

DOE Oversight Bureau, New Mexico Environment Department

**Groundwater Monitoring at
Sandia National Laboratories/New Mexico
Tijeras Arroyo Groundwater**

**Conducted by the
New Mexico Environment Department DOE Oversight Bureau
for FFY 2014 Q-4**

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Final Report

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The purpose of this communication is to transmit groundwater data collected by New Mexico Environment Department DOE Oversight Bureau from Tijeras Arroyo groundwater monitoring wells during the fourth quarter of FFY 2014.

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Introductory remarks

The New Mexico Environment Department (NMED) DOE Oversight Bureau (DOE-OB or the Bureau) has compiled and assessed groundwater data collected during August 2014. The Bureau collected groundwater samples from Tijeras Arroyo Groundwater (TAG) monitoring wells PGS-2, TA1-W-01, TA1-W-05, TA1-W-08, TA2-SW1-320, TA2-W-01, TA2-W-19, TJA-3, TJA-6, and WYO-4. Split samples were collected using standard Sandia National Laboratories/New Mexico (SNL/NM) sampling procedures and equipment. The samples were submitted to an independent analytical laboratory where they were analyzed for total metals, anions, nitrates, volatile organic compounds (VOCs), gross alpha, gross beta, gamma-emitting isotopes, and tritium. Samples collected for nitrates from monitoring wells TA2-SW1-320 and TA2-W-19 were detected at or above the U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) of 10 mg/L. Trichloroethylene (TCE) was also detected at the U.S. EPA MCL of 5 µg/L at monitoring well WYO-4.

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 target analyte list (TAL) metals plus uranium are presented in Table 1. All metal concentrations were below established MCLs.

Analytical results for major anions (as bromide, chloride, fluoride, and sulfate) and nitrate are listed in Table 2. All major anions were detected below established MCLs. Nitrate levels were detected at or above the EPA MCL of 10 mg/L at monitoring wells TA2-SW1-320 (21 mg/L) and TA2-W-19 (10 mg/L).

Volatile organic compounds (VOCs) detected above the method detection limit are presented in Table 3. All samples were detected below established MCLs, except trichloroethylene (TCE). Monitoring well WYO-4 measured a TCE concentration of 5 µg/L. The MDLs for the remaining VOCs analyzed from TAG monitoring wells are presented in Table-4.

Analytical results for radiochemistry samples are listed in Table-5. Samples were analyzed for gross alpha, gross beta, gamma emitting isotopes and tritium. No isotopes were detected above U.S. EPA MCLs.

Conclusion

Samples were collected from TAG monitoring wells PGS-2, TA1-W-01, TA1-W-05, TA1-W-08, TA2-SW1-320, TA2-W-01, TA2-W-19, TJA-3, TJA-6, and WYO-4. Samples were analyzed for total metals, anions, nitrates, VOCs, gross alpha and beta, gamma-emitting isotopes, and tritium. Samples collected for nitrates from monitoring wells TA2-SW1-320 and TA2-W-19 were detected at or above the U.S EPA MCL of 10 mg/L. Trichloroethylene (TCE) was also detected at the U.S. EPA MCL of 5 µg/L at monitoring well WYO-4.

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 2014 Q-4 Tijeras Arroyo Groundwater Quality Results: Total TAL Metals + U

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
PGS-2 15-Aug-14	Aluminum	0.019	NE	0.05	0.017	J	SW-846:6020
	Antimony	0.00049	0.006	0.0003	0.00017		SW-846:6020
	Arsenic	0.0027	0.01	0.002	0.00025		SW-846:6020
	Barium	0.072	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	66	NE	1	0.09		SW-846:6020
	Chromium	0.026	0.1	0.01	0.0013		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	0.27	NE	0.1	0.016		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	0.002	NE	0.002	0.00052	J	SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.037	NE	0.005	0.0014		SW-846:6020
	Potassium	2.8	NE	1	0.16		SW-846:6020
	Selenium	0.0016	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	47	NE	1	0.24		SW-846:6020
Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020	
Uranium	0.00051	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0047	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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

NE = Not Established

U = the analyte was analyzed for but not detected

Table-1 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo Groundwater Quality Results: Total TAL Metals + U

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TA1-W-01 13-Aug-14	Aluminum	0.029	NE	0.05	0.017	J	SW-846:6020
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020
	Arsenic	0.00044	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.05	2	0.001	0.00041		SW-846:6020
	Beryllium	0.00013	0.004	0.0005	0.00013	U	SW-846:6020
	Cadmium	0.00056	0.005	0.0003	0.00012		SW-846:6020
	Calcium	67	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	0.035	NE	0.1	0.016	J	SW-846:6020
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020
	Magnesium	13	NE	0.1	0.039		SW-846:6020
	Manganese	0.0011	NE	0.002	0.00052	J	SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.004	NE	0.005	0.0014	J	SW-846:6020
	Potassium	2.3	NE	1	0.16		SW-846:6020
	Selenium	0.0011	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	26	NE	1	0.24		SW-846:6020
Thallium	0.00006	0.002	0.0002	0.000042	J	SW-846:6020	
Uranium	0.0032	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0042	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0089	NE	0.02	0.0068	J	SW-846:6020	

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Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TA1-W-05 20-Aug-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	0.00034	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.037	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	83	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	0.026	NE	0.1	0.016	J	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
	Nickel	0.0022	NE	0.005	0.0014	J	SW-846:6020
	Potassium	2	NE	1	0.16		SW-846:6020
	Selenium	0.0014	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	31	NE	1	0.24		SW-846:6020
Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020	
Uranium	0.0034	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0032	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TA1-W-08 19-Aug-14	Aluminum	0.027	NE	0.05	0.017	J	SW-846:6020
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020
	Arsenic	0.00047	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.022	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	350	NE	1	0.09		SW-846:6020
	Chromium	0.0029	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	0.021	NE	0.1	0.016	J	SW-846:6020
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020
	Magnesium	45	NE	0.1	0.039		SW-846:6020
	Manganese	0.00058	NE	0.002	0.00052	J	SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0019	NE	0.005	0.0014	J	SW-846:6020
	Potassium	3.4	NE	1	0.16		SW-846:6020
	Selenium	0.03	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	89	NE	1	0.24		SW-846:6020
	Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020
Uranium	0.0018	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0028	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TA2-SW1-320 27-Aug-14	Aluminum	0.15	NE	0.05	0.017		SW-846:6020
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020
	Arsenic	0.00076	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.22	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	68	NE	1	0.09		SW-846:6020
	Chromium	0.0016	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	0.13	NE	0.1	0.016		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	0.0036	NE	0.002	0.00052		SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0014	NE	0.005	0.0014	U	SW-846:6020
	Potassium	2.1	NE	1	0.16		SW-846:6020
	Selenium	0.0035	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	20	NE	1	0.24		SW-846:6020
Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020	
Uranium	0.0013	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0051	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TA2-W-01 14-Aug-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	0.00069	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.088	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	85	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
	Nickel	0.0015	NE	0.005	0.0014	J	SW-846:6020
	Potassium	1.8	NE	1	0.16		SW-846:6020
	Selenium	0.0062	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	22	NE	1	0.24		SW-846:6020
Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020	
Uranium	0.001	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0039	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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Table-1 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo Groundwater Quality Results: Total TAL Metals + U

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TA2-W-19 28-Aug-14	Aluminum	0.02	NE	0.05	0.017	J	SW-846:6020
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020
	Arsenic	0.00067	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.054	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	79	NE	1	0.09		SW-846:6020
	Chromium	0.0015	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	0.02	NE	0.1	0.016	J	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
	Nickel	0.0014	NE	0.005	0.0014	U	SW-846:6020
	Potassium	1.9	NE	1	0.16		SW-846:6020
	Selenium	0.0031	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	23	NE	1	0.24		SW-846:6020
Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020	
Uranium	0.0012	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0044	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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Table-1 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo Groundwater Quality Results: Total TAL Metals + U

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TA2-W-19 28-Aug-14 DUP	Aluminum	0.019	NE	0.05	0.017	J	SW-846:6020
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020
	Arsenic	0.00086	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.051	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	0.02	NE	0.1	0.016	J	SW-846:6020
	Lead	0.00025	NE	0.0005	0.00025	U	SW-846:6020
	Magnesium	13	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
	Nickel	0.0014	NE	0.005	0.0014	U	SW-846:6020
	Potassium	2	NE	1	0.16		SW-846:6020
	Selenium	0.0042	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	23	NE	1	0.24		SW-846:6020
Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020	
Vanadium	0.0047	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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

NE = Not Established

U = the analyte was analyzed for but not detected

Table-1 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo Groundwater Quality Results: Total TAL Metals + U

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TJA-3 21-Aug-14	Aluminum	0.02	NE	0.05	0.017	J	SW-846:6020
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020
	Arsenic	0.00026	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.044	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	69	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	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
	Nickel	0.0014	NE	0.005	0.0014	U	SW-846:6020
	Potassium	1.8	NE	1	0.16		SW-846:6020
	Selenium	0.0015	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	25	NE	1	0.24		SW-846:6020
Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020	
Uranium	0.0025	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0037	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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

NE = Not Established

U = the analyte was analyzed for but not detected

Table-1 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo Groundwater Quality Results: Total TAL Metals + U

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TJA-6 19-Aug-14	Aluminum	0.22	NE	0.05	0.017		SW-846:6020
	Antimony	0.00017	0.006	0.0003	0.00017	U	SW-846:6020
	Arsenic	0.00067	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.07	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	62	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	0.16	NE	0.1	0.016		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	0.0059	NE	0.002	0.00052		SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0014	NE	0.005	0.0014	U	SW-846:6020
	Potassium	2.1	NE	1	0.16		SW-846:6020
	Selenium	0.0014	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	22	NE	1	0.24		SW-846:6020
Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020	
Uranium	0.0029	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0056	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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

NE = Not Established

U = the analyte was analyzed for but not detected

Table-1 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo Groundwater Quality Results: Total TAL Metals + U

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Reporting Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
WYO-4 25-Aug-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	0.00067	0.01	0.002	0.00025	J	SW-846:6020
	Barium	0.16	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	84	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	15	NE	0.1	0.039		SW-846:6020
	Manganese	0.00067	NE	0.002	0.00052	J	SW-846:6020
	Mercury	0.00006	0.002	0.0001	0.00006	U	SW-846:7470A
	Nickel	0.0014	NE	0.005	0.0014	U	SW-846:6020
	Potassium	2	NE	1	0.16		SW-846:6020
	Selenium	0.005	0.05	0.001	0.00054		SW-846:6020
	Silver	0.00004	NE	0.0001	0.00004	U	SW-846:6020
	Sodium	21	NE	1	0.24		SW-846:6020
Thallium	0.000042	0.002	0.0002	0.000042	U	SW-846:6020	
Uranium	0.0012	0.03	0.0001	0.000088		SW-846:6020	
Vanadium	0.0042	NE	0.001	0.00052		SW-846:6020	
Zinc	0.0068	NE	0.02	0.0068	U	SW-846:6020	

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 2014 Q-4 Tijeras Arroyo 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
PGS-2 15-Aug-14	Bromide	0.23	NE	0.2	0.06		EPA:300.0
	Chloride	17	NE	0.2	0.062		EPA:300.0
	Fluoride	0.03	4	0.1	0.03	U	EPA:300.0
	Nitrate-Nitrite as Nitrogen	1.4	10	0.05	0.015		EPA:353.2
	Sulfate	72	NE	1	0.3		EPA:300.0
TA1-W-01 13-Aug-14	Bromide	0.22	NE	0.2	0.06		EPA:300.0
	Chloride	17	NE	0.2	0.062		EPA:300.0
	Fluoride	0.42	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	2.7	10	0.05	0.015		EPA:353.2
	Sulfate	80	NE	1	0.3		EPA:300.0
TA1-W-05 20-Aug-14	Bromide	0.06	NE	0.2	0.06	U	EPA:300.0
	Chloride	12	NE	0.2	0.062		EPA:300.0
	Fluoride	0.27	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	1.3	10	0.01	0.003		EPA:353.2
	Sulfate	99	NE	1	0.3		EPA:300.0
TA1-W-08 19-Aug-14	Bromide	2.4	NE	0.4	0.12		EPA:300.0
	Chloride	240	NE	4	1.2		EPA:300.0
	Fluoride	0.27	4	0.2	0.06		EPA:300.0
	Nitrate-Nitrite as Nitrogen	4.9	10	0.05	0.015		EPA:353.2
	Sulfate	740	NE	20	6		EPA:300.0
TA2-SW1-320 27-Aug-14	Bromide	0.57	NE	0.2	0.06		EPA:300.0
	Chloride	38	NE	1	0.31		EPA:300.0
	Fluoride	0.44	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	21	10	0.2	0.2		EPA:353.2
	Sulfate	14	NE	1	0.3		EPA:300.0
TA2-W-01 14-Aug-14	Bromide	1.4	NE	0.2	0.06		EPA:300.0
	Chloride	100	NE	2	0.62		EPA:300.0
	Fluoride	0.35	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	3.7	10	0.05	0.015		EPA:353.2
	Sulfate	60	NE	1	0.3		EPA:300.0
TA2-W-19 28-Aug-14	Bromide	0.82	NE	0.2	0.06		EPA:300.0
	Chloride	67	NE	1	0.31		EPA:300.0
	Fluoride	0.35	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	9.9	10	0.1	0.1		EPA:353.2
	Sulfate	58	NE	1	0.3		EPA:300.0

NE = Not Established

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

Table-2 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo 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
TA2-W-19 28-Aug-14 DUP	Bromide	0.82	NE	0.2	0.06		EPA:300.0
	Chloride	67	NE	1	0.31		EPA:300.0
	Fluoride	0.35	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	10	10	0.1	0.1		EPA:353.2
	Sulfate	58	NE	1	0.3		EPA:300.0
TJA-3 21-Aug-14	Bromide	0.06	NE	0.2	0.06	U	EPA:300.0
	Chloride	14	NE	0.2	0.062		EPA:300.0
	Fluoride	0.32	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	2.2	10	0.05	0.015		EPA:353.2
	Sulfate	79	NE	1	0.3		EPA:300.0
TJA-6 19-Aug-14	Bromide	0.06	NE	0.2	0.06	U	EPA:300.0
	Chloride	16	NE	0.2	0.062		EPA:300.0
	Fluoride	0.38	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	2.3	10	0.05	0.015		EPA:353.2
	Sulfate	66	NE	1	0.3		EPA:300.0
WYO-4 25-Aug-14	Bromide	1.2	NE	0.2	0.06		EPA:300.0
	Chloride	110	NE	2	0.62		EPA:300.0
	Fluoride	0.3	4	0.1	0.03		EPA:300.0
	Nitrate-Nitrite as Nitrogen	2.9	10	0.05	0.05		EPA:353.2
	Sulfate	52	NE	1	0.3		EPA:300.0

NE = Not Established

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

Table-3 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo Groundwater Quality Results: Detected Volatile Organic Compounds

Monitoring Well/ Sample Date	Analyte	Result (µg/L)	EPA MCL (µg/L)	Quantitation Limit (µg/L)	MDL (µg/L)	Laboratory Qualifier	Analytical Method
TA2-W-01 14-Aug-14	Tetrachloroethene	0.31	5	1	0.2	J	SW-846:8260B_25
	Trichloroethene	1.2	5	1	0.3		SW-846:8260B_25
TA2-W-19 28-Aug-14	Dichloroethane[1,1-]	0.36	7	1	0.3	J	SW-846:8260B_25
	Dichloroethene[cis-1,2-]	0.36	70	1	0.3	J	SW-846:8260B_25
	Trichloroethene	2.5	5	1	0.3		SW-846:8260B_25
TA2-W-19 28-Aug-14 DUP	Dichloroethane[1,1-]	0.32	7	1	0.3	J	SW-846:8260B_25
	Dichloroethene[cis-1,2-]	0.35	70	1	0.3	J	SW-846:8260B_25
	Trichloroethene	2.6	5	1	0.3		SW-846:8260B_25
TJA-3 21-Aug-14	Trichloroethene	0.67	5	1	0.3	J	SW-846:8260B_25
WYO-4 25-Aug-14	Chloroform	0.33	NE	1	0.3	J	SW-846:8260B_25
	Dichloroethane[1,1-]	0.94	7	1	0.3	J	SW-846:8260B_25
	Dichloroethene[cis-1,2-]	1.8	70	1	0.3		SW-846:8260B_25
	Toluene	1.1	1000	1	0.3		SW-846:8260B_25
	Trichloroethene	5	5	1	0.3		SW-846:8260B_25

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

Table-4 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo Groundwater Quality Results: Method Detection Limits for Volatile Organic Compounds by Method SW-846:8260B_25

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

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

Table-5 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo 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
PGS-2 15-Aug-14	Actinium-228	26 ± 5.8	17		EPA:901.1
	Americium-241	0.38 ± 12	41	U	EPA:901.1
	Beryllium-7	-29 ± 14	51	U	EPA:901.1
	Bismuth-212	14 ± 22	74	U	EPA:901.1
	Bismuth-214	9.6 ± 3.1	9.6	J	EPA:901.1
	Cesium-134	1.1 ± 1.4	4.9	U	EPA:901.1
	Cesium-137	-0.97 ± 1.4	5	U	EPA:901.1
	Cobalt-60	2.4 ± 1.5	5	U	EPA:901.1
	Gross alpha	1.1 ± 0.28	0.82		EPA:900
	Gross beta	3.1 ± 0.46	1.2		EPA:900
	Iodine-131	-9.4 ± 16	55	U	EPA:901.1
	Lead-212	0.22 ± 3.3	11	U	EPA:901.1
	Lead-214	2.6 ± 6.2	21	UJ	EPA:901.1
	Potassium-40	-90 ± 52	180	U	EPA:901.1
	Protactinium-234m	170 ± 240	820	U	EPA:901.1
	Sodium-22	-1.4 ± 1.6	5.5	U	EPA:901.1
	Thallium-208	3.2 ± 3.4	12	U	EPA:901.1
	Thorium-234	-9.5 ± 47	160	U	EPA:901.1
	Tritium	86 ± 100	350	U	EPA:906.0
TA1-W-01 13-Aug-14	Actinium-228	16 ± 5.1	16		EPA:901.1
	Americium-241	11 ± 11	37	U	EPA:901.1
	Beryllium-7	10 ± 15	49	U	EPA:901.1
	Bismuth-212	28 ± 20	64	U	EPA:901.1
	Bismuth-214	6.8 ± 6.9	23	UJ	EPA:901.1
	Cesium-134	0.092 ± 2	6.6	U	EPA:901.1
	Cesium-137	0.11 ± 1.3	4.6	U	EPA:901.1
	Cobalt-60	-0.043 ± 1.6	5.5	U	EPA:901.1
	Gross alpha	4.3 ± 0.5	0.8		EPA:900
	Gross beta	4.1 ± 0.52	1.2		EPA:900
	Iodine-131	41 ± 15	47	U	EPA:901.1
	Lead-212	-1.4 ± 3.8	13	U	EPA:901.1
	Lead-214	0.86 ± 5.6	19	UJ	EPA:901.1
	Potassium-40	18 ± 38	130	U	EPA:901.1
	Protactinium-234m	510 ± 230	730	U	EPA:901.1
	Sodium-22	-2.2 ± 1.4	4.9	U	EPA:901.1
	Thallium-208	3.6 ± 1.4	4.4	U	EPA:901.1
	Thorium-234	-13 ± 38	130	U	EPA:901.1
	Tritium	-48 ± 100	350	U	EPA:906.0

J = The activity is an estimated value.

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

Table-5 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo 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
TA1-W-05 20-Aug-14	Actinium-228	14 ± 6.8	22	U	EPA:901.1
	Americium-241	7.2 ± 7.3	24	U	EPA:901.1
	Beryllium-7	26 ± 14	47	U	EPA:901.1
	Bismuth-212	-35 ± 22	76	U	EPA:901.1
	Bismuth-214	2.8 ± 7.6	25	UJ	EPA:901.1
	Cesium-134	-0.72 ± 2.2	7.6	U	EPA:901.1
	Cesium-137	-0.57 ± 1.7	5.8	U	EPA:901.1
	Cobalt-60	1.9 ± 2.1	6.9	U	EPA:901.1
	Gross alpha	3.1 ± 0.51	1.3		EPA:900
	Gross beta	2.5 ± 0.52	1.5		EPA:900
	Iodine-131	-13 ± 9.9	34	U	EPA:901.1
	Lead-212	1.6 ± 3.9	13	U	EPA:901.1
	Lead-214	-4.5 ± 6.2	21	UJ	EPA:901.1
	Potassium-40	-24 ± 50	170	U	EPA:901.1
	Protactinium-234m	8.2 ± 300	1000	U	EPA:901.1
	Sodium-22	1.7 ± 1.9	6.4	U	EPA:901.1
	Thallium-208	3.5 ± 1.6	5.3	U	EPA:901.1
	Thorium-234	-11 ± 44	150	U	EPA:901.1
	Tritium	11 ± 110	360	U	EPA:906.0
TA1-W-08 19-Aug-14	Actinium-228	1.5 ± 9.4	31	U	EPA:901.1
	Americium-241	45 ± 31	100	U	EPA:901.1
	Beryllium-7	9.4 ± 12	41	U	EPA:901.1
	Bismuth-212	-6.7 ± 16	56	U	EPA:901.1
	Bismuth-214	5.6 ± 6.8	22	UJ	EPA:901.1
	Cesium-134	1.2 ± 2	6.6	U	EPA:901.1
	Cesium-137	0.66 ± 1.2	4.1	U	EPA:901.1
	Cobalt-60	0 ± 1.3	4.5	U	EPA:901.1
	Gross alpha	1.9 ± 1.1	3.5	U	EPA:900
	Gross beta	3.1 ± 1.5	4.9	U	EPA:900
	Iodine-131	1.2 ± 8.8	30	U	EPA:901.1
	Lead-212	-1.9 ± 4.2	14	U	EPA:901.1
	Lead-214	-0.33 ± 5.6	19	UJ	EPA:901.1
	Potassium-40	11 ± 36	120	U	EPA:901.1
	Protactinium-234m	290 ± 210	700	U	EPA:901.1
	Sodium-22	-0.94 ± 1.2	4.2	U	EPA:901.1
	Thallium-208	-0.15 ± 2.6	8.7	U	EPA:901.1
	Thorium-234	-26 ± 58	190	U	EPA:901.1
	Tritium	-25 ± 100	350	U	EPA:906.0

J = The activity is an estimated value.

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

Table-5 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo 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
TA2-SW1-320 27-Aug-14	Actinium-228	12 ± 4	14	U	EPA:901.1
	Americium-241	-60 ± 40	140	U	EPA:901.1
	Beryllium-7	-12 ± 13	43	U	EPA:901.1
	Bismuth-212	4.5 ± 15	52	U	EPA:901.1
	Bismuth-214	-1.1 ± 5.9	20	UJ	EPA:901.1
	Cesium-134	-3.1 ± 1.2	4.2	U	EPA:901.1
	Cesium-137	1.9 ± 1.1	3.7	U	EPA:901.1
	Cobalt-60	0.21 ± 1.1	3.8	U	EPA:901.1
	Gross alpha	0.75 ± 0.4	1.3	U	EPA:900
	Gross beta	2.6 ± 0.57	1.7		EPA:900
	Iodine-131	6.2 ± 12	41	U	EPA:901.1
	Lead-212	0.39 ± 3.8	13	U	EPA:901.1
	Lead-214	-4.5 ± 4.9	16	UJ	EPA:901.1
	Potassium-40	-10 ± 37	120	U	EPA:901.1
	Protactinium-234m	220 ± 190	620	U	EPA:901.1
	Sodium-22	0.34 ± 1.2	4.1	U	EPA:901.1
	Thallium-208	3 ± 2	6.5	U	EPA:901.1
	Thorium-234	27 ± 14	47	U	EPA:901.1
	Tritium	-60 ± 92	310	U	EPA:906.0
TA2-W-01 14-Aug-14	Actinium-228	6.6 ± 9.2	31	U	EPA:901.1
	Americium-241	-10 ± 7.3	25	U	EPA:901.1
	Beryllium-7	21 ± 15	50	U	EPA:901.1
	Bismuth-212	19 ± 21	71	U	EPA:901.1
	Bismuth-214	9.1 ± 7.5	25	UJ	EPA:901.1
	Cesium-134	1.5 ± 2.2	7.3	U	EPA:901.1
	Cesium-137	3.1 ± 1.7	5.4	U	EPA:901.1
	Cobalt-60	1.1 ± 1.9	6.6	U	EPA:901.1
	Gross alpha	0.61 ± 0.33	1.1	U	EPA:900
	Gross beta	3.1 ± 0.52	1.4		EPA:900
	Iodine-131	-1.6 ± 15	51	U	EPA:901.1
	Lead-212	7.9 ± 2.1	6.6		EPA:901.1
	Lead-214	-3.2 ± 6.1	20	UJ	EPA:901.1
	Potassium-40	-56 ± 49	160	U	EPA:901.1
	Protactinium-234m	95 ± 280	940	U	EPA:901.1
	Sodium-22	4.3 ± 2	6.4	U	EPA:901.1
	Thallium-208	5.6 ± 1.7	5.2		EPA:901.1
	Thorium-234	-27 ± 44	150	U	EPA:901.1
	Tritium	68 ± 100	350	U	EPA:906.0

J = The activity is an estimated value.

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

Table-5 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo 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
TA2-W-19 28-Aug-14	Actinium-228	9.6 ± 5.3	21	U	EPA:901.1
	Americium-241	-3.3 ± 7.9	27	U	EPA:901.1
	Beryllium-7	11 ± 12	40	U	EPA:901.1
	Bismuth-212	24 ± 18	58	U	EPA:901.1
	Bismuth-214	-3 ± 6.7	22	UJ	EPA:901.1
	Cesium-134	-1.5 ± 1.4	4.6	U	EPA:901.1
	Cesium-137	-2.4 ± 1.2	4.2	U	EPA:901.1
	Cobalt-60	-2.5 ± 1.4	5.1	U	EPA:901.1
	Gross alpha	1.6 ± 0.41	1.2		EPA:900
	Gross beta	2.8 ± 0.56	1.6		EPA:900
	Iodine-131	-1.8 ± 11	38	U	EPA:901.1
	Lead-212	0.99 ± 3.5	12	U	EPA:901.1
	Lead-214	-8 ± 5.5	18	UJ	EPA:901.1
	Potassium-40	9.7 ± 37	120	U	EPA:901.1
	Protactinium-234m	220 ± 210	690	U	EPA:901.1
	Sodium-22	-0.012 ± 1.4	4.8	U	EPA:901.1
	Thallium-208	-0.067 ± 2.6	8.6	U	EPA:901.1
	Thorium-234	-5.5 ± 38	130	U	EPA:901.1
	Tritium	-74 ± 91	310	U	EPA:906.0
TA2-W-19 28-Aug-14 Dup	Actinium-228	16 ± 6.8	22	U	EPA:901.1
	Americium-241	-1.5 ± 7.3	24	U	EPA:901.1
	Beryllium-7	-4.1 ± 16	55	U	EPA:901.1
	Bismuth-212	12 ± 22	74	U	EPA:901.1
	Bismuth-214	16 ± 3.6	11	J	EPA:901.1
	Cesium-134	-4.5 ± 1.7	5.8	U	EPA:901.1
	Cesium-137	-1.3 ± 1.7	5.8	U	EPA:901.1
	Cobalt-60	-0.86 ± 2.1	7.3	U	EPA:901.1
	Gross alpha	0.56 ± 0.42	1.4	U	EPA:900
	Gross beta	2.7 ± 0.58	1.7		EPA:900
	Iodine-131	-6.3 ± 17	59	U	EPA:901.1
	Lead-212	-1.1 ± 4.6	15	U	EPA:901.1
	Lead-214	8.9 ± 3	9.4	UJ	EPA:901.1
	Potassium-40	0.79 ± 47	160	U	EPA:901.1
	Protactinium-234m	570 ± 290	940	U	EPA:901.1
	Sodium-22	2.7 ± 1.9	6.4	U	EPA:901.1
	Thallium-208	3.9 ± 1.7	5.4	U	EPA:901.1
	Thorium-234	-31 ± 51	170	U	EPA:901.1
	Tritium	-33 ± 92	310	U	EPA:906.0

J = The activity is an estimated value.

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

Table-5 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo 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
TJA-3 21-Aug-14	Actinium-228	10 ± 4.8	19	U	EPA:901.1
	Americium-241	13 ± 40	130	U	EPA:901.1
	Beryllium-7	-0.65 ± 11	38	U	EPA:901.1
	Bismuth-212	-2.6 ± 15	52	U	EPA:901.1
	Bismuth-214	3.6 ± 5.9	20	UJ	EPA:901.1
	Cesium-134	-3.2 ± 1.2	4.1	U	EPA:901.1
	Cesium-137	0.81 ± 1.1	3.7	U	EPA:901.1
	Cobalt-60	-1.5 ± 1.1	3.9	U	EPA:901.1
	Gross alpha	1.9 ± 0.35	0.91		EPA:900
	Gross beta	2.7 ± 0.41	1.1		EPA:900
	Iodine-131	8.6 ± 7.1	23	U	EPA:901.1
	Lead-212	-1.4 ± 4.5	15	U	EPA:901.1
	Lead-214	-5.4 ± 4.9	16	UJ	EPA:901.1
	Potassium-40	-58 ± 36	120	U	EPA:901.1
	Protactinium-234m	-62 ± 430	1400	U	EPA:901.1
	Sodium-22	0.49 ± 1.2	3.9	U	EPA:901.1
	Thallium-208	0.21 ± 2.3	7.6	U	EPA:901.1
	Thorium-234	32 ± 64	210	U	EPA:901.1
	Tritium	-1.8 ± 100	350	U	EPA:906.0
TJA-6 19-Aug-14	Actinium-228	12 ± 6.6	28	U	EPA:901.1
	Americium-241	-10 ± 11	37	U	EPA:901.1
	Beryllium-7	9.5 ± 13	44	U	EPA:901.1
	Bismuth-212	29 ± 19	61	U	EPA:901.1
	Bismuth-214	2.8 ± 7	23	UJ	EPA:901.1
	Cesium-134	4 ± 2	6.3	U	EPA:901.1
	Cesium-137	-2.8 ± 1.4	4.8	U	EPA:901.1
	Cobalt-60	-2.9 ± 1.6	5.7	U	EPA:901.1
	Gross alpha	3.1 ± 0.42	0.89		EPA:900
	Gross beta	3.7 ± 0.49	1.2		EPA:900
	Iodine-131	17 ± 9.7	32	U	EPA:901.1
	Lead-212	-3.3 ± 3.8	13	U	EPA:901.1
	Lead-214	2.1 ± 5.7	19	UJ	EPA:901.1
	Potassium-40	27 ± 37	120	U	EPA:901.1
	Protactinium-234m	470 ± 230	750	U	EPA:901.1
	Sodium-22	1.1 ± 1.4	4.7	U	EPA:901.1
	Thallium-208	0.47 ± 2.3	7.6	U	EPA:901.1
	Thorium-234	41 ± 37	130	U	EPA:901.1
	Tritium	-130 ± 100	350	U	EPA:906.0

J = The activity is an estimated value.

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

Table-5 NMED DOE OB FFY 2014 Q-4 Tijeras Arroyo 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
WYO-4 25-Aug-14	Actinium-228	24 ± 5.5	16		EPA:901.1
	Americium-241	-7.3 ± 11	38	U	EPA:901.1
	Beryllium-7	23 ± 15	48	U	EPA:901.1
	Bismuth-212	27 ± 19	63	U	EPA:901.1
	Bismuth-214	-0.36 ± 5.9	20	UJ	EPA:901.1
	Cesium-134	-1.6 ± 1.4	4.9	U	EPA:901.1
	Cesium-137	0.56 ± 1.4	4.6	U	EPA:901.1
	Cobalt-60	-2.1 ± 1.6	5.5	U	EPA:901.1
	Gross alpha	1.7 ± 0.45	1.3		EPA:900
	Gross beta	2.2 ± 0.55	1.7		EPA:900
	Iodine-131	3.6 ± 16	55	U	EPA:901.1
	Lead-212	-5.9 ± 3.8	13	U	EPA:901.1
	Lead-214	-5.8 ± 6.3	21	UJ	EPA:901.1
	Potassium-40	-11 ± 38	130	U	EPA:901.1
	Protactinium-234m	670 ± 250	780	U	EPA:901.1
	Sodium-22	-2.5 ± 1.5	5.3	U	EPA:901.1
	Thallium-208	2.7 ± 1.4	4.4	U	EPA:901.1
	Thorium-234	42 ± 42	140	U	EPA:901.1
Tritium	-160 ± 91	310	U	EPA:906.0	

J = The activity is an estimated value.

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