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**Groundwater Monitoring at Sandia National Laboratories/New Mexico Tijeras Arroyo
Groundwater Conducted by NMED DOE OB for FFY 2011 Q-4**

The New Mexico Environment Department (NMED) DOE Oversight Bureau (Bureau) has compiled and assessed groundwater data collected during August and September 2011. The Bureau collected groundwater samples from Tijeras Arroyo Groundwater (TAG) monitoring wells TA1-W-02, TA2-SW1-320, TA2-W-01, TA2-W-19, TA2-W-27, TJA-2, TJA-4, TJA-6, TJA-7, and WYO-4. Split samples were collected using standard Sandia National Laboratories/New Mexico 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, gamma emitting isotopes, gross alpha and beta, and volatile organic compounds (VOCs). Several samples analyzed for nitrate were detected above the EPA MCL of 10 mg/L. Trichloroethylene (TCE) was also detected above the EPA MCL of 5 µg/L at monitoring well WYO-4.

Data Assessment

Data results are compared to applicable Maximum Contaminant Levels (MCLs) established by the U.S. Environmental Protection Agency (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. No metal parameters were detected above established regulatory standards.

Analytical results for inorganic compounds are listed in Table-2. Samples were analyzed for anions (bromide, chloride, fluoride and sulfate), nitrate and nitrite. Nitrate concentrations were detected above the EPA MCL of 10 mg/L at monitoring wells TA2-SW1-320 (21.1 mg/L), TJA-2 (10.1 mg/L), TJA-4 (28.4 mg/L) and TJA-7 (22.2 mg/L).

Analytical results for radionuclides are listed in Table-4. Samples were analyzed for gross alpha, gross beta and gamma emitting isotopes. No isotopes were detected above EPA MCLs.

Volatile organic compounds (VOCs) detected above the method detection limit are presented in Table-2. All samples were detected below established MCLs, except trichloroethylene (TCE). Monitoring well WYO-4 measured a TCE concentration of 6.5 µg/L.

Response

Questions or comments should be addressed to Chris Armijo by phone at (505) 383-2070, by e-mail at chris.armijo1@state.nm.us, or to the address in the letterhead.

Enclosure: (1) Table-1 Total TAL Metals plus Uranium Results
(2) Table-2 Anions, Nitrate and Nitrite Results
(3) Table-3 Gross Alpha, Gross Beta, and Gamma Spectroscopy Results
(4) Table-4 Detected Volatile Organic Compounds

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File: SGE42.Groundwater Monitoring. TAG. FFY 2011 Q-4

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Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
TA1-W-02 26-Aug-11	Aluminum	0.019	NE	0.03	0.013	B,J	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.00095	0.01	0.01	0.00095	U	SW-846:6020
	Barium	0.049	2	0.002	0.0002		SW-846:6020
	Beryllium	0.00068	0.004	0.0005	0.00035		SW-846:6020
	Cadmium	0.0001	0.005	0.0005	0.0001	U	SW-846:6020
	Calcium	69.5	NE	0.1	0.068		SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00022	NE	0.002	0.00022	U	SW-846:6020
	Copper	0.00045	1.3	0.001	0.00045	U	SW-846:6020
	Iron	0.028	NE	0.05	0.02	B	SW-846:6020
	Lead	0.00017	0.015	0.003	0.00017	U	SW-846:6020
	Magnesium	12.4	NE	0.05	0.0052	J	SW-846:6020
	Manganese	0.0012	NE	0.002	0.00024	B	SW-846:6020
	Mercury	0.00006	0.002	0.0002	0.00006	U	SW-846:7470A
	Nickel	0.0012	NE	0.005	0.0004	B,J	SW-846:6020
	Potassium	2.1	NE	0.1	0.042		SW-846:6020
	Selenium	0.0016	0.05	0.005	0.0016	U	SW-846:6020
	Silver	0.00004	NE	0.002	0.00004	U	SW-846:6020
	Sodium	22.1	NE	0.05	0.015		SW-846:6020
Thallium	0.0016	0.002	0.002	0.00055	B	SW-846:6020	
Uranium	0.0034	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0045	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

B = Estimated result. Result is less than RL.

J = Method blank contamination. The associated method blank contains the target analyte at a reportable level.

NE = Not Established

U = Result is less than the sample selection limit.

Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
TA2-SW1-320 22-Aug-11	Aluminum	0.63	NE	0.03	0.013	J	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.0012	0.01	0.01	0.00095	B	SW-846:6020
	Barium	0.22	2	0.002	0.0002		SW-846:6020
	Beryllium	0.00065	0.004	0.0005	0.00035		SW-846:6020
	Cadmium	0.0001	0.005	0.0005	0.0001	U	SW-846:6020
	Calcium	67.9	NE	0.1	0.068	J	SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00025	NE	0.002	0.00022	B	SW-846:6020
	Copper	0.0012	1.3	0.001	0.00045		SW-846:6020
	Iron	0.45	NE	0.05	0.02		SW-846:6020
	Lead	0.00045	0.015	0.003	0.00017	B	SW-846:6020
	Magnesium	11.1	NE	0.05	0.0052	J	SW-846:6020
	Manganese	0.012	NE	0.002	0.00024		SW-846:6020
	Mercury	0.00006	0.002	0.0002	0.00006	U	SW-846:7470A
	Nickel	0.00061	NE	0.005	0.0004	B	SW-846:6020
	Potassium	2	NE	0.1	0.042		SW-846:6020
	Selenium	0.003	0.05	0.005	0.0016	B	SW-846:6020
	Silver	0.00004	NE	0.002	0.00004	U	SW-846:6020
	Sodium	18	NE	0.05	0.015	J	SW-846:6020
Thallium	0.0018	0.002	0.002	0.00055	B	SW-846:6020	
Uranium	0.0015	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0065	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

B = Estimated result. Result is less than RL.

J = Method blank contamination. The associated method blank contains the target analyte at a reportable level.

NE = Not Established

U = Result is less than the sample selection limit.

Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
TA2-W-01 20-Sep-11	Aluminum	0.013	NE	0.03	0.013	U	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.00095	0.01	0.01	0.00095	U	SW-846:6020
	Barium	0.097	2	0.002	0.0002		SW-846:6020
	Beryllium	0.00047	0.004	0.0005	0.00035	B	SW-846:6020
	Cadmium	0.0001	0.005	0.0005	0.0001	U	SW-846:6020
	Calcium	82.9	NE	0.1	0.068		SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00022	NE	0.002	0.00022	U	SW-846:6020
	Copper	0.00062	1.3	0.001	0.00045	B	SW-846:6020
	Iron	0.02	NE	0.05	0.02	U	SW-846:6020
	Lead	0.00047	0.015	0.003	0.00017	B,J	SW-846:6020
	Magnesium	11	NE	0.05	0.0052		SW-846:6020
	Manganese	0.00035	NE	0.002	0.00024	B	SW-846:6020
	Mercury	0.00006	0.002	0.0002	0.00006	U	SW-846:7470A
	Nickel	0.0004	NE	0.005	0.0004	U	SW-846:6020
	Potassium	1.7	NE	0.1	0.042		SW-846:6020
	Selenium	0.0057	0.05	0.005	0.0016		SW-846:6020
	Silver	0.000044	NE	0.002	0.00004	B	SW-846:6020
	Sodium	20.1	NE	0.05	0.015	J	SW-846:6020
Thallium	0.0015	0.002	0.002	0.00055	B,J	SW-846:6020	
Uranium	0.0011	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0037	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

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Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
TA2-W-19 21-Sep-11	Aluminum	0.013	NE	0.03	0.013	U	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.00095	0.01	0.01	0.00095	U	SW-846:6020
	Barium	0.048	2	0.002	0.0002		SW-846:6020
	Beryllium	0.00035	0.004	0.0005	0.00035	U	SW-846:6020
	Cadmium	0.0001	0.005	0.0005	0.0001	U	SW-846:6020
	Calcium	75.8	NE	0.1	0.068		SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00022	NE	0.002	0.00022	U	SW-846:6020
	Copper	0.00078	1.3	0.001	0.00045	B	SW-846:6020
	Iron	0.02	NE	0.05	0.02	U	SW-846:6020
	Lead	0.00033	0.015	0.003	0.00017	B,J	SW-846:6020
	Magnesium	11.2	NE	0.05	0.0052		SW-846:6020
	Manganese	0.00027	NE	0.002	0.00024	B	SW-846:6020
	Mercury	0.00027	0.002	0.0002	0.00006		SW-846:7470A
	Nickel	0.0004	NE	0.005	0.0004	U	SW-846:6020
	Potassium	1.7	NE	0.1	0.042		SW-846:6020
	Selenium	0.0041	0.05	0.005	0.0016	B	SW-846:6020
	Silver	0.00004	NE	0.002	0.00004	U	SW-846:6020
	Sodium	21.2	NE	0.05	0.015	J	SW-846:6020
Thallium	0.00083	0.002	0.002	0.00055	B,J	SW-846:6020	
Uranium	0.0013	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0045	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

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Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
TA2-W-19 21-Sep-11 DUP	Aluminum	0.013	NE	0.03	0.013	U	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.00096	0.01	0.01	0.00095	B	SW-846:6020
	Barium	0.048	2	0.002	0.0002		SW-846:6020
	Beryllium	0.00035	0.004	0.0005	0.00035	U	SW-846:6020
	Cadmium	0.0001	0.005	0.0005	0.0001	U	SW-846:6020
	Calcium	75.1	NE	0.1	0.068		SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00022	NE	0.002	0.00022	U	SW-846:6020
	Copper	0.00045	1.3	0.001	0.00045	U	SW-846:6020
	Iron	0.02	NE	0.05	0.02	U	SW-846:6020
	Lead	0.00018	0.015	0.003	0.00017	B	SW-846:6020
	Magnesium	11	NE	0.05	0.0052		SW-846:6020
	Manganese	0.00024	NE	0.002	0.00024	U	SW-846:6020
	Mercury	0.00006	0.002	0.0002	0.00006	U	SW-846:7470A
	Nickel	0.0004	NE	0.005	0.0004	U	SW-846:6020
	Potassium	1.8	NE	0.1	0.042		SW-846:6020
	Selenium	0.0039	0.05	0.005	0.0016	B	SW-846:6020
	Silver	0.00004	NE	0.002	0.00004	U	SW-846:6020
	Sodium	20.8	NE	0.05	0.015		SW-846:6020
Thallium	0.0016	0.002	0.002	0.00055	B	SW-846:6020	
Uranium	0.0012	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0051	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

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Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
TA2-W-27 14-Sep-11	Aluminum	0.013	NE	0.03	0.013	U	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.00095	0.01	0.01	0.00095	U	SW-846:6020
	Barium	0.064	2	0.002	0.0002		SW-846:6020
	Beryllium	0.00042	0.004	0.0005	0.00035	B	SW-846:6020
	Cadmium	0.00013	0.005	0.0005	0.0001	B	SW-846:6020
	Calcium	121	NE	0.2	0.14		SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00022	NE	0.002	0.00022	U	SW-846:6020
	Copper	0.00045	1.3	0.001	0.00045	U	SW-846:6020
	Iron	0.025	NE	0.05	0.02	B	SW-846:6020
	Lead	0.00017	0.015	0.003	0.00017	U	SW-846:6020
	Magnesium	15	NE	0.05	0.0052		SW-846:6020
	Manganese	0.0004	NE	0.002	0.00024	B	SW-846:6020
	Mercury	0.0012	0.002	0.0002	0.00006		SW-846:7470A
	Nickel	0.0004	NE	0.005	0.0004	U	SW-846:6020
	Potassium	2	NE	0.1	0.042		SW-846:6020
	Selenium	0.0071	0.05	0.005	0.0016		SW-846:6020
	Silver	0.00004	NE	0.002	0.00004	U	SW-846:6020
	Sodium	26.7	NE	0.05	0.015		SW-846:6020
Thallium	0.0017	0.002	0.002	0.00055	B	SW-846:6020	
Uranium	0.0014	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0026	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

B = Estimated result. Result is less than RL.

J = Method blank contamination. The associated method blank contains the target analyte at a reportable level.

NE = Not Established

U = Result is less than the sample selection limit.

Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
TJA-2 26-Sep-11	Aluminum	0.013	NE	0.03	0.013	U	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.00095	0.01	0.01	0.00095	U	SW-846:6020
	Barium	0.045	2	0.002	0.0002		SW-846:6020
	Beryllium	0.00045	0.004	0.0005	0.00035	B	SW-846:6020
	Cadmium	0.0001	0.005	0.0005	0.0001	U	SW-846:6020
	Calcium	75.5	NE	0.1	0.068		SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00022	NE	0.002	0.00022	U	SW-846:6020
	Copper	0.00063	1.3	0.001	0.00045	B	SW-846:6020
	Iron	0.02	NE	0.05	0.02	U	SW-846:6020
	Lead	0.00017	0.015	0.003	0.00017	U	SW-846:6020
	Magnesium	11	NE	0.05	0.0052		SW-846:6020
	Manganese	0.00024	NE	0.002	0.00024	U	SW-846:6020
	Mercury	0.00006	0.002	0.0002	0.00006	U	SW-846:7470A
	Nickel	0.0004	NE	0.005	0.0004	U	SW-846:6020
	Potassium	1.8	NE	0.1	0.042		SW-846:6020
	Selenium	0.006	0.05	0.005	0.0016		SW-846:6020
	Silver	0.00004	NE	0.002	0.00004	U	SW-846:6020
	Sodium	21	NE	0.05	0.015		SW-846:6020
Thallium	0.0016	0.002	0.002	0.00055	B	SW-846:6020	
Uranium	0.0013	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0047	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

B = Estimated result. Result is less than RL.

J = Method blank contamination. The associated method blank contains the target analyte at a reportable level.

NE = Not Established

U = Result is less than the sample selection limit.

Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
TJA-4 27-Sep-11	Aluminum	0.013	NE	0.03	0.013	U	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.00095	0.01	0.01	0.00095	U	SW-846:6020
	Barium	0.18	2	0.002	0.0002		SW-846:6020
	Beryllium	0.00035	0.004	0.0005	0.00035	U	SW-846:6020
	Cadmium	0.0001	0.005	0.0005	0.0001	U	SW-846:6020
	Calcium	66	NE	0.1	0.068		SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00022	NE	0.002	0.00022	U	SW-846:6020
	Copper	0.00057	1.3	0.001	0.00045	B	SW-846:6020
	Iron	0.02	NE	0.05	0.02	U	SW-846:6020
	Lead	0.00017	0.015	0.003	0.00017	U	SW-846:6020
	Magnesium	12.9	NE	0.05	0.0052		SW-846:6020
	Manganese	0.00036	NE	0.002	0.00024	B	SW-846:6020
	Mercury	0.00006	0.002	0.0002	0.00006	U	SW-846:7470A
	Nickel	0.0004	NE	0.005	0.0004	U	SW-846:6020
	Potassium	3.3	NE	0.1	0.042		SW-846:6020
	Selenium	0.0023	0.05	0.005	0.0016	B	SW-846:6020
	Silver	0.00004	NE	0.002	0.00004	U	SW-846:6020
	Sodium	23.9	NE	0.05	0.015		SW-846:6020
Thallium	0.00055	0.002	0.002	0.00055	U	SW-846:6020	
Uranium	0.0028	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0051	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

B = Estimated result. Result is less than RL.

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NE = Not Established

U = Result is less than the sample selection limit.

Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
TJA-6 15-Sep-11	Aluminum	0.13	NE	0.03	0.013	J	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.00095	0.01	0.01	0.00095	U	SW-846:6020
	Barium	0.07	2	0.002	0.0002		SW-846:6020
	Beryllium	0.00041	0.004	0.0005	0.00035	B	SW-846:6020
	Cadmium	0.0001	0.005	0.0005	0.0001	U	SW-846:6020
	Calcium	62.1	NE	0.1	0.068		SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00022	NE	0.002	0.00022	U	SW-846:6020
	Copper	0.00056	1.3	0.001	0.00045	B	SW-846:6020
	Iron	0.1	NE	0.05	0.02		SW-846:6020
	Lead	0.00017	0.015	0.003	0.00017	U	SW-846:6020
	Magnesium	10.9	NE	0.05	0.0052		SW-846:6020
	Manganese	0.0044	NE	0.002	0.00024		SW-846:6020
	Mercury	0.00027	0.002	0.0002	0.00006		SW-846:7470A
	Nickel	0.00064	NE	0.005	0.0004	B	SW-846:6020
	Potassium	2.2	NE	0.1	0.042		SW-846:6020
	Selenium	0.0016	0.05	0.005	0.0016	U	SW-846:6020
	Silver	0.00004	NE	0.002	0.00004	U	SW-846:6020
	Sodium	21.4	NE	0.05	0.015		SW-846:6020
Thallium	0.0017	0.002	0.002	0.00055	B	SW-846:6020	
Uranium	0.0033	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0045	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

B = Estimated result. Result is less than RL.

J = Method blank contamination. The associated method blank contains the target analyte at a reportable level.

NE = Not Established

U = Result is less than the sample selection limit.

Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
TJA-7 28-Sep-11	Aluminum	0.029	NE	0.03	0.013	B	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.00095	0.01	0.01	0.00095	U	SW-846:6020
	Barium	0.23	2	0.002	0.0002		SW-846:6020
	Beryllium	0.00035	0.004	0.0005	0.00035	U	SW-846:6020
	Cadmium	0.0001	0.005	0.0005	0.0001	U	SW-846:6020
	Calcium	64.3	NE	0.1	0.068		SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00058	NE	0.002	0.00022	B	SW-846:6020
	Copper	0.00054	1.3	0.001	0.00045	B	SW-846:6020
	Iron	0.031	NE	0.05	0.02	B	SW-846:6020
	Lead	0.00017	0.015	0.003	0.00017	U	SW-846:6020
	Magnesium	11.8	NE	0.05	0.0052		SW-846:6020
	Manganese	0.00069	NE	0.002	0.00024	B	SW-846:6020
	Mercury	0.00006	0.002	0.0002	0.00006	U	SW-846:7470A
	Nickel	0.0004	NE	0.005	0.0004	U	SW-846:6020
	Potassium	2.1	NE	0.1	0.042		SW-846:6020
	Selenium	0.0044	0.05	0.005	0.0016	B	SW-846:6020
	Silver	0.00004	NE	0.002	0.00004	U	SW-846:6020
	Sodium	17.9	NE	0.05	0.015		SW-846:6020
Thallium	0.00055	0.002	0.002	0.00055	U	SW-846:6020	
Uranium	0.0017	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0053	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

B = Estimated result. Result is less than RL.

J = Method blank contamination. The associated method blank contains the target analyte at a reportable level.

NE = Not Established

U = Result is less than the sample selection limit.

Table-1 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo 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
WYO-4 19-Sep-11	Aluminum	0.013	NE	0.03	0.013	B	SW-846:6020
	Antimony	0.0017	0.006	0.005	0.0017	U	SW-846:6020
	Arsenic	0.00095	0.01	0.01	0.00095	U	SW-846:6020
	Barium	0.17	2	0.002	0.0002		SW-846:6020
	Beryllium	0.0005	0.004	0.0005	0.00035		SW-846:6020
	Cadmium	0.0001	0.005	0.0005	0.0001	U	SW-846:6020
	Calcium	82.3	NE	0.1	0.068		SW-846:6020
	Chromium	0.0033	0.1	0.01	0.0033	U	SW-846:6020
	Cobalt	0.00022	NE	0.002	0.00022	U	SW-846:6020
	Copper	0.00091	1.3	0.001	0.00045	B	SW-846:6020
	Iron	0.029	NE	0.05	0.02	B	SW-846:6020
	Lead	0.00049	0.015	0.003	0.00017	B,J	SW-846:6020
	Magnesium	13.4	NE	0.05	0.0052		SW-846:6020
	Manganese	0.00068	NE	0.002	0.00024	B	SW-846:6020
	Mercury	0.000076	0.002	0.0002	0.00006	B	SW-846:7470A
	Nickel	0.00045	NE	0.005	0.0004	B	SW-846:6020
	Potassium	1.8	NE	0.1	0.042		SW-846:6020
	Selenium	0.005	0.05	0.005	0.0016		SW-846:6020
	Silver	0.000074	NE	0.002	0.00004	B	SW-846:6020
	Sodium	19.5	NE	0.05	0.015	J	SW-846:6020
Thallium	0.0014	0.002	0.002	0.00055	B,J	SW-846:6020	
Uranium	0.0014	0.03	0.001	0.00023		SW-846:6020	
Vanadium	0.0043	NE	0.01	0.0024	B	SW-846:6020	
Zinc	0.0083	NE	0.01	0.0083	U	SW-846:6020	

B = Estimated result. Result is less than RL.

J = Method blank contamination. The associated method blank contains the target analyte at a reportable level.

NE = Not Established

U = Result is less than the sample selection limit.

Table-2 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo Groundwater Quality Results: Anions, Nitrate, and Nitrite

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TA1-W-02 26-Aug-11	Bromide	0.12	NE	0.25	0.025	B	EPA:300.0
	Chloride	14.2	NE	1	0.1		EPA:300.0
	Fluoride	0.37	4	0.1	0.01		EPA:300.0
	Nitrate	1	10	0.1	0.02		EPA:300.0
	Nitrite	0.003	1	0.02	0.003	U	EPA:300.0
	Sulfate	81.3	NE	2.5	0.25		EPA:300.0
TA2-SW1-320 22-Aug-11	Bromide	0.67	NE	0.25	0.025		EPA:300.0
	Chloride	31.9	NE	2	0.2		EPA:300.0
	Fluoride	0.39	4	0.1	0.01		EPA:300.0
	Nitrate	21.1	10	2	0.4		EPA:300.0
	Nitrite	0.03	1	0.2	0.03	U	EPA:300.0
	Sulfate	14.7	NE	0.5	0.05		EPA:300.0
TA2-W-01 20-Sep-11	Bromide	1.4	NE	0.25	0.025		EPA:300.0
	Chloride	89.2	NE	10	1		EPA:300.0
	Fluoride	0.28	4	0.1	0.01		EPA:300.0
	Nitrate	4.3	10	1	0.2		EPA:300.0
	Nitrite	0.003	1	0.02	0.003	U	EPA:300.0
	Sulfate	56.6	NE	2.5	0.25		EPA:300.0
TA2-W-19 21-Sep-11	Bromide	0.81	NE	0.25	0.025		EPA:300.0
	Chloride	57.2	NE	10	1		EPA:300.0
	Fluoride	0.33	4	0.1	0.01		EPA:300.0
	Nitrate	9.5	10	1	0.2		EPA:300.0
	Nitrite	0.003	1	0.02	0.003	U	EPA:300.0
	Sulfate	55.1	NE	2.5	0.25		EPA:300.0
TA2-W-19 21-Sep-11 DUP	Bromide	0.77	NE	0.25	0.025		EPA:300.0
	Chloride	58.7	NE	10	1		EPA:300.0
	Fluoride	0.31	4	0.1	0.01		EPA:300.0
	Nitrate	9.8	10	1	0.2		EPA:300.0
	Nitrite	0.003	1	0.02	0.003	U	EPA:300.0
	Sulfate	55.4	NE	2.5	0.25		EPA:300.0
TA2-W-27 14-Sep-11	Bromide	1.5	NE	0.25	0.025		EPA:300.0
	Chloride	100	NE	20	2		EPA:300.0
	Fluoride	0.28	4	0.1	0.01		EPA:300.0
	Nitrate	4	10	0.2	0.04	J	EPA:300.0
	Nitrite	0.03	1	0.2	0.03	U	EPA:300.0
	Sulfate	154	NE	5	0.5		EPA:300.0

B = Estimated result. Result is less than RL.

J = Method blank contamination. The associated method blank contains the target analyte at a reportable level.

NE = Not Established

U = Result is less than the sample selection limit.

Table-2 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo Groundwater Quality Results: Anions, Nitrate, and Nitrite

Monitoring Well/ Sample Date	Analyte	Result (mg/L)	EPA MCL (mg/L)	Quantitation Limit (mg/L)	MDL (mg/L)	Laboratory Qualifier	Analytical Method
TJA-2 26-Sep-11	Bromide	0.8	NE	0.25	0.025		EPA:300.0
	Chloride	60.3	NE	10	1		EPA:300.0
	Fluoride	0.3	4	0.1	0.01		EPA:300.0
	Nitrate	10.1	10	1	0.2		EPA:300.0
	Nitrite	0.003	1	0.02	0.003	U	EPA:300.0
	Sulfate	52.4	NE	2.5	0.25		EPA:300.0
TJA-4 27-Sep-11	Bromide	0.3	NE	0.25	0.025		EPA:300.0
	Chloride	21.4	NE	1	0.1		EPA:300.0
	Fluoride	0.37	4	0.1	0.01		EPA:300.0
	Nitrate	28.4	10	1	0.2		EPA:300.0
	Nitrite	0.003	1	0.02	0.003	U	EPA:300.0
	Sulfate	17.1	NE	0.5	0.05		EPA:300.0
TJA-6 15-Sep-11	Bromide	0.16	NE	0.25	0.025	B	EPA:300.0
	Chloride	13.6	NE	2	0.2		EPA:300.0
	Fluoride	0.41	4	0.1	0.01		EPA:300.0
	Nitrate	2.4	10	0.2	0.04	J	EPA:300.0
	Nitrite	0.003	1	0.02	0.003	U	EPA:300.0
	Sulfate	60.6	NE	5	0.5		EPA:300.0
TJA-7 28-Sep-11	Bromide	0.36	NE	0.25	0.025		EPA:300.0
	Chloride	22	NE	10	1		EPA:300.0
	Fluoride	0.34	4	0.1	0.01		EPA:300.0
	Nitrate	22.2	10	1	0.2		EPA:300.0
	Nitrite	0.003	1	0.02	0.003	U	EPA:300.0
	Sulfate	18.5	NE	2.5	0.25		EPA:300.0
WYO-4 19-Sep-11	Bromide	1.3	NE	0.25	0.025		EPA:300.0
	Chloride	100	NE	10	1		EPA:300.0
	Fluoride	0.31	4	0.1	0.01		EPA:300.0
	Nitrate	2.9	10	0.1	0.02		EPA:300.0
	Nitrite	0.003	1	0.02	0.003	U	EPA:300.0
	Sulfate	49.9	NE	2.5	0.25		EPA:300.0

B = Estimated result. Result is less than RL.

J = Method blank contamination. The associated method blank contains the target analyte at a reportable level.

NE = Not Established

U = Result is less than the sample selection limit.

Table-3 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo Groundwater Quality Results: Gross Alpha, Gross Beta, and Gamma Spectroscopy

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Qualifier	Analytical Method
TA1-W-02 26-Aug-11	Actinium-228	11.3 ± 6.3	10		EPA:901.1
	Americium-241	-16.8 ± 6.8	11	U	EPA:901.1
	Bismuth-212	7 ± 13	21	U	EPA:901.1
	Bismuth-214	19.4 ± 8.9	7.6		EPA:901.1
	Cesium-134	0.8 ± 1.2	2.1	U	EPA:901.1
	Cesium-137	1.3 ± 2.1	3.5	U	EPA:901.1
	Cobalt-60	0.4 ± 0.95	3.7	U	EPA:901.1
	Gross alpha	3.6 ± 2.2	2.7		EPA:900
	Gross beta	2.3 ± 1.1	1.4		EPA:900
	Lead-212	1.1 ± 2.8	5	U	EPA:901.1
	Lead-214	9.9 ± 4.7	7.2		EPA:901.1
	Potassium-40	34 ± 26	36	U	EPA:901.1
	Protactinium-234M	290 ± 350	430	U	EPA:901.1
	Sodium-22	-0.5 ± 2	3.4	U	EPA:901.1
	Thallium-208	1.6 ± 2.2	3.8	U	EPA:901.1
	Thorium-234	-48 ± 89	110	U	EPA:901.1
	Tritium	38 ± 50	82	U	EPA:906.0
Uranium-235	-2.2 ± 5.9	18	U	EPA:901.1	
TA2-SW1-320 22-Aug-11	Actinium-228	9.8 ± 6.7	12	U	EPA:901.1
	Americium-241	221 ± 20	6		EPA:901.1
	Bismuth-212	5 ± 18	22	U	EPA:901.1
	Bismuth-214	10.8 ± 5.7	6.6		EPA:901.1
	Cesium-134	3.3 ± 1.6	2.1		EPA:901.1
	Cesium-137	111 ± 8.5	3.3		EPA:901.1
	Cobalt-60	148 ± 9.99	3.3		EPA:901.1
	Gross alpha	1.3 ± 2.2	3.7	U	EPA:900
	Gross beta	1.7 ± 1.1	1.6		EPA:900
	Lead-212	1.3 ± 4.1	5.7	U	EPA:901.1
	Lead-214	9.2 ± 4.9	6.2		EPA:901.1
	Potassium-40	24 ± 33	38	U	EPA:901.1
	Protactinium-234M	210 ± 270	430	U	EPA:901.1
	Sodium-22	-0.7 ± 1.6	2.7	U	EPA:901.1
	Thallium-208	0.9 ± 2.5	3.3	U	EPA:901.1
	Thorium-234	33 ± 44	58	U	EPA:901.1
	Tritium	40 ± 130	220	U	EPA:906.0
Uranium-235	4 ± 10	13	U	EPA:901.1	

U = Result is less than the sample detection limit.

Table-3 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo Groundwater Quality Results: Gross Alpha, Gross Beta, and Gamma Spectroscopy

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Qualifier	Analytical Method
TA2-W-01 20-Sep-11	Actinium-228	6 ± 4.9	8.9	U	EPA:901.1
	Americium-241	1.1 ± 2.5	4.1	U	EPA:901.1
	Bismuth-212	-7 ± 10	17	U	EPA:901.1
	Bismuth-214	15.1 ± 5.4	6.3		EPA:901.1
	Cesium-134	1.38 ± 0.97	1.8	U	EPA:901.1
	Cesium-137	1 ± 1.5	2.5	U	EPA:901.1
	Cobalt-60	0.35 ± 0.77	2.6	U	EPA:901.1
	Gross alpha	-0.4 ± 1.6	3.2	U	EPA:900
	Gross beta	1.09 ± 0.78	1.2	U	EPA:900
	Lead-212	1.2 ± 2.5	4.8	U	EPA:901.1
	Lead-214	6.7 ± 3.6	5.6		EPA:901.1
	Potassium-40	10 ± 24	37	U	EPA:901.1
	Protactinium-234M	-90 ± 390	360	U	EPA:901.1
	Sodium-22	-0.01 ± 1.2	2	U	EPA:901.1
	Thallium-208	0.33 ± 0.63	3	U	EPA:901.1
	Thorium-234	24 ± 38	56	U	EPA:901.1
	Tritium	41 ± 98	170	U	EPA:906.0
Uranium-235	2.5 ± 9.8	14	U	EPA:901.1	
TA2-W-19 21-Sep-11	Actinium-228	-5 ± 15	10	U	EPA:901.1
	Americium-241	0.6 ± 3	5	U	EPA:901.1
	Bismuth-212	11 ± 16	19	U	EPA:901.1
	Bismuth-214	7 ± 5.6	6.3		EPA:901.1
	Cesium-134	1.05 ± 0.78	2.9	U	EPA:901.1
	Cesium-137	-0.9 ± 1.7	2.9	U	EPA:901.1
	Cobalt-60	0.6 ± 1.1	2.6	U	EPA:901.1
	Gross alpha	0.5 ± 1.5	2.7	U	EPA:900
	Gross beta	2.44 ± 0.84	1.1		EPA:900
	Lead-212	-1.8 ± 4.5	5.5	U	EPA:901.1
	Lead-214	5.2 ± 4.2	5.7	U	EPA:901.1
	Potassium-40	5 ± 27	43	U	EPA:901.1
	Protactinium-234M	280 ± 220	320	U	EPA:901.1
	Sodium-22	-0.05 ± 1.7	2.8	U	EPA:901.1
	Thallium-208	-0.03 ± 2.7	3.3	U	EPA:901.1
	Thorium-234	6 ± 11	50	U	EPA:901.1
	Tritium	110 ± 110	170	U	EPA:906.0
Uranium-235	8.8 ± 8.3	12	U	EPA:901.1	

U = Result is less than the sample detection limit.

Table-3 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo Groundwater Quality Results: Gross Alpha, Gross Beta, and Gamma Spectroscopy

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Qualifier	Analytical Method
TA2-W-19 21-Sep-11 DUP	Actinium-228	8.2 ± 4.4	8.2	U	EPA:901.1
	Americium-241	1.6 ± 3	5	U	EPA:901.1
	Bismuth-212	11 ± 13	21	U	EPA:901.1
	Bismuth-214	16.5 ± 5.8	6.4		EPA:901.1
	Cesium-134	1 ± 1.2	3.7	U	EPA:901.1
	Cesium-137	0.2 ± 1.6	2.7	U	EPA:901.1
	Cobalt-60	0.2 ± 1.3	2.7	U	EPA:901.1
	Gross alpha	1.25 ± 0.96	1.5	U	EPA:900
	Gross beta	3.1 ± 0.6	0.68		EPA:900
	Lead-212	0.2 ± 2.6	4.9	U	EPA:901.1
	Lead-214	10 ± 4.6	6.1		EPA:901.1
	Potassium-40	15 ± 25	37	U	EPA:901.1
	Protactinium-234M	-110 ± 420	340	U	EPA:901.1
	Sodium-22	0.4 ± 1.7	2.9	U	EPA:901.1
	Thallium-208	-1.1 ± 1.8	3.1	U	EPA:901.1
	Thorium-234	0.3 ± 3.3	54	U	EPA:901.1
	Tritium	90 ± 100	170	U	EPA:906.0
Uranium-235	0.2 ± 9.6	16	U	EPA:901.1	
TA2-W-27 14-Sep-11	Actinium-228	16 ± 8.7	8.5		EPA:901.1
	Americium-241	-0.6 ± 3.3	5.5	U	EPA:901.1
	Bismuth-212	13 ± 11	17	U	EPA:901.1
	Bismuth-214	70.8 ± 8.4	7.2		EPA:901.1
	Cesium-134	0.51 ± 0.84	7.1	U	EPA:901.1
	Cesium-137	-0.4 ± 1.8	3	U	EPA:901.1
	Cobalt-60	-0.8 ± 1.9	3.2	U	EPA:901.1
	Gross alpha	2.3 ± 2.4	3.7	U	EPA:900
	Gross beta	1.6 ± 1.7	2.8	U	EPA:900
	Lead-212	0.9 ± 2.7	5.1	U	EPA:901.1
	Lead-214	62.6 ± 7.6	6.8		EPA:901.1
	Potassium-40	-15 ± 31	41	U	EPA:901.1
	Protactinium-234M	-220 ± 900	430	U	EPA:901.1
	Sodium-22	0.6 ± 1.7	2.8	U	EPA:901.1
	Thallium-208	1.6 ± 2.4	3.5	U	EPA:901.1
	Thorium-234	10 ± 20	58	U	EPA:901.1
	Tritium	-20 ± 100	200	U	EPA:906.0
Uranium-235	0.27 ± 0.59	17	U	EPA:901.1	

U = Result is less than the sample detection limit.

Table-3 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo Groundwater Quality Results: Gross Alpha, Gross Beta, and Gamma Spectroscopy

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Qualifier	Analytical Method
TJA-2 26-Sep-11	Actinium-228	11.6 ± 6.6	7.2		EPA:901.1
	Americium-241	-0.09 ± 3.2	5.3	U	EPA:901.1
	Bismuth-212	-6 ± 22	22	U	EPA:901.1
	Bismuth-214	49.3 ± 6.5	6.5		EPA:901.1
	Cesium-134	1.9 ± 1.2	1.8		EPA:901.1
	Cesium-137	0.05 ± 1.3	2.2	U	EPA:901.1
	Cobalt-60	0.6 ± 1	2.4	U	EPA:901.1
	Gross alpha	1.65 ± 0.97	1.5		EPA:900
	Gross beta	1.7 ± 0.5	0.7		EPA:900
	Lead-212	1.7 ± 2.6	5	U	EPA:901.1
	Lead-214	54.3 ± 6.2	6.4		EPA:901.1
	Potassium-40	33 ± 25	33	U	EPA:901.1
	Protactinium-234M	-90 ± 320	330	U	EPA:901.1
	Sodium-22	0.02 ± 1.5	2.6	U	EPA:901.1
	Thallium-208	0.2 ± 2	2.9	U	EPA:901.1
	Thorium-234	-7 ± 37	51	U	EPA:901.1
	Tritium	70 ± 100	170	U	EPA:906.0
Uranium-235	7.8 ± 9.2	12	U	EPA:901.1	
TJA-4 27-Sep-11	Actinium-228	8 ± 3.9	9.6	U	EPA:901.1
	Americium-241	0.7 ± 3.3	5.4	U	EPA:901.1
	Bismuth-212	0.2 ± 14	23	U	EPA:901.1
	Bismuth-214	43.1 ± 6.1	6.6		EPA:901.1
	Cesium-134	1.1 ± 1.2	6.4	U	EPA:901.1
	Cesium-137	-0.2 ± 1.9	3.2	U	EPA:901.1
	Cobalt-60	0.23 ± 0.49	3.1	U	EPA:901.1
	Gross alpha	3.8 ± 1.4	1.8		EPA:900
	Gross beta	2.76 ± 0.62	0.75		EPA:900
	Lead-212	-1.5 ± 3.2	5.2	U	EPA:901.1
	Lead-214	46.1 ± 5.8	6.9		EPA:901.1
	Potassium-40	-29 ± 42	44	U	EPA:901.1
	Protactinium-234M	104 ± 84	430	U	EPA:901.1
	Sodium-22	-0.4 ± 1.8	3.1	U	EPA:901.1
	Thallium-208	-0.4 ± 2.5	3.3	U	EPA:901.1
	Thorium-234	2 ± 33	51	U	EPA:901.1
	Tritium	41 ± 99	170	U	EPA:906.0
Uranium-235	22.2 ± 9.8	13		EPA:901.1	

U = Result is less than the sample detection limit.

Table-3 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo Groundwater Quality Results: Gross Alpha, Gross Beta, and Gamma Spectroscopy

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)	MDA (pCi/L)	Laboratory Qualifier	Analytical Method
TJA-6 15-Sep-11	Actinium-228	4.9 ± 5.5	9.7	U	EPA:901.1
	Americium-241	1.1 ± 3.4	5.7	U	EPA:901.1
	Bismuth-212	-5 ± 23	23	U	EPA:901.1
	Bismuth-214	71.7 ± 7.8	6.6		EPA:901.1
	Cesium-134	-2.4 ± 2	3.2	U	EPA:901.1
	Cesium-137	-0.9 ± 1.8	3	U	EPA:901.1
	Cobalt-60	0.6 ± 1.1	2.6	U	EPA:901.1
	Gross alpha	3 ± 1.9	2.5		EPA:900
	Gross beta	2.8 ± 1.1	1.4		EPA:900
	Lead-212	2.1 ± 2.7	5	U	EPA:901.1
	Lead-214	80.8 ± 8.6	6.8		EPA:901.1
	Potassium-40	16 ± 30	39	U	EPA:901.1
	Protactinium-234M	-210 ± 970	390	U	EPA:901.1
	Sodium-22	0.6 ± 1.7	2.8	U	EPA:901.1
	Thallium-208	1.8 ± 2.4	2.9	U	EPA:901.1
	Thorium-234	-10 ± 40	57	U	EPA:901.1
	Tritium	50 ± 120	210	U	EPA:906.0
Uranium-235	-3 ± 15	18	U	EPA:901.1	
TJA-7 28-Sep-11	Actinium-228	20.1 ± 7.5	9.6		EPA:901.1
	Americium-241	2 ± 3.9	6.4	U	EPA:901.1
	Bismuth-212	-0.8 ± 17	29	U	EPA:901.1
	Bismuth-214	75 ± 10	9		EPA:901.1
	Cesium-134	2.2 ± 1.8	8.1	U	EPA:901.1
	Cesium-137	-1.3 ± 2.3	3.8	U	EPA:901.1
	Cobalt-60	-1.3 ± 2.3	3.9	U	EPA:901.1
	Gross alpha	3.1 ± 1.2	1.5		EPA:900
	Gross beta	2.44 ± 0.59	0.76		EPA:900
	Lead-212	0.5 ± 3.2	6.1	U	EPA:901.1
	Lead-214	77.3 ± 8.9	7.9		EPA:901.1
	Potassium-40	26 ± 42	50	U	EPA:901.1
	Protactinium-234M	270 ± 250	410	U	EPA:901.1
	Sodium-22	0.05 ± 2.1	3.6	U	EPA:901.1
	Thallium-208	1.4 ± 2.3	3.9	U	EPA:901.1
	Thorium-234	10 ± 17	67	U	EPA:901.1
	Tritium	80 ± 100	170	U	EPA:906.0
Uranium-235	9 ± 14	19	U	EPA:901.1	

U = Result is less than the sample detection limit.

Table-3 NMED DOE OB FFY 2011 Q-4 Tijeras Arroyo Groundwater Quality Results: Gross Alpha, Gross Beta, and Gamma Spectroscopy

Monitoring Well/ Sample Date	Analyte	Activity (pCi/L)		MDA (pCi/L)	Laboratory Qualifier	Analytical Method
WYO-4 19-Sep-11	Actinium-228	3.5	± 4.8	11	U	EPA:901.1
	Americium-241	8.5	± 6	9.7	U	EPA:901.1
	Bismuth-212	4	± 13	21	U	EPA:901.1
	Bismuth-214	5.1	± 5.6	6.6	U	EPA:901.1
	Cesium-134	-2.7	± 2.3	3.7	U	EPA:901.1
	Cesium-137	-0.1	± 2.1	3.6	U	EPA:901.1
	Cobalt-60	0.7	± 1.9	3.2	U	EPA:901.1
	Gross alpha	0.9	± 1.6	2.8	U	EPA:900
	Gross beta	0.71	± 0.68	1.1	U	EPA:900
	Lead-212	2.1	± 2.8	4.9	U	EPA:901.1
	Lead-214	8.5	± 4.2	6.5		EPA:901.1
	Potassium-40	-30	± 49	45	U	EPA:901.1
	Protactinium-234M	-500	± 1300	500	U	EPA:901.1
	Sodium-22	-0.8	± 2.1	3.5	U	EPA:901.1
	Thallium-208	0.9	± 2.5	3.3	U	EPA:901.1
	Thorium-234	-30	± 94	110	U	EPA:901.1
	Tritium	130	± 120	180	U	EPA:906.0
Uranium-235	3	± 14	18	U	EPA:901.1	

U = Result is less than the sample detection limit.

Table-4 NMED DOE OB FFY 2011 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-SW1-320 22-Aug-11	Acetone	6.7	NE	20	6.7	J	SW-846:8260B
	Methylene Chloride	3.3	NE	5	1.7	J,B	SW-846:8260B
TA2-W-01 20-Sep-11	Trichloroethene	1.4	5	5	0.29	J	SW-846:8260B
TA2-W-19 21-Sep-11	Dichloroethane[1,1-]	0.41	NE	5	0.39	J	SW-846:8260B
	Dichloroethene[cis-1,2-]	0.54	70	5	0.16	J	SW-846:8260B
	Trichloroethene	3.1	5	5	0.29	J	SW-846:8260B
TA2-W-19 21-Sep-11 DUP	Trichloroethene	2.4	5	5	0.29	J	SW-846:8260B
TA2-W-27 14-Sep-11	Acetone	13	NE	20	6.7	J	SW-846:8260B
	Chloroform	0.36	NE	5	0.15	J	SW-846:8260B
	Methylene Chloride	3.4	NE	5	1.7	J,B	SW-846:8260B
	Tetrachloroethene	0.91	5	5	0.28	J	SW-846:8260B
	Trichloroethene	0.85	5	5	0.29	J	SW-846:8260B
TJA-6 15-Sep-11	Acetone	17	NE	20	6.7	J	SW-846:8260B
	Methylene Chloride	2	NE	5	1.7	J,B	SW-846:8260B
WYO-4 19-Sep-11	Dichloroethane[1,1-]	1	NE	5	0.39	J	SW-846:8260B
	Dichloroethene[cis-1,2-]	2	70	5	0.16	J	SW-846:8260B
	Trichloroethene	6.5	5	5	0.29		SW-846:8260B

B = Method blank contamination. The associated method blank contains the target analyte at a reportable level,

J = Estimated result. Result is less than the Reporting limit.

NE = Not Established