ESHID-601562

Los Alamos
NATIONAL LABORATORY
EST. 1943

Associate Director for ESH
Environment, Safety, and Health
P.O. Box 1663, MS K491
Los Alamos, New Mexico 87545
505-667-4218/Fax 505-665-3811

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JUN 2016

Environmental Management
Los Alamos Field Office
1900 Diamond Drive, MS M984
Los Alamos, New Mexico 87544
(505) 665-5658/FAX (505) 606-2132

Date: JUN 22 2016
Refer To: ADESH-16-086
LAUR: 16-24354
Locates Action No.: n/a

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 June 2016

Dear Mr. Kieling:

This letter is Los Alamos National Laboratory's (LANL's) written submission that meets notification requirements presented in Section IV.A.3.g, Notification, of the Compliance Order on Consent (Consent Order). Members of LANL's Associate Directorate for Environmental Management met on June 15, 2016, to review new groundwater data received in May 2016. This report was prepared by comparing the data against groundwater cleanup levels, as defined in Section VIII.A.1 of the Consent Order. For comparison with U.S. Environmental Protection Agency (EPA) tap water standards, the carcinogenic risk was adjusted to 1×10^{-5}, as specified in the Consent Order. This report was prepared using the November 2015 EPA regional screening levels.

This report also includes analytical data from samples collected in San Ildefonso Pueblo, which are subject to reporting at this time. These data have been reviewed by San Ildefonso Pueblo. This review is required under the Memorandum of Agreement dated May 28, 2014, between the U.S. Department of Energy, National Nuclear Security Administration, Los Alamos Field Office, and San Ildefonso Pueblo.

1-Day Notification

There were no instances of a contaminant detected at a concentration that exceeded the New Mexico Water Quality Control Commission 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).

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 six reporting criteria requiring written notification within 15 days is given in the accompanying report and table.

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
Environmental Management
Los Alamos Field Office

BR/DR/SP:sm

Enclosure: Two hard copies with electronic files – Summary of Groundwater Data Reviewed in June 2016 That Meet Notification Requirements (EP2016-0092)

Cy: (w/enc.)
Public Reading Room (EPRR)
ADESH Records

Cy: (Letter and CD and/or DVD)
Laurie King, EPA Region 6, Dallas, TX
Michelle Hunter, NMED-GWQB
Steve Yanicak, NMED-DOE-OB, MS M894
Raymond Martinez, San Ildefonso Pueblo, NM
Dino Chavarria, Santa Clara Pueblo, NM
emla.docs@em.doe.gov
Steve Paris, ADEM ER Program
Jake Meadows, ADESH-EPC-CP
PRS Database

Cy: (w/o enc./date-stamped letter emailed)
Wayne Witten, Los Alamos County Utility Department, Los Alamos, NM
lasomailbox@nnsa.doe.gov
Peter Maggiore, DOE-NA-LA
Kimberly Davis Lebak, DOE-NA-LA
Hai Shen, DOE-EM-LA
David Rhodes, DOE-EM-LA
Mei Ding, EES-14
Bruce Robinson, ADEM ER Program
Randy Erickson, ADEM
Jocelyn Buckley, ADESH-EPC-CP
Leslie Dale, ADESH-EPC-CP
Mike Saladen, ADESH-EPC-CP
John McCann, ADESH-EPC-DO
Michael Brandt, ADESH
William Mairson, PADOPS
Craig Leasure, PADOPS

SUMMARY OF GROUNDWATER DATA REVIEWED IN JUNE 2016
THAT MEET NOTIFICATION REQUIREMENTS

INTRODUCTION

This report provides preliminary information to the New Mexico Environment Department (NMED) concerning recent groundwater monitoring data obtained by the Los Alamos National Laboratory (the Laboratory) under its interim monitoring plan and contains results for chemical constituents that meet the six screening criteria laid out in the Compliance Order on Consent (Consent Order). The report covers groundwater samples taken from wells or springs (listed in the accompanying table) that provide surveillance of the groundwater zones indicated in the table.

The report includes one table, *Table 1: NMED 05-16 Groundwater Report*. This table contains some values that are reported when they are detected for the first time since June 14, 2007, or are greater than other data collected since that time (as specified in the Consent Order). These reported data may be similar to data gathered before June 14, 2007.

This table includes the following:

- Additional comments on results that appear to be exceptional or based on consideration of monitoring data acquired before the current result (using statistics described below)
- Supplemental information summarizing monitoring results obtained before the current result
- 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.

In accordance with the Consent Order, the screening levels used include the U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs), the New Mexico groundwater standards, and the EPA regional screening levels for tap water (for compounds having no other regulatory standard). The EPA regional screening levels for tap water are either for cancer (10^{-6} excess risk) or noncancer risk values. The data were screened using 10 times the EPA's 10^{-6} excess cancer risk values, to achieve 10^{-5} excess cancer risk as indicated in Section VIII.A.1 of the Consent Order. This report was prepared using the November 2015 EPA regional screening levels.

Background levels applied in Criteria 2 and 5 are the NMED-approved 95% upper tolerance limits for background for each groundwater zone as set forth in the "Groundwater Background Investigation Report, Revision 3," prepared under Section IV.A.3.d of the Consent Order.

DESCRIPTION OF TABLE

15-Day Notification Requirement

The table is divided into separate categories that correspond to the six screening criteria in the Consent Order. Some data meet more than one of the criteria and appear in the table multiple times. The table also presents only the instances where the results exceed criteria; therefore, all six criteria may not appear in the table.

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 exceeds 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, one-half the EPA Region 6 human health medium-specific screening level for tap water (now the EPA Regional Screening Levels 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 perchlorate in a spring or screened interval of a well at a concentration of 2 µg/L or greater if perchlorate at such concentration has not previously been detected in the spring or screened interval.

C5. 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 2 times the background level for the third consecutive sampling of the spring or screened interval.

C6. 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 MCL, and that has increased for the third consecutive sampling of that spring or screened interval.

The next seven columns of the table give information on monitoring results obtained prior to the current result. The columns provide summary statistics for the samples collected since January 1, 2000, for the same analyte and field preparation (for example, filtered samples). The information includes the date of the first sampling event included in the statistics, the numbers 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—groundwater zone sampled by monitoring location (such as 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 to 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 05-16 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	8	9	06/24/08	4.37	4.37	4.37	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-8	9.7	04/20/16	REG	UF	INIT	VOC	Butanone[2-]	78-93-3	4.37	1	EPA TAP SCRN LVL	5600	0	2	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC	J-flagged value, common organic solvent used in a chemistry lab.
C1	30	41	06/23/06	0.19	0.19	0.19	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	04/04/16	REG	UF	INIT	SVOC	Benzo(b)fluoranthene	205-99-2	0.19	1	EPA TAP SCRN LVL	0.34	0.6	0.15	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL of 0.03 µg/L was nondetect.
C1	30	41	06/23/06	0.225	0.225	0.225	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	04/04/16	REG	UF	INIT	SVOC	Benzo(k)fluoranthene	207-08-9	0.225	1	EPA TAP SCRN LVL	3.4	0.1	0.15	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL of 0.03 µg/L was nondetect.
C1	17	23	04/18/01	0.186	0.186	0.186	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	UF	INIT	SVOC	Benzo(a)anthracene	56-55-3	0.186	1	EPA TAP SCRN LVL	0.12	1.6	0.155	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL of 0.0326 µg/L was nondetect.
C1	17	23	04/18/01	0.216	0.216	0.216	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	UF	INIT	SVOC	Benzo(b)fluoranthene	205-99-2	0.216	1	EPA TAP SCRN LVL	0.34	0.6	0.155	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL of 0.0326 µg/L was nondetect.
C1	17	23	04/18/01	0.32	0.32	0.32	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	UF	INIT	SVOC	Benzo(g,h,i)perylene	191-24-2	0.32	1				0.155	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL of 0.0326 µg/L was nondetect.
C1	17	23	04/18/01	0.278	0.278	0.278	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	UF	INIT	SVOC	Benzo(k)fluoranthene	207-08-9	0.278	1	EPA TAP SCRN LVL	3.4	0.1	0.155	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL of 0.0326 µg/L was nondetect.
C2	18	24	08/28/06	0.026	0.175	0.0346	4	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	GENINORG	Ammonia as Nitrogen	NH3-N	0.175	5.1	LANL Avl BG LVL	0.04	4.4	0.017	mg/L	1		J	I4a	EPA:350.1	GELC	
C2	16	22	03/19/07	3.23	3.7	3.465	2	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	METALS	Copper	Cu	3.23	0.9	LANL Avl BG LVL	3	1.1	3	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	16	22	03/19/07	3.23	3.7	3.465	2	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	REG	F	INIT	METALS	Copper	Cu	3.7	1.1	LANL Avl BG LVL	3	1.2	3	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	32	43	06/23/06	0.0239	3.61	0.238	35	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	04/04/16	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.61	15.2	LANL Int BG LVL	2.41	1.5	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	Highest concentration so far
C2	32	43	06/23/06	2.9	3.35	3.125	2	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	04/04/16	REG	F	INIT	METALS	Tin	Sn	3.35	1.1	LANL Int BG LVL	3.26	1	2.5	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	3	4	10/23/15	5.01	6.75	5.255	4	Mortandad Canyon (includes Ten Site Canyon and Cañada del Buey)	Regional	SIMR-2	885	02/18/16	REG	F	INIT	METALS	Chromium	Cr	6.75	1.3	LANL Reg BG LVL	5.75	1.2	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C3	30	41	06/23/06	0.19	0.19	0.19	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	04/04/16	REG	UF	INIT	SVOC	Benzo(b)fluoranthene	205-99-2	0.19	1	EPA TAP SCRN LVL	0.34	0.6	0.15	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL of 0.03 µg/L was nondetect.
C3	17	23	04/18/01	0.186	0.186	0.186	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	UF	INIT	SVOC	Benzo(a)anthracene	56-55-3	0.186	1	EPA TAP SCRN LVL	0.12	1.6	0.155	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL of 0.0326 µg/L was nondetect.

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
C3	17	23	04/18/01	0.216	0.216	0.216	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	UF	INIT	SVOC	Benzo(b)fluoranthene	205-99-2	0.216	1	EPA TAP SCRN LVL	0.34	0.6	0.155	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL of 0.0326 µg/L was nondetect.
C5	19	25	08/28/06	103	531	257	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	METALS	Barium	Ba	392	1.5	LANL Avl BG LVL	68.57	5.7	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	19	25	08/28/06	103	531	257	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	REG	F	INIT	METALS	Barium	Ba	389	1.5	LANL Avl BG LVL	68.57	5.7	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	19	25	08/28/06	18.5	80.5	51	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	GENINORG	Calcium	Ca	60.7	1.2	LANL Avl BG LVL	26.36	2.3	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	19	25	08/28/06	18.5	80.5	51	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	REG	F	INIT	GENINORG	Calcium	Ca	61.2	1.2	LANL Avl BG LVL	26.36	2.3	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	18	24	08/28/06	51.3	354.0	177.5	24	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	GENINORG	Chloride	Cl(-1)	263	1.5	LANL Avl BG LVL	69.76	3.8	3.35	mg/L	50		NQ	NQ	EPA:300.0	GELC	
C5	18	24	08/28/06	51.3	354	177.5	24	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	REG	F	INIT	GENINORG	Chloride	Cl(-1)	267	1.5	LANL Avl BG LVL	69.76	3.8	3.35	mg/L	50		NQ	NQ	EPA:300.0	GELC	
C5	19	25	08/28/06	5.8	24.4	15.5	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	GENINORG	Magnesium	Mg	17.6	1.1	LANL Avl BG LVL	7.78	2.3	0.11	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	19	25	08/28/06	5.8	24.4	15.5	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	REG	F	INIT	GENINORG	Magnesium	Mg	17.6	1.1	LANL Avl BG LVL	7.78	2.3	0.11	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	18	24	08/28/06	0.575	3.99	1.125	24	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.59	2.3	LANL Avl BG LVL	0.57	4.5	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C5	18	24	08/28/06	0.575	3.99	1.125	24	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.79	2.5	LANL Avl BG LVL	0.57	4.9	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C5	18	24	08/28/06	0.0972	0.321	0.1665	24	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	GENINORG	Perchlorate	ClO4	0.199	1.2	LANL Avl BG LVL	0.05	4	0.05	ug/L	1	J	J	J_LAB	SW-846:6850	GELC	
C5	18	24	08/28/06	0.0972	0.321	0.1665	24	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.19	1.1	LANL Avl BG LVL	0.05	3.8	0.05	ug/L	1	J	J	J_LAB	SW-846:6850	GELC	
C5	19	25	08/28/06	45.1	143	76.9	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	GENINORG	Sodium	Na	120	1.6	LANL Avl BG LVL	15.54	7.7	0.1	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	19	25	08/28/06	45.1	143	76.9	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	REG	F	INIT	GENINORG	Sodium	Na	121	1.6	LANL Avl BG LVL	15.54	7.8	0.1	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	19	25	08/28/06	128	576	333	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	METALS	Strontium	Sr	436	1.3	LANL Avl BG LVL	120	3.6	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	19	25	08/28/06	128	576	333	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	REG	F	INIT	METALS	Strontium	Sr	441	1.3	LANL Avl BG LVL	120	3.7	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	18	24	08/28/06	240	834	451.5	24	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	FD	F	INIT	GENINORG	Total Dissolved Solids	TDS	801	1.8	LANL Avl BG LVL	139	5.8	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	

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
C5	18	24	08/28/06	240	834	451.5	24	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-18	12.5	04/08/16	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	813	1.8	LANL Avl BG LVL	139	5.8	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
C5	13	21	04/02/10	7070	49400	13700	21	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	03/28/16	FD	F	INIT	METALS	Barium	Ba	7110	0.5	LANL Avl BG LVL	68.57	103.7	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	13	21	04/02/10	7070	49400	13700	21	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	03/28/16	REG	F	INIT	METALS	Barium	Ba	7070	0.5	LANL Avl BG LVL	68.57	103.1	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	13	21	04/02/10	111	7510	684	21	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	03/28/16	FD	F	INIT	METALS	Manganese	Mn	178	0.3	LANL Avl BG LVL	2	89	2	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	13	21	04/02/10	111	7510	684	21	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	03/28/16	REG	F	INIT	METALS	Manganese	Mn	179	0.3	LANL Avl BG LVL	2	89.5	2	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	13	21	04/02/10	2.34	4.88	2.96	9	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	03/28/16	FD	F	INIT	METALS	Vanadium	V	2.47	0.8	LANL Avl BG LVL	1	2.5	1	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	13	21	04/02/10	2.34	4.88	2.96	9	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	03/28/16	REG	F	INIT	METALS	Vanadium	V	2.72	0.9	LANL Avl BG LVL	1	2.7	1	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	8	8	06/24/08	219	431	290	8	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-8	9.7	04/20/16	REG	F	INIT	METALS	Barium	Ba	269	0.9	LANL Avl BG LVL	68.57	3.9	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	8	8	06/24/08	31.2	69.9	41.55	8	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-8	9.7	04/20/16	REG	F	INIT	GENINORG	Sodium	Na	39	0.9	LANL Avl BG LVL	15.54	2.5	0.1	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	8	8	06/24/08	281	501	384	8	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-8	9.7	04/20/16	REG	F	INIT	METALS	Strontium	Sr	329	0.9	LANL Avl BG LVL	120	2.7	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	32	43	06/23/06	12.4	77.6	40.85	38	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	04/04/16	REG	F	INIT	METALS	Boron	B	33.1	0.8	LANL Int BG LVL	15.12	2.2	15	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	32	43	06/23/06	0.075	0.904	0.118	15	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	04/04/16	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.191	1.6	LANL Int BG LVL	0.03	6.4	0.067	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	
C5	32	43	06/23/06	13.8	610	104	43	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	04/04/16	REG	F	INIT	GENINORG	Chloride	Cl(-1)	196	1.9	LANL Int BG LVL	7.78	25.2	3.35	mg/L	50		NQ	NQ	EPA:300.0	GELC	
C5	32	43	06/23/06	23.6	347	75.4	43	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	04/04/16	REG	F	INIT	GENINORG	Sodium	Na	76.1	1	LANL Int BG LVL	12.19	6.2	0.1	mg/L	1	E	NQ	NQ	SW-846:6010C	GELC	
C5	32	45	06/23/06	107	1230	303	45	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	04/04/16	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	451	1.5	LANL Int BG LVL	127	3.6	3.4	mg/L	1		J	i10b	EPA:160.1	GELC	
C5	15	23	02/05/07	0.242	0.333	0.294	23	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	03/30/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.32	1.1	LANL Int BG LVL	0.05	6.4	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	

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
C5	21	29	12/15/05	5.6	29.8	13.65	26	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	03/30/16	REG	F	INIT	METALS	Zinc	Zn	12	0.9	LANL Int BG LVL	2	6	3.3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	15	18	06/11/09	0.145	0.192	0.1735	18	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	PCI-2	512	04/14/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.178	1	LANL Int BG LVL	0.05	3.6	0.05	ug/L	1	J	J	J_LAB	SW-846:6850	GELC	
C5	57	64	01/10/00	570	2840	1490	64	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	F	INIT	METALS	Boron	B	876	0.6	LANL Int BG LVL	15.12	57.9	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	17	22	01/30/07	0.0773	0.234	0.118	17	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.0905	0.8	LANL Int BG LVL	0.03	3	0.067	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	
C5	17	22	01/30/07	18	44.2	22.6	22	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	F	INIT	GENINORG	Chloride	Cl(-1)	24.4	1.1	LANL Int BG LVL	7.78	3.1	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C5	15	19	01/30/07	0.459	0.707	0.558	19	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.569	1	LANL Int BG LVL	0.05	11.4	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	61	68	01/10/00	17	50.2	33.95	68	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	03/28/16	REG	F	INIT	GENINORG	Sodium	Na	33.3	1	LANL Int BG LVL	12.19	2.7	0.1	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	23	27	10/19/06	22.8	1510	81.9	15	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-17 S1	1057	04/12/16	FD	F	INIT	METALS	Iron	Fe	68.6	0.8	LANL Reg BG LVL	21	3.3	30	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	23	27	10/19/06	22.8	1510	81.9	15	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-17 S1	1057	04/12/16	REG	F	INIT	METALS	Iron	Fe	73	0.9	LANL Reg BG LVL	21	3.5	30	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	26	30	10/19/06	0.351	2.44	0.6265	26	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-17 S1	1057	04/12/16	FD	UF	INIT	GENINORG	Total Organic Carbon	TOC	0.813	1.3	LANL Reg BG LVL	0.33	2.5	0.33	mg/L	1	J	J	J_LAB	SW-846:9060	GELC	
C5	26	30	10/19/06	0.351	2.44	0.6265	26	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-17 S1	1057	04/12/16	REG	UF	INIT	GENINORG	Total Organic Carbon	TOC	0.816	1.3	LANL Reg BG LVL	0.33	2.5	0.33	mg/L	1	J	J	J_LAB	SW-846:9060	GELC	
C5	32	33	08/30/07	68	389	346	33	Sandia Canyon	Regional	R-35a	1013.1	05/02/16	REG	F	INIT	METALS	Barium	Ba	347	1	LANL Reg BG LVL	56.83	6.1	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	32	40	08/29/07	11.7	62.3	29.45	40	Sandia Canyon	Regional	R-35b	825.4	05/02/16	REG	F	INIT	METALS	Zinc	Zn	11.7	0.4	LANL Reg BG LVL	3.89	3	3.3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	