

General

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Date: DEC 15 2015

Refer To: ADESH-15-180

LAUR: 15-29389

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 December 2015**

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 Environmental Programs met on December 3, 2015, to review new groundwater data received in November 2015. 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  $1 \times 10^{-5}$ , as specified in the Consent Order.

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.

37344



**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, Supervisor  
Environmental Management  
Los Alamos Field Office

BR/DR/SP:sm

Enclosure: Two hard copies with electronic files – Summary of Groundwater Data Reviewed in December 2015 That Meet Notification Requirements (EP2015-0209)

Cy: (w/enc.)

Steve Paris, ADEP ER Program, MS M992  
emla.docs@em.doe.gov  
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  
Jake Meadows, ADESH-ENV-CP, MS K490  
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Cy: (w/o enc./date-stamped letter emailed)

Pete Padilla, Los Alamos County Utility Department, Los Alamos, NM  
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Kimberly Davis Lebak, DOE-NA-LA  
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Hai Shen, DOE-EM-LA  
David Rhodes, DOE-EM-LA  
Mei Ding, EES-14  
Tim Goering, ADEP ER Program  
Stanislaw Marczak, ADEP ER Program  
Robert Cygnarowicz, ADEP ER Program  
Bruce Robinson, ADEP ER Program  
Randy Erickson, ADEP  
Jocelyn Buckley, ADESH-ENV-CP  
Mike Saladen, ADESH-ENV-CP  
Alison Dorries, ADESH-ENV-DO  
Michael Brandt, ADESH  
Amy De Palma, PADOPS  
Craig Leasure, PADOPS

## SUMMARY OF GROUNDWATER DATA REVIEWED IN DECEMBER 2015 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 11-15 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.

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 11-15 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Screen Depth	Start Date	Fid QC Type Code	Fid 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	20	23	07/07/06	2.95	2.95	2.95	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-21	888.8	10/20/15	REG	UF	INIT	SVOC	Dioxane[1,4-]	123-91-1	2.95	1	EPA TAP SCRNLVL	4.6	0.6	1.53	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Continued monitoring of R-21 for Dioxane [1,4-] per the Interim Facility-Wide Groundwater Monitoring Plan (IFGMP) will assist in the proper assessment of this first-time detection.
C1	17	22	09/24/01	0.36	0.36	0.36	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 4	0	10/13/15	REG	UF	INIT	VOC	Butylbenzene[n-]	104-51-8	0.36	1	EPA TAP SCRNLVL	1000	0	0.3	ug/L	1	HJ	J-	V9	SW-846:8260B	GELC	
C1	18	24	09/25/00	0.31	0.31	0.31	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 4	0	10/13/15	REG	UF	INIT	VOC	Dichlorobenzene[1,2-]	95-50-1	0.31	1	EPA MCL	600	0	0.3	ug/L	1	HJ	J-	V9	SW-846:8260B	GELC	The MDL for the result reported in this table was much lower than the MDLs for previous analyses which were all NDs.
C1	17	25	09/24/01	0.0722	0.0722	0.0722	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 4	0	10/13/15	REG	UF	RE	SVOC	Dichlorobenzidine[3,3-]	91-94-1	0.0722	1	EPA TAP SCRNLVL	1.2	0.1	0.0402	ug/L	1	BJ	J	J_LAB	SW-846:8270DGCMS_SIM	GELC	Analysis of the initial sample was ND. The value reported in this table is the re-analysis result. The same analytical method was used for both the INIT analysis and the re-analysis.
C1	17	22	09/24/01	0.78	0.78	0.78	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 4	0	10/13/15	REG	UF	INIT	VOC	Naphthalene	91-20-3	0.78	1	NM GW STD	30	0	0.4	ug/L	1	HJ	J-	V9	SW-846:8260B	GELC	In addition to the result reported in this table, two other regular (REG) samples collected during the same sampling event were ND. One of these two other samples were analyzed using the low-MDL analytical method.
C1	14	17	09/26/05	0.92	0.92	0.92	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 4	0	10/13/15	REG	UF	INIT	VOC	Trichlorobenzene[1,2,3-]	87-61-6	0.92	1	EPA TAP SCRNLVL	7	0.1	0.3	ug/L	1	HJ	J-	V9	SW-846:8260B	GELC	
C1	14	17	09/26/05	0.73	0.73	0.73	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 4	0	10/13/15	REG	UF	INIT	VOC	Trichlorobenzene[1,2,4-]	120-82-1	0.73	1	EPA MCL	70	0	0.3	ug/L	1	HJ	J-	V9	SW-846:8260B	GELC	The MDL for the result reported in this table was much lower than the MDLs for previous analyses which were all NDs.
C1	9	9	09/25/01	1.78	1.78	1.78	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 9	0	10/06/15	REG	UF	INIT	SVOC	Di-n-butylphthalate	84-74-2	1.78	1	EPA TAP SCRNLVL	900	0	1.63	ug/L	1	J	J	J_LAB	SW-846:8270D	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
C1	15	16	06/14/10	12.2	12.2	12.2	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-49 S1	845	10/22/15	FD	UF	INIT	VOC	Acetonitrile	75-05-8	12.2	1	EPA TAP SCRNLVL	130	0.1	8	ug/L	1	BHJ	J-	V9	SW-846:8260B	GELC	The field duplicate (FD), field blank (FB) and field trip blank (FTB) quality control samples all showed detections of acetonitrile. The REG sample was ND. The REG and FD samples were analyzed using the same analytical method.
C1	15	20	06/23/09	0.0619	0.0619	0.0619	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-49 S1	845	10/22/15	REG	UF	INIT	SVOC	Benzo(k)fluoranthene	207-08-9	0.0619	1	EPA TAP SCRNLVL	3.4	0	0.0309	ug/L	1	J	J	J_LAB	SW-846:8270DGCMS_SIM	GELC	Examination of the chromatogram integration suggests that the reported result may be an overestimate. The FD sample was ND using the same method.
C1	15	20	06/23/09	0.0515	0.0515	0.0515	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-49 S1	845	10/22/15	REG	UF	INIT	SVOC	Dibenz(a,h)anthracene	53-70-3	0.0515	1	EPA TAP SCRNLVL	0.034	1.5	0.0309	ug/L	1	J	J	J_LAB	SW-846:8270DGCMS_SIM	GELC	This sampling event included the collection of two samples: a regular sample and a field duplicate sample. Each of these samples were split for analysis by the EPA standard and low-MDL analytical methods, 8270D and 8270DGCMS_SIM, respectively. Of the four analyses, there were three NDs and one detect (reported in this table). Continued monitoring of R-49 S1 for Dibenz(a,h)anthracene per the IFGMP will assist in the proper assessment of this first-time detection.
C1	16	18	06/18/09	13.7	13.7	13.7	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-49 S2	905.6	10/22/15	REG	UF	INIT	VOC	Acetonitrile	75-05-8	13.7	1	EPA TAP SCRNLVL	130	0.1	8	ug/L	1	BHJ	J-	V9	SW-846:8260B	GELC	
C2	25	28	10/03/06	5.23	6.37	5.745	28	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i S2	470.2	10/26/15	FD	F	INIT	GENINORG	Magnesium	Mg	6.2	1.1	LANL Int BG LVL	6.12	1	0.11	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C2	25	28	10/03/06	5.23	6.37	5.745	28	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i S2	470.2	10/26/15	REG	F	INIT	GENINORG	Magnesium	Mg	6.23	1.1	LANL Int BG LVL	6.12	1	0.11	mg/L	1		NQ	NQ	SW-846:6010C	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
C2	22	24	10/12/06	124	197	153.5	24	Sandia Canyon	Regional	R-10 S1	874	09/02/15	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	197	1.3	LANL Reg BG LVL	191.7	1	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
C2	24	24	06/29/06	2.24	2.24	2.24	1	Sandia Canyon	Regional	R-10 S2	1042	09/02/15	REG	F	INIT	METALS	Antimony	Sb	2.24	1	LANL Reg BG LVL	1	2.2	1	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C2	24	24	06/29/06	2.71	3.74	3.145	24	Sandia Canyon	Regional	R-10 S2	1042	09/02/15	REG	F	INIT	GENINORG	Chloride	Cl(-1)	3.74	1.2	LANL Reg BG LVL	3.57	1	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C2	15	20	09/25/00	3.84	3.84	3.84	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 3A	0	10/08/15	REG	F	INIT	METALS	Tin	Sn	3.84	1	LANL Reg BG LVL	3.26	1.2	2.5	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	16	18	09/25/00	136	239	167	18	White Rock Canyon and Rio Grande	Regional Spring	Spring 4	0	10/13/15	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	239	1.4	LANL Reg BG LVL	191.7	1.2	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
C2	12	12	09/26/05	151	261	177.5	12	White Rock Canyon and Rio Grande	Regional Spring	Spring 4B	0	10/15/15	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	261	1.5	LANL Reg BG LVL	191.7	1.4	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
C2	11	12	09/18/06	11.8	11.8	11.8	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 4AA	0	10/13/15	REG	F	INIT	METALS	Tin	Sn	11.8	1	LANL Reg BG LVL	3.26	3.6	2.5	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C2	14	14	09/26/00	2.1	4.46	3.28	2	White Rock Canyon and Rio Grande	Regional Spring	Ancho Spring	0	10/05/15	REG	F	INIT	METALS	Zinc	Zn	4.46	1.4	LANL Reg BG LVL	3.89	1.1	3.3	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	13	17	09/26/00	27.1	27.1	27.1	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 6	0	10/05/15	REG	F	INIT	METALS	Tin	Sn	27.1	1	LANL Reg BG LVL	3.26	8.3	2.5	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C2	15	18	01/15/09	0.0169	0.0752	0.046	3	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-40 S2	849.27	10/30/15	REG	F	INIT	GENINORG	Ammonia as Nitrogen	NH3-N	0.0752	1.6	LANL Reg BG LVL	0.05	1.5	0.017	mg/L	1		NQ	NQ	EPA:350.1	GELC	
C2	8	9	06/25/10	233	233	233	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-57 S2	971.5	10/30/15	REG	F	INIT	METALS	Aluminum	Al	233	1	LANL Reg BG LVL	68	3.4	68	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C2	17	19	02/19/09	0.016	0.117	0.031	4	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-39	859	10/29/15	REG	F	INIT	GENINORG	Ammonia as Nitrogen	NH3-N	0.117	3.8	LANL Reg BG LVL	0.05	2.3	0.017	mg/L	1		NQ	NQ	EPA:350.1	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
C3	15	20	06/23/09	0.0515	0.0515	0.0515	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-49 S1	845	10/22/15	REG	UF	INIT	SVOC	Dibenz(a,h)anthracene	53-70-3	0.0515	1	EPA TAP SCRNLVL	0.034	1.5	0.0309	ug/L	1	J	J	J_LAB	SW-846:8270DGCMS_SIM	GELC	This sampling event included the collection of two samples: a regular sample and a field duplicate sample. Each of these samples were split for analysis by the EPA standard and low-MDL analytical methods, 8270D and 8270DGCMS_SIM, respectively. Of the four analyses, there were three NDs and one detect (reported in this table). Continued monitoring of R-49 S1 for Dibenz(a,h)anthracene per the IFGMP will assist in the proper assessment of this first-time detection.
C5	15	16	07/13/09	0.427	0.615	0.5085	16	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	R-37 S1	929.3	10/21/15	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.427	0.8	LANL Int BG LVL	0.05	8.5	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	16	17	07/13/09	1.32	1.84	1.55	17	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	R-37 S1	929.3	10/21/15	REG	F	INIT	GENINORG	Uranium	U	1.5	1	LANL Int BG LVL	0.72	2.1	0.067	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	16	24	02/06/09	4.9	69	9.93	23	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-38	821.2	10/19/15	FD	F	INIT	METALS	Zinc	Zn	8.59	0.9	LANL Reg BG LVL	3.89	2.2	3.3	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	16	24	02/06/09	4.9	69	9.93	23	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-38	821.2	10/19/15	REG	F	INIT	METALS	Zinc	Zn	8.07	0.8	LANL Reg BG LVL	3.89	2.1	3.3	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	31	42	06/23/06	12.4	77.6	40.9	37	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	10/19/15	REG	F	INIT	METALS	Boron	B	42.1	1	LANL Int BG LVL	15.12	2.8	15	ug/L	1	J	J	J_LAB	SW-846:6010C	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	31	42	06/23/06	13.8	610	91	42	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	10/19/15	REG	F	INIT	GENINORG	Chloride	Cl(-1)	73.4	0.8	LANL Int BG LVL	7.78	9.4	1.34	mg/L	20		NQ	NQ	EPA:300.0	GELC	
C5	31	42	06/23/06	3.1	681	19.4	42	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	10/19/15	REG	F	INIT	METALS	Manganese	Mn	25.4	1.3	LANL Int BG LVL	2	12.7	2	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	31	42	06/23/06	23.6	347	73.15	42	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	10/19/15	REG	F	INIT	GENINORG	Sodium	Na	48.9	0.7	LANL Int BG LVL	12.19	4	0.1	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	12	13	01/28/09	60.2	132	115	13	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-40 Si	649.67	10/29/15	REG	F	INIT	GENINORG	Alkalinity-CO3+HCO3	ALK-CO3+HCO3	107	0.9	LANL Int BG LVL	52	2.1	0.725	mg/L	1		NQ	NQ	EPA:310.1	GELC	
C5	12	13	01/28/09	106	398	276	13	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-40 Si	649.67	10/29/15	REG	F	INIT	METALS	Manganese	Mn	263	1	LANL Int BG LVL	2	131.5	2	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	12	13	01/28/09	9.7	22	14.8	13	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-40 Si	649.67	10/29/15	REG	F	INIT	METALS	Molybdenum	Mo	19.2	1.3	LANL Int BG LVL	2	9.6	0.165	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	20	22	09/06/07	0.086	0.151	0.108	16	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i S1	400.3	10/26/15	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.0992	0.9	LANL Int BG LVL	0.03	3.3	0.067	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	
C5	20	22	09/06/07	3.66	36.8	21	22	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i S1	400.3	10/26/15	REG	F	INIT	GENINORG	Chloride	Cl(-1)	20.9	1	LANL Int BG LVL	7.78	2.7	0.268	mg/L	4		NQ	NQ	EPA:300.0	GELC	
C5	19	20	09/06/07	0.11	0.333	0.274	19	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i S1	400.3	10/26/15	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.305	1.1	LANL Int BG LVL	0.05	6.1	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	25	28	10/03/06	0.067	0.123	0.084	9	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i S2	470.2	10/26/15	FD	F	INIT	GENINORG	Bromide	Br(-1)	0.067	0.8	LANL Int BG LVL	0.03	2.2	0.067	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	
C5	24	27	10/03/06	0.146	0.294	0.231	27	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i S2	470.2	10/26/15	FD	F	INIT	GENINORG	Perchlorate	ClO4	0.288	1.2	LANL Int BG LVL	0.05	5.8	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	24	27	10/03/06	0.146	0.294	0.231	27	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i S2	470.2	10/26/15	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.294	1.3	LANL Int BG LVL	0.05	5.9	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	12	12	09/26/05	7.19	8.83	7.74	12	White Rock Canyon and Rio Grande	Regional Spring	Spring 4B	0	10/15/15	REG	F	INIT	GENINORG	Chloride	Cl(-1)	8.83	1.1	LANL Reg BG LVL	3.57	2.5	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C5	24	27	03/10/04	113	253	180	27	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20 S2	1147.1	10/26/15	REG	F	INIT	METALS	Barium	Ba	225	1.3	LANL Reg BG LVL	56.83	4	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	24	27	03/10/04	38.5	382	72.2	27	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20 S2	1147.1	10/26/15	REG	F	INIT	METALS	Manganese	Mn	82.1	1.1	LANL Reg BG LVL	2.94	27.9	2	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	22	27	03/10/04	1.18	51.7	2.51	25	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20 S2	1147.1	10/26/15	REG	UF	INIT	GENINORG	Total Organic Carbon	TOC	3.06	1.2	LANL Reg BG LVL	0.33	9.3	0.33	mg/L	1		J-	I9	SW-846:9060	GELC	