAV-MW2 12-May-14	Bromide	0.37	NE	0.2	0.06		EPA:300.0
	Chloride	62	NE	2	0.62		EPA:300.0
	Fluoride	0.98	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	3.1	10	0.05	0.015		EPA:353.2
	Sulfate	59	NE	1	0.3		EPA:300.0
TAV-MW6 22-May-14	Bromide	0.86	NE	0.2	0.06		EPA:300.0
	Chloride	80	NE	1	0.31		EPA:300.0
	Fluoride	1.1	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	7.6	10	0.1	0.03		EPA:353.2
	Sulfate	44	NE	1	0.3		EPA:300.0
TAV-MW8 13-May-14	Bromide	0.35	NE	0.2	0.06		EPA:300.0
	Chloride	43	NE	1	0.31		EPA:300.0
	Fluoride	1.3	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	5.2	10	0.1	0.03		EPA:353.2
	Sulfate	55	NE	1	0.3		EPA:300.0
TAV-MW9 5-May-14	Bromide	0.28	NE	0.2	0.06		EPA:300.0
	Chloride	34	NE	1	0.31		EPA:300.0
	Fluoride	0.89	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	3.3	10	0.05	0.015		EPA:353.2
	Sulfate	61	NE	1	0.3		EPA:300.0

NE = Not established

U = The analyte was analyzed for but not detected.

Table-3 NMED DOE OB FFY 2014 Q-3 Technical Area-V Groundwater Quality Results: Anions 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
TAV-MW13 30-April-14	Bromide	0.2	NE	0.2	0.06		EPA:300.0
	Chloride	20	NE	1	0.31		EPA:300.0
	Fluoride	1.2	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	5	10	0.05	0.015		EPA:353.2
	Sulfate	53	NE	1	0.3		EPA:300.0
TAV-MW14 20-May-14	Bromide	0.36	NE	0.2	0.06		EPA:300.0
	Chloride	54	NE	1	0.31		EPA:300.0
	Fluoride	1.4	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	7.6	10	0.1	0.03		EPA:353.2
	Sulfate	55	NE	1	0.3		EPA:300.0

NE = Not established

U = The analyte was analyzed for but not detected.

Table-4 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
LWDS-MW1 19-May-14	Dichloroethene[cis-1,2-]	4	70	1	0.3		SW-846:8260B_25
	Trichloroethene	**17**	5	1	0.3		SW-846:8260B_25
TAV-MW2 12-May-14	Trichloroethene	1.1	5	1	0.3		SW-846:8260B_25
TAV-MW6 22-May-14	Dichloroethene[cis-1,2-]	3	70	1	0.3		SW-846:8260B_25
	Trichloroethene	**15**	5	1	0.3		SW-846:8260B_25
TAV-MW8 13-May-14	Trichloroethene	2.6	5	1	0.3		SW-846:8260B_25
TAV-MW14 20-May-14	Dichloroethene[cis-1,2-]	1	70	1	0.3	J	SW-846:8260B_25
	Trichloroethene	**7.4**	5	1	0.3		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).

Table-5 NMED DOE OB FFY 2014 Q-3 Technical Area-V 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
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-6 NMED DOE OB FFY 2014 Q-3 Technical Area-V Groundwater Quality Results: Gross Alpha, Gross Beta, Gamma Spectroscopy and Tritium

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
AVN-1 7-May-14	Actinium-228	19	±	5.3	16		EPA:901.1
	Americium-241	1.6	±	12	39	U	EPA:901.1
	Beryllium-7	14	±	11	37	U	EPA:901.1
	Bismuth-212	38	±	19	62	U	EPA:901.1
	Bismuth-214	29	±	5.3	19	J	EPA:901.1
	Cesium-134	-4.6	±	1.5	5.2	U	EPA:901.1
	Cesium-137	1.9	±	1.4	4.8	U	EPA:901.1
	Cobalt-60	-2.1	±	1.6	5.6	U	EPA:901.1
	Gross alpha	1.6	±	0.33	0.89		EPA:900
	Gross beta	2.7	±	0.48	1.4		EPA:900
	Iodine-131	0.29	±	2.3	7.8	U	EPA:901.1
	Lead-212	-4.4	±	3.8	13	U	EPA:901.1
	Lead-214	21	±	4.4	16	J	EPA:901.1
	Potassium-40	20	±	40	130	U	EPA:901.1
	Protactinium-234m	550	±	230	750	U	EPA:901.1
	Sodium-22	2.8	±	1.4	4.4	U	EPA:901.1
	Thallium-208	4	±	1.4	4.3	U	EPA:901.1
	Thorium-234	11	±	38	120	U	EPA:901.1
	Tritium	68	±	95	320	U	EPA:906.0
LWDS-MW1 19-May-14	Actinium-228	6.8	±	4.3	14	U	EPA:901.1
	Americium-241	-14	±	41	140	U	EPA:901.1
	Beryllium-7	11	±	6.7	22	U	EPA:901.1
	Bismuth-212	13	±	15	51	U	EPA:901.1
	Bismuth-214	4.7	±	4.7	15	UJ	EPA:901.1
	Cesium-134	-1.9	±	1.2	4.3	U	EPA:901.1
	Cesium-137	0.59	±	1.1	3.8	U	EPA:901.1
	Cobalt-60	-0.65	±	1.1	3.8	U	EPA:901.1
	Gross alpha	2.4	±	0.47	1.2		EPA:900
	Gross beta	4.4	±	0.55	1.3		EPA:900
	Iodine-131	2.7	±	3.4	11	U	EPA:901.1
	Lead-212	2.3	±	3.4	11	U	EPA:901.1
	Lead-214	6.7	±	4.3	14	UJ	EPA:901.1
	Potassium-40	-2.2	±	34	110	U	EPA:901.1
	Protactinium-234m	470	±	190	610	U	EPA:901.1
	Sodium-22	-0.34	±	1.2	4.2	U	EPA:901.1
	Thallium-208	3.9	±	1.2	3.8		EPA:901.1
	Thorium-234	-6	±	83	270	U	EPA:901.1
	Tritium	-37	±	82	280	U	EPA:906.0

J = the activity values are estimated values

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

Table-6 NMED DOE OB FFY 2014 Q-3 Technical Area-V Groundwater Quality Results: Gross Alpha, Gross Beta, Gamma Spectroscopy and Tritium

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
LWDS-MW2 9-May-14	Actinium-228	-14	±	11	37	U	EPA:901.1
	Americium-241	-20	±	12	40	U	EPA:901.1
	Beryllium-7	6	±	11	38	U	EPA:901.1
	Bismuth-212	36	±	19	63	U	EPA:901.1
	Bismuth-214	17	±	4.9	18	UJ	EPA:901.1
	Cesium-134	-5.1	±	1.5	5.3	U	EPA:901.1
	Cesium-137	0.83	±	1.4	4.7	U	EPA:901.1
	Cobalt-60	-0.57	±	1.5	5.3	U	EPA:901.1
	Gross alpha	3.7	±	0.46	0.8		EPA:900
	Gross beta	2.9	±	0.45	1.2		EPA:900
	Iodine-131	-1.4	±	3	10	U	EPA:901.1
	Lead-212	-3.6	±	4	13	U	EPA:901.1
	Lead-214	14	±	5	16	UJ	EPA:901.1
	Potassium-40	-61	±	39	130	U	EPA:901.1
	Protactinium-234m	1000	±	240	730		EPA:901.1
	Sodium-22	-0.52	±	1.5	5.2	U	EPA:901.1
	Thallium-208	-1.1	±	2.7	9.2	U	EPA:901.1
	Thorium-234	36	±	40	130	U	EPA:901.1
	Tritium	-120	±	92	310	U	EPA:906.0
TAV-MW2 12-May-14.	Actinium-228	0.24	±	15	50	U	EPA:901.1
	Americium-241	5.2	±	7.6	25	U	EPA:901.1
	Beryllium-7	11	±	12	39	U	EPA:901.1
	Bismuth-212	50	±	26	83	U	EPA:901.1
	Bismuth-214	30	±	8.4	26	J	EPA:901.1
	Cesium-134	-0.66	±	2.3	7.7	U	EPA:901.1
	Cesium-137	-1.1	±	1.7	5.8	U	EPA:901.1
	Cobalt-60	-4	±	2.1	7.6	U	EPA:901.1
	Gross alpha	5.8	±	0.68	1.2		EPA:900
	Gross beta	4.2	±	0.61	1.6		EPA:900
	Iodine-131	0.52	±	2.7	9	U	EPA:901.1
	Lead-212	3.6	±	4	13	U	EPA:901.1
	Lead-214	25	±	5.1	20	J	EPA:901.1
	Potassium-40	33	±	52	170	U	EPA:901.1
	Protactinium-234m	490	±	290	930	U	EPA:901.1
	Sodium-22	-0.64	±	1.9	6.4	U	EPA:901.1
	Thallium-208	4.9	±	1.7	5.4	U	EPA:901.1
	Thorium-234	30	±	48	160	U	EPA:901.1
	Tritium	-87	±	93	310	U	EPA:906.0

J = the activity values are estimated values

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

Table-6 NMED DOE OB FFY 2014 Q-3 Technical Area-V Groundwater Quality Results: Gross Alpha, Gross Beta, Gamma Spectroscopy and Tritium

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
TAV-MW6 22-May-14	Actinium-228	-0.39	±	8.5	29	U	EPA:901.1
	Americium-241	-0.43	±	2.1	7.2	U	EPA:901.1
	Beryllium-7	-3.3	±	9.2	31	U	EPA:901.1
	Bismuth-212	29	±	15	48	U	EPA:901.1
	Bismuth-214	20	±	4.3	17	J	EPA:901.1
	Cesium-134	-1	±	1.1	3.7	U	EPA:901.1
	Cesium-137	1.2	±	1.1	3.5	U	EPA:901.1
	Cobalt-60	-0.77	±	1.1	3.9	U	EPA:901.1
	Gross alpha	3.4	±	0.53	1.2		EPA:900
	Gross beta	4.6	±	0.59	1.4		EPA:900
	Iodine-131	1.6	±	2.2	7.3	U	EPA:901.1
	Lead-212	4.1	±	3	10	U	EPA:901.1
	Lead-214	12	±	4.5	14	UJ	EPA:901.1
	Potassium-40	5.2	±	31	100	U	EPA:901.1
	Protactinium-234m	290	±	180	600	U	EPA:901.1
	Sodium-22	0.086	±	1.2	4.2	U	EPA:901.1
	Thallium-208	-2	±	2.6	8.7	U	EPA:901.1
	Thorium-234	40	±	20	66	U	EPA:901.1
	Tritium	-4	±	100	340	U	EPA:906.0
TAV-MW8 13-May-14	Actinium-228	-5.3	±	8.9	30	U	EPA:901.1
	Americium-241	-8.8	±	42	140	U	EPA:901.1
	Beryllium-7	-2	±	9.4	32	U	EPA:901.1
	Bismuth-212	42	±	22	71	U	EPA:901.1
	Bismuth-214	25	±	5.4	18	J	EPA:901.1
	Cesium-134	0.074	±	1.2	4	U	EPA:901.1
	Cesium-137	-0.54	±	1.1	3.9	U	EPA:901.1
	Cobalt-60	0.95	±	1.1	3.7	U	EPA:901.1
	Gross alpha	3.1	±	0.58	1.5		EPA:900
	Gross beta	3.2	±	0.7	2.1		EPA:900
	Iodine-131	-0.83	±	1.8	6.2	U	EPA:901.1
	Lead-212	5.8	±	3.5	11	U	EPA:901.1
	Lead-214	33	±	5.4	18	J	EPA:901.1
	Potassium-40	-27	±	35	120	U	EPA:901.1
	Protactinium-234m	400	±	190	600	U	EPA:901.1
	Sodium-22	1.5	±	1.2	3.9	U	EPA:901.1
	Thallium-208	4.2	±	1.2	3.8		EPA:901.1
	Thorium-234	13	±	60	200	U	EPA:901.1
	Tritium	-13	±	93	310	U	EPA:906.0

J = the activity values are estimated values

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

Table-6 NMED DOE OB FFY 2014 Q-3 Technical Area-V Groundwater Quality Results: Gross Alpha, Gross Beta, Gamma Spectroscopy and Tritium

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
TAV-MW9 5-May-14	Actinium-228	16	±	4.2	15		EPA:901.1
	Americium-241	-2.3	±	13	43	U	EPA:901.1
	Beryllium-7	9.7	±	9.4	31	U	EPA:901.1
	Bismuth-212	27	±	17	57	U	EPA:901.1
	Bismuth-214	22	±	7.1	23	UJ	EPA:901.1
	Cesium-134	-2.7	±	1.3	4.6	U	EPA:901.1
	Cesium-137	0.4	±	1.2	3.9	U	EPA:901.1
	Cobalt-60	-0.24	±	1.4	4.9	U	EPA:901.1
	Gross alpha	5.9	±	0.67	1		EPA:900
	Gross beta	3.7	±	0.55	1.4		EPA:900
	Iodine-131	-0.12	±	2	6.8	U	EPA:901.1
	Lead-212	-1.1	±	3.7	12	U	EPA:901.1
	Lead-214	24	±	4.3	15	J	EPA:901.1
	Potassium-40	2.5	±	34	110	U	EPA:901.1
	Protactinium-234m	-21	±	220	740	U	EPA:901.1
	Sodium-22	1	±	1.4	4.7	U	EPA:901.1
	Thallium-208	-1.6	±	2.9	9.7	U	EPA:901.1
	Thorium-234	98	±	35	110	U	EPA:901.1
	Tritium	120	±	96	320	U	EPA:906.0
TAV-MW13 30-Apr-14	Actinium-228	11	±	3.3	13	U	EPA:901.1
	Americium-241	-33	±	39	130	U	EPA:901.1
	Beryllium-7	21	±	10	32	U	EPA:901.1
	Bismuth-212	5.1	±	15	50	U	EPA:901.1
	Bismuth-214	15	±	4.1	17	UJ	EPA:901.1
	Cesium-134	-1.5	±	1.2	4.1	U	EPA:901.1
	Cesium-137	-0.36	±	1.1	3.8	U	EPA:901.1
	Cobalt-60	-0.41	±	1.1	3.9	U	EPA:901.1
	Gross alpha	4.5	±	0.57	1.1		EPA:900
	Gross beta	3.6	±	0.55	1.5		EPA:900
	Iodine-131	0.98	±	3	10	U	EPA:901.1
	Lead-212	3.4	±	3.7	12	U	EPA:901.1
	Lead-214	5.1	±	4.6	15	UJ	EPA:901.1
	Potassium-40	-40	±	36	120	U	EPA:901.1
	Protactinium-234m	190	±	120	380	U	EPA:901.1
	Sodium-22	2.2	±	1.2	3.8	U	EPA:901.1
	Thallium-208	4.1	±	1.2	3.8		EPA:901.1
	Thorium-234	3	±	71	240	U	EPA:901.1
	Tritium	160	±	95	310	U	EPA:906.0

J = the activity values are estimated values

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

Table-6 NMED DOE OB FFY 2014 Q-3 Technical Area-V Groundwater Quality Results: Gross Alpha, Gross Beta, Gamma Spectroscopy and Tritium

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)			MDA (pCi/L)	Laboratory Qualifier	Analytical Method
TAV-MW14 20-May-14	Actinium-228	14	±	4.8	15	U	EPA:901.1
	Americium-241	-4.4	±	7.8	26	U	EPA:901.1
	Beryllium-7	2.3	±	10	34	U	EPA:901.1
	Bismuth-212	62	±	18	57		EPA:901.1
	Bismuth-214	2.3	±	6.6	22	UJ	EPA:901.1
	Cesium-134	-1.2	±	1.3	4.5	U	EPA:901.1
	Cesium-137	0.7	±	1.2	4	U	EPA:901.1
	Cobalt-60	-3.6	±	1.4	5.1	U	EPA:901.1
	Gross alpha	4.7	±	0.55	0.95		EPA:900
	Gross beta	5.8	±	0.64	1.3		EPA:900
	Iodine-131	0.82	±	3.1	10	U	EPA:901.1
	Lead-212	0.57	±	3.6	12	U	EPA:901.1
	Lead-214	-1.3	±	4.8	16	UJ	EPA:901.1
	Potassium-40	-12	±	35	120	U	EPA:901.1
	Protactinium-234m	-31	±	210	720	U	EPA:901.1
	Sodium-22	-1.3	±	1.4	4.9	U	EPA:901.1
	Thallium-208	1.8	±	2.5	8.9	U	EPA:901.1
	Thorium-234	-13	±	38	130	U	EPA:901.1
	Tritium	-13	±	82	280	U	EPA:906.0

J = the activity values are estimated values

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