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Date: MAY 25 2017
Refer To: ADEM-17-0104
LAUR: 17-24068
Locates Action No.: n/a

RECEIVED
MAY 2017

John Kieling, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Monthly Notification of Groundwater Data Reviewed in May 2017

This letter is Los Alamos National Laboratory's (LANL's) written submission in accordance with Section XXVI of the 2016 Compliance Order on Consent (Consent Order). Members of LANL's Associate Directorate for Environmental Management met on May 11, 2017, to review groundwater data received in April 2017. This report was prepared by comparing the data against groundwater notification criteria as defined in Section IX of the 2016 Consent Order. These criteria consider New Mexico Water Quality Control Commission (NMWQCC) groundwater standards, U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs), New Mexico Environment Department (NMED) screening levels for tap water, EPA regional screening levels for tap water, and NMED-approved background values for hydrogeological zones as set forth in the "Groundwater Background Investigation Report, Revision 5." For comparison with EPA tap water standards, the standard's carcinogenic risk value was adjusted to 1×10^{-5}, as specified in the Consent Order. This report was prepared using the May 2016 EPA regional screening levels for tap water.

1-Day Notification

There were no instances of a contaminant detected at a concentration that exceeded the NMWQCC groundwater standard or federal maximum contaminant level at locations where contaminants have not been previously detected above the respective standard (based on samples collected since June 14, 2007).

One-day notification was not required because there were no cases of a contaminant detected in a well screen interval or spring at a concentration that exceeded a water quality standard for the first time.

15-Day Notification

The required information for the contaminants and other chemical parameters that meet the five reporting criteria requiring written notification within 15 days is given in the accompanying report and tables.

If you have questions, please contact Steve Paris at (505) 606-0915 (smparis@lanl.gov) or Hai Shen at (505) 665-5046 (hai.shen@em.doe.gov).

Sincerely,

Bruce Robinson, Program Director
Environmental Remediation Program
Los Alamos National Laboratory

Sincerely,

David S. Rhodes, Director
Office of Quality and Regulatory Compliance
Los Alamos Environmental Management
Field Office

BR/DR/SP:sm

Enclosure: Two hard copies with electronic files – Summary of Groundwater Data Reviewed in May 2017 That Meet Notification Requirements (EP2017-0082)

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SUMMARY OF GROUNDWATER DATA REVIEWED IN MAY 2017
THAT MEET NOTIFICATION REQUIREMENTS

INTRODUCTION

This report provides information to the New Mexico Environment Department (NMED) concerning recent groundwater monitoring data obtained by Los Alamos National Laboratory (the Laboratory) under its annual "Interim Facility-Wide Groundwater Monitoring Plan" for the 2017 Monitoring Year and contains results for contaminants and other chemical constituents that meet the five screening criteria described in Section XXVI of the 2016 Compliance Order on Consent modified February 2017 (2016 Consent Order). The report covers groundwater samples collected from wells or springs (listed in the accompanying tables) that provide surveillance of the hydrogeological zones indicated in the tables.

The report includes two tables. Table 1, NMED 04-17 Groundwater Report, presents results since June 14, 2007, that met the five reporting criteria as specified in the 2016 Consent Order. Table 2, NMED 04-17 Groundwater Report Addendum, presents results that are exceeding the 95th percentile of those results in the data set defined in the "Groundwater Background Investigation Report, Revision 5." Only contaminants and other chemical constituents lacking a calculated groundwater background value (i.e., the frequency of detections was too low to calculate a background value at the 95% upper tolerance level) are listed in this table. Table 2 is a voluntary submission by the Laboratory to NMED to identify the potential risk resulting from contaminants and other chemical constituents without defined background values.

These tables include the following:

- Comments on results that appear to be exceptional based on consideration of monitoring data acquired from previous analyses (using statistics described below)
- Supplemental information summarizing monitoring results obtained from previous analyses
- Sampling date, name of the well or spring, location of the well or spring, depth of the screened interval, groundwater zone sampled, analytical result, detection limit, values for regulatory standards or screening levels, and analytical and secondary validation qualifiers. Additional information describing the locations and analytical data is also included. All data have been through secondary validation.

This report was prepared by comparing the data against groundwater notification criteria as defined in Section IX of the 2016 Consent Order. These criteria consider New Mexico Water Quality Control Commission (NMWQCC) groundwater standards, U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs), NMED screening levels for tap water, EPA regional screening levels for tap water, and NMED-approved background values for hydrogeological zones as set forth in the "Groundwater Background Investigation Report, Revision 5." For comparison EPA tap water standards, the standard's carcinogenic risk value was adjusted to 1×10^{-5}, as specified in the Consent Order. This report was prepared using the May 2016 EPA regional screening levels for tap water.

Background values applied in Table 1 notification criteria C2 and C4 are the background values for hydrogeological zones as set forth in the NMED-approved "Groundwater Background Investigation Report, Revision 5."

Screening values applied in Table 2 criteria XC2scr and XC4scr are the 95th percentile of the data set used to establish background as defined in the “Groundwater Background Investigation Report, Revision 5.”

DESCRIPTION OF TABLE

15-Day Notification Requirement

Table 1 is divided into separate categories that correspond to the five screening criteria in Section XXVI of the 2016 Consent Order. Some data met more than one of the notification criteria and appear in the table multiple times.

The criteria are as follows:

C1. Detection of a contaminant that is an organic compound in a spring or screened interval of a well if that contaminant has not previously been detected in the spring or screened interval.

C2. Detection of a contaminant that is a metal or other inorganic compound at a concentration above the background level in a spring or screened interval of a well if that contaminant has not previously exceeded the background level in the spring or screened interval.

C3. Detection of a contaminant in a spring or screened interval of a well at a concentration that (1) exceeds the lower of either one-half the New Mexico water quality standard or one-half the federal maximum contaminant level, or, if there is no such standard for the contaminant, (2) exceeds one-half the tap water screening levels in Table A-1 of NMED' s “Risk Assessment Guidance for Site Investigations and Remediation” (March 2017 or updates, as appropriate), or, if there is no NMED tap water screening level available for a contaminant, (3) exceeds one-half the EPA regional human health medium-specific screening level for tap water, if that contaminant has not previously exceeded one-half such standard or screening level in the spring or screened interval.

C4. Detection of a contaminant that is a metal or other inorganic compound in a spring or screened interval of a well at a concentration that exceeds two times the background level for the third consecutive sampling of the spring or screened interval.

C5. Detection of a contaminant in a spring or screened interval of a well at a concentration that exceeds either one-half the New Mexico water quality standard or one-half the federal maximum contaminant level, and which has increased for the third consecutive sampling of that spring or screened interval.

Table 2 is divided into two categories that correspond to two screening criteria. They mirror criteria C2 and C4 in Table 1, respectively.

The two criteria are as follows:

XC2scr. Detection of a contaminant that is a metal or other inorganic compound at a concentration above the 95th percentile in a spring or screened interval of a well if that contaminant has not previously exceeded the 95th percentile of the data set used to establish background in the spring or screened interval as defined in the “Groundwater Background Investigation Report, Revision 5.”

XC4scr. Detection of a contaminant that is a metal or other inorganic compound in a spring or screened interval of a well at a concentration that for the third consecutive sampling exceeds 2 times the 95th percentile of the data set used to establish background as defined in the “Groundwater Background Investigation Report, Revision 5.”

Columns 2 through 8 in both tables provide summary statistics for metals or inorganic compounds by field preparation code (e.g., filtered aluminum) for samples collected since January 1, 2000, including the currently reported data The statistics include the date of the first sampling event; the number of sampling events and samples analyzed; the number of detections; and the minimum, maximum, and median concentration for detections. This information indicates whether the new result is consistent with the range of earlier data.

The subsequent columns contain location and sampling information:

Hdr 1—canyon where monitoring location is found

Zone—hydrogeological zone from which the groundwater sample was collected (e.g., alluvial spring)

Location—monitoring location name

Screen Depth—depth of top of well screen in feet (0 for springs, –1 if unknown)

Start Date—sample date

Fld QC Type Code—identifies regular samples (REG) or field duplicates (FD)

Fld Prep Code—identifies whether samples are filtered or unfiltered

Lab Sample Type Code—indicates whether result is a primary sample (INIT) or reanalysis (RE)

Anyl Suite Code—analytical suite (such as volatile organic compounds) for analyzed compound

Analyte Desc—name of analyte

Analyte—chemical symbol for analyte or CAS (Chemical Abstracts Service) number for organic compounds

Std Result—analytical result in standard measurement units

Result/Median—ratio of the Std Result to the median of all detections since 2000

LVL Type/Risk Code—type of regulatory standard, screening level, or background value (indicating groundwater zone) used for comparison

Screen Level—value of the LVL Type/Risk Code

Exceedance Ratio—ratio of Std Result to LVL Type/Risk Code. In earlier versions of this report, the ratio was divided by the basis for comparison in the criterion, but that is no longer the case. For example, for a criterion (such as C3) that compares the value with one-half the standard, a value equal to a standard previously had an exceedance ratio of 2. The current report shows this ratio as 1.

Std Mdl—method detection limit in standard measurement units

Std Uom—standard units of measurement

Dilution Factor—amount by which the sample was diluted to measure the concentration

Lab Qual Code—analytical laboratory qualifiers indicating analytical quality of the sample

Validation Flag—secondary validation qualifier

Validation Reason Code—concatenated secondary validation codes explaining assignment of qualifiers

Anyl Meth Code—analytical method number

Lab Code—analytical laboratory name

Comment—comment on the analytical result

Table 1: NMED 04-17 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Validation Flag	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C1	1	1	3/20/2017	4.36	4.36	4.36	1	Canon de Valle	Regional	R-68	1340	3/20/2017	REG	UF	INIT	VOC	Acetone	67-64-1	4.36	1	NMED A1 TAP SCRN LVL	14100	0	1.5	ug/L	1	J	J-	V12a	SW-846:8260B	GELC	New well, the result is J-flagged, the compound was also detected in PEB at similar concentration of 2.32 ug/L.
C1	1	1	3/20/2017	8.82	8.82	8.82	1	Canon de Valle	Regional	R-68	1340	3/20/2017	REG	UF	INIT	HEXP	RDX	121-82-4	8.82	1	NMED A1 TAP SCRN LVL	7.02	1.3	0.0851	ug/L	2		NQ	NQ	SW-846:8321A_MOD	GELC	New well. The concentration is above NMED A1 TAP SCRN LVL of 7.02 ug/L.
C1	1	1	3/20/2017	21	21	21	1	Canon de Valle	Regional	R-68	1340	3/20/2017	REG	UF	INIT	VOC	Toluene	108-88-3	21	1	NM GW STD	750	0	0.3	ug/L	1		NQ	NQ	SW-846:8260B	GELC	New well. The result is the first measurement of the compound.
C1	7	8	4/1/2010	0.0867	0.108	0.09735	2	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611937	3	3/17/2017	FD	UF	INIT	LCMS/MS High Explosives	MNX	MNX	0.0867	0.9				0.086	ug/L	2	J	J	J_LAB	SW-846:8321A_MOD	GELC	
C1	7	8	4/1/2010	0.0867	0.108	0.09735	2	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611937	3	3/17/2017	REG	UF	INIT	LCMS/MS High Explosives	MNX	MNX	0.108	1.1				0.087	ug/L	2	J	J	J_LAB	SW-846:8321A_MOD	GELC	
C1	7	7	2/16/2006	2.34	2.34	2.34	1	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Alluvial	FLC-16-25280	2.6	3/8/2017	REG	UF	INIT	VOC	Butanone[2-]	78-93-3	2.34	1	NMED A1 TAP SCRN LVL	5560	0	1.5	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC	
C1	4	4	4/3/2008	0.211	0.211	0.211	1	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Alluvial	FLC-16-25280	2.6	3/8/2017	REG	UF	INIT	LCMS/MS High Explosives	MNX	MNX	0.211	1				0.0851	ug/L	2	J	J	J_LAB	SW-846:8321A_MOD	GELC	
C1	12	14	12/11/2009	0.37	0.37	0.37	1	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-27i	619	3/24/2017	REG	UF	INIT	VOC	Hexachlorobutadiene	87-68-3	0.37	1	NMED A1 TAP SCRN LVL	1.39	0.3	0.3	ug/L	1	BJ	J	J_LAB	SW-846:8260B	GELC	

Table 1: NMED 04-17 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Validation Flag	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C1	12	14	12/11/2009	0.31	0.31	0.31	1	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-27i	619	3/24/2017	REG	UF	INIT	VOC	Trichlorobenzene[1,2,3-]	87-61-6	0.31	1	EPA TAP SCRN LVL	7	0	0.3	ug/L	1	BJ	J	J_LAB	SW-846:8260B	GELC	
C2	18	23	4/20/2010	11.6	24.8	16.1	23	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	16-26644	130	3/8/2017	REG	F	INIT	GENINORG	Sodium	Na	24.8	1.5	LANL Int BG LVL	18.2	1.4	0.1	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C2	11	11	4/26/2007	0.476	1.35	0.842	11	Upper Los Alamos Canyon (includes DP Canyon)	Intermediate	LADP-3	316	3/30/2017	REG	F	INIT	GENINORG	Uranium	U	1.35	1.6	LANL Int BG LVL	0.992	1.4	0.067	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C3	1	1	3/20/2017	8.82	8.82	8.82	1	Canon de Valle	Regional	R-68	1340	3/20/2017	REG	UF	INIT	HEXP	RDX	121-82-4	8.82	1	NMED A1 TAP SCRN LVL	7.02	1.3	0.0851	ug/L	2		NQ	NQ	SW-846:8321A_MOD	GELC	New well. The concentration is above NMED A1 TAP SCRN LVL of 7.02 ug/L.
C4	18	23	4/20/2010	41.3	119	52.6	23	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	16-26644	130	3/8/2017	REG	F	INIT	METALS	Barium	Ba	108	2.1	LANL Int BG LVL	13.5	8	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	15	19	4/20/2010	15.2	38.7	19.8	19	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	16-26644	130	3/8/2017	REG	F	INIT	GENINORG	Chloride	Cl(-1)	38.7	2	LANL Int BG LVL	3.11	12.4	0.67	mg/L	10		NQ	NQ	EPA:300.0	GELC	
C4	22	27	6/1/2005	5.78	8.34	6.75	27	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	3/20/2017	REG	F	INIT	GENINORG	Chloride	Cl(-1)	8.34	1.2	LANL Int BG LVL	3.11	2.7	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	22	27	6/1/2005	0.51	1.09	0.842	27	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	3/20/2017	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.09	1.3	LANL Int BG LVL	0.459	2.4	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	19	20	1/5/2009	8.41	40.6	12.7	19	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	3/20/2017	REG	F	INIT	METALS	Barium	Ba	40.6	3.2	LANL Int BG LVL	13.5	3	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	

Table 1: NMED 04-17 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Validation Flag	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C4	19	20	1/5/2009	8.71	246	15.65	20	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	3/20/2017	REG	F	INIT	GENINORG	Sodium	Na	197	12.6	LANL Int BG LVL	18.2	10.8	0.1	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	6	10	5/21/2015	9.11	17.3	12.3	10	Acid Canyon	Intermediate Perched	CDV-9-1(i) S1	937.4	3/8/2017	FD	F	INIT	GENINORG	Chloride	Cl(-1)	16.3	1.3	LANL Int BG LVL	3.11	5.2	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	6	10	5/21/2015	9.11	17.3	12.3	10	Acid Canyon	Intermediate Perched	CDV-9-1(i) S1	937.4	3/8/2017	REG	F	INIT	GENINORG	Chloride	Cl(-1)	17.3	1.4	LANL Int BG LVL	3.11	5.6	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	6	10	5/21/2015	1.03	2.63	1.075	10	Acid Canyon	Intermediate Perched	CDV-9-1(i) S1	937.4	3/8/2017	FD	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.06	1	LANL Int BG LVL	0.459	2.3	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	6	10	5/21/2015	1.03	2.63	1.075	10	Acid Canyon	Intermediate Perched	CDV-9-1(i) S1	937.4	3/8/2017	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.09	1	LANL Int BG LVL	0.459	2.4	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	26	29	9/9/2004	53.9	82	69.1	29	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	3/9/2017	FD	F	INIT	METALS	Barium	Ba	71.4	1	LANL Int BG LVL	13.5	5.3	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	26	29	9/9/2004	53.9	82	69.1	29	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	3/9/2017	REG	F	INIT	METALS	Barium	Ba	72.6	1.1	LANL Int BG LVL	13.5	5.4	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	25	28	9/9/2004	12.1	34.6	18.6	28	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	3/9/2017	FD	F	INIT	GENINORG	Chloride	Cl(-1)	34.3	1.8	LANL Int BG LVL	3.11	11	0.67	mg/L	10		NQ	NQ	EPA:300.0	GELC	
C4	25	28	9/9/2004	12.1	34.6	18.6	28	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	3/9/2017	REG	F	INIT	GENINORG	Chloride	Cl(-1)	34.6	1.9	LANL Int BG LVL	3.11	11.1	0.67	mg/L	10		NQ	NQ	EPA:300.0	GELC	
C4	23	26	6/22/2005	0.537	0.947	0.7125	26	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	3/9/2017	FD	F	INIT	GENINORG	Perchlorate	ClO4	0.673	0.9	LANL Int BG LVL	0.27	2.5	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	

Table 1: NMED 04-17 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Validation Flag	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C4	23	26	6/22/2005	0.537	0.947	0.7125	26	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	3/9/2017	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.654	0.9	LANL Int BG LVL	0.27	2.4	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C4	69	84	1/10/2000	145	266	182.5	78	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	3/10/2017	REG	F	INIT	METALS	Barium	Ba	215	1.2	LANL Int BG LVL	13.5	15.9	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	21	26	1/29/2007	13.9	42	19.5	26	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	3/10/2017	REG	F	INIT	GENINORG	Chloride	Cl(-1)	33.4	1.7	LANL Int BG LVL	3.11	10.7	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	20	25	1/29/2007	0.518	0.717	0.592	25	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	3/10/2017	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.581	1	LANL Int BG LVL	0.27	2.2	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C4	65	73	1/10/2000	122	243	168	66	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	3/9/2017	REG	F	INIT	METALS	Barium	Ba	146	0.9	LANL Int BG LVL	13.5	10.8	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	65	73	1/10/2000	15.5	42.8	29.8	73	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	3/9/2017	REG	F	INIT	GENINORG	Calcium	Ca	25.1	0.8	LANL Int BG LVL	10.7	2.3	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	21	27	1/30/2007	18	44.2	23	27	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	3/9/2017	REG	F	INIT	GENINORG	Chloride	Cl(-1)	25.6	1.1	LANL Int BG LVL	3.11	8.2	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	29	36	8/25/2005	65.7	112	94.85	36	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	3/9/2017	REG	F	INIT	GENINORG	Hardness	HARDNESS	84.8	0.9	LANL Int BG LVL	37.8	2.2	0.453	mg/L	1		NQ	NQ	SM:A2340B	GELC	
C4	21	27	1/30/2007	1.69	4.88	2.75	27	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	3/9/2017	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.15	0.8	LANL Int BG LVL	0.459	4.7	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	

Table 1: NMED 04-17 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Validation Flag	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C4	21	27	1/30/2007	13.1	20	16.9	27	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	3/9/2017	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	15.1	0.9	LANL Int BG LVL	7.1	2.1	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	32	32	1/10/2000	209	371	270.5	32	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	SWSC Spring	0	3/10/2017	REG	F	INIT	METALS	Barium	Ba	281	1	LANL Int BG LVL	13.5	20.8	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	10	10	5/10/2007	13.4	33.9	18.6	10	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	SWSC Spring	0	3/10/2017	REG	F	INIT	GENINORG	Chloride	Cl(-1)	33.9	1.8	LANL Int BG LVL	3.11	10.9	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	

Table 2: NMED 04-17 Groundwater Report Addendum

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Validation Flag	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
XC2scr	12	12	12/11/2009	82.9	139	118	12	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-27i	619	3/24/2017	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	139	1.2	Int-Scr_95	135	1	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
XC2scr	14	17	12/21/2009	2.77	2.77	2.77	1	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-47i	840	3/7/2017	REG	F	INIT	METALS	Selenium	Se	2.77	1	Int-Scr_95	1.5	1.8	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
XC2scr	10	11	11/25/2014	2.22	2.22	2.22	1	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Regional	R-47	1322	3/7/2017	REG	F	INIT	METALS	Selenium	Se	2.22	1	Reg-Scr_95	1.5	1.5	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
XC2scr	6	8	1/19/2016	0.03	0.752	0.0439	8	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Regional	R-58	1257	3/13/2017	REG	F	INIT	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.752	17.1	Reg-Scr_95	0.0822	9.1	0.02	mg/L	1		NQ	NQ	EPA:365.4	GELC	
XC2scr	1	1	3/20/2017	72.3	72.3	72.3	1	Canon de Valle	Regional	R-68	1340	3/20/2017	REG	F	INIT	METALS	Aluminum	Al	72.3	1	Reg-Scr_95	68	1.1	68	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
XC4scr	25	30	6/1/2005	51	78.9	60.5	30	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	3/20/2017	REG	F	INIT	METALS	Boron	B	73.4	1.2	Int-Scr_95	16.2	4.5	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	25	30	6/1/2005	3.4	24.8	8.89	28	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	3/20/2017	REG	F	INIT	METALS	Copper	Cu	20.1	2.3	Int-Scr_95	3	6.7	3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	19	23	8/31/2010	60.3	115	66.9	23	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-16-4ip S1	815.6	3/6/2017	REG	F	INIT	METALS	Boron	B	60.4	0.9	Int-Scr_95	16.2	3.7	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	19	20	1/5/2009	111	1010	274.5	8	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	3/20/2017	REG	F	INIT	METALS	Aluminum	Al	281	1	Int-Scr_95	68	4.1	68	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	19	20	1/5/2009	3.99	15.9	7.3	7	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	3/20/2017	REG	F	INIT	METALS	Copper	Cu	8.97	1.2	Int-Scr_95	3	3	3	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
XC4scr	19	20	1/5/2009	4.3	102	25.7	11	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	3/20/2017	REG	F	INIT	METALS	Manganese	Mn	63.5	2.5	Int-Scr_95	8.39	7.6	2	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	18	19	1/5/2009	32.9	1880	126	19	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	3/20/2017	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	1510	12	Int-Scr_95	135	11.2	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
XC4scr	6	10	5/21/2015	0.0745	2.75	0.3805	10	Acid Canyon	Intermediate Perched	CDV-9-1(i) S1	937.4	3/8/2017	FD	F	INIT	GENINORG	Bromide	Br(-1)	0.345	0.9	Int-Scr_95	0.0716	4.8	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
XC4scr	6	10	5/21/2015	0.0745	2.75	0.3805	10	Acid Canyon	Intermediate Perched	CDV-9-1(i) S1	937.4	3/8/2017	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.337	0.9	Int-Scr_95	0.0716	4.7	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
XC4scr	26	29	9/9/2004	95	4500	631.5	28	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	3/9/2017	FD	F	INIT	METALS	Aluminum	Al	918	1.5	Int-Scr_95	68	13.5	68	ug/L	1		NQ	NQ	SW-846:6010C	GELC	

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Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Validation Flag	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
XC4scr	26	29	9/9/2004	95	4500	631.5	28	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	3/9/2017	REG	F	INIT	METALS	Aluminum	Al	1160	1.8	Int-Scr_95	68	17.1	68	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	26	29	9/9/2004	77.2	2200	343	28	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	3/9/2017	FD	F	INIT	METALS	Iron	Fe	461	1.3	Int-Scr_95	54.1	8.5	30	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	26	29	9/9/2004	77.2	2200	343	28	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	3/9/2017	REG	F	INIT	METALS	Iron	Fe	575	1.7	Int-Scr_95	54.1	10.6	30	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	69	84	1/10/2000	16.2	2590	332	59	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	3/10/2017	REG	F	INIT	METALS	Aluminum	Al	1200	3.6	Int-Scr_95	68	17.6	68	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	65	73	1/10/2000	51	5130	346	45	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	3/9/2017	REG	F	INIT	METALS	Aluminum	Al	601	1.7	Int-Scr_95	68	8.8	68	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	61	69	1/10/2000	570	2840	1380	69	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	3/9/2017	REG	F	INIT	METALS	Boron	B	853	0.6	Int-Scr_95	16.2	52.7	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	65	73	1/10/2000	29.3	2690	133	50	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	3/9/2017	REG	F	INIT	METALS	Iron	Fe	327	2.5	Int-Scr_95	54.1	6	30	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	33	33	1/10/2000	168	3150	690	21	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	SWSC Spring	0	3/10/2017	REG	F	INIT	METALS	Aluminum	Al	1110	1.6	Int-Scr_95	68	16.3	68	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	33	33	1/10/2000	41.6	1600	229	25	Water Canyon (includes Canon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	SWSC Spring	0	3/10/2017	REG	F	INIT	METALS	Iron	Fe	540	2.4	Int-Scr_95	54.1	10	30	ug/L	1		NQ	NQ	SW-846:6010C	GELC	