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Date: MAY 17 2016
Refer To: ADESH-16-073
LAUR: 16-23492
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 May 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 May 11, 2016, to review new groundwater data received in April 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.

1-Day Notification

There was one instance 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). This one instance is as follows:

- In a filtered sample collected March 16, 2016, from intermediate well R-25b, total dissolved solids (TDS) were measured at 1880 mg/L, above the 1000-mg/L New Mexico groundwater standard. This high TDS measurement is likely a result of tracer injections at the Technical Area 16 (TA-16) 260 Outfall. Tracers were injected at wells CdV-9-1(i), CdV-16-1(i), and R-25b during the first quarter of fiscal year 2016. Detailed tracer sampling and analysis data will be presented in the TA-16 260 monitoring group periodic monitoring report to be submitted to the New Mexico Environment Department on August 31, 2016.

One-day notification of this result by telephone occurred on May 12, 2016.

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
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 May 2016 That Meet Notification Requirements (EP2016-0072)

Cy: (w/enc.)
Steve Paris, ADEM ER Program, MS M992
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
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Jake Meadows, ADESH-ENV-CP, MS K490
PRS Database

Cy: (w/o enc./date-stamped letter emailed)
Pete Padilla, Los Alamos County Utility Department, Los Alamos, NM
lasomailbox@nnsa.doe.gov
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Peter Maggiore, DOE-NA-LA
Hai Shen, DOE-EM-LA
David Rhodes, DOE-EM-LA
Mei Ding, EES-14
Tim Goering, ADEM ER Program
Stanislaw Marczak, ADEM ER Program
Robert Cygnarowicz, ADEM ER Program
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
Amy De Palma, PADOPS
Craig Leasure, PADOPS

SUMMARY OF GROUNDWATER DATA REVIEWED IN MAY 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 04-16 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

1-Day Notification Requirement

The "CA" value is used in the "Criteria Code" column of the report. The CA represents the data that show detection of a contaminant in a well screen interval or spring at a concentration that exceeds either the New Mexico Water Quality Control Commission water quality standard or the federal MCL if that contaminant has not previously exceeded such water quality standard or MCL in the well screen interval

or spring. The Laboratory notifies NMED orally within one business day after review of such analytical data and also includes the data in the 15-day notification 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 04-16 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	6	7	11/25/14	1.94	1.94	1.94	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Regional	R-47	1322	03/21/16	REG	UF	INIT	SVOC	Dioxane[1,4-]	123-91-1	1.94	1	EPA TAP SCRN LVL	4.6	0.4	1.5	ug/L	1	J	J+	SV12b	SW-846:8270D	GELC	
C1	6	10	11/25/14	1.57	1.57	1.57	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Regional	R-47	1322	03/21/16	REG	UF	INIT	SVOC	Nitrosodimethylamine[N-]	62-75-9	1.57	1	EPA TAP SCRN LVL	0.0011	1427	1.5	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL 0.0714 ug/L was nondetect.
C1	6	7	11/25/14	2.34	2.34	2.34	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Regional	R-47	1322	03/21/16	REG	UF	INIT	SVOC	Pyridine	110-86-1	2.34	1	EPA TAP SCRN LVL	20	0.1	1.5	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	
C1	8	8	11/14/00	3.08	3.08	3.08	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06293	2	03/16/16	REG	UF	INIT	VOC	Butanone[2-]	78-93-3	3.08	1	EPA TAP SCRN LVL	5600	0	2	ug/L	1	J	J-	V9	SW-846:8260B	GELC	
C1	6	7	09/27/01	2.57	2.57	2.57	1	Ancho Canyon	Regional	R-31 S4	826.6	03/09/16	REG	UF	INIT	SVOC	Bis(2-ethylhexyl)phthalate	117-81-7	2.57	1	EPA MCL	6	0.4	1.5	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	
C2	6	6	04/02/08	3.17	16.3	9.735	2	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06293	2	03/16/16	REG	F	INIT	METALS	Tin	Sn	16.3	1.7	LANL Avl BG LVL	3.26	5	2.5	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C2	12	12	08/30/05	5.05	5.05	5.05	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06294	2.5	03/16/16	REG	F	INIT	METALS	Tin	Sn	5.05	1	LANL Avl BG LVL	3.26	1.5	2.5	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	14	18	04/20/10	1.19	1.19	1.19	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	16-26644	130	03/15/16	REG	F	INIT	METALS	Cobalt	Co	1.19	1	LANL Int BG LVL	0.5	2.4	1	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	11	12	02/08/10	3.36	3.36	3.36	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-37-1(i)	632	03/18/16	REG	F	INIT	METALS	Chromium	Cr	3.36	1	LANL Int BG LVL	1	3.4	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C2	17	18	01/05/09	10.4	10.4	10.4	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	03/16/16	REG	F	INIT	METALS	Tin	Sn	10.4	1	LANL Int BG LVL	3.26	3.2	2.5	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C2	19	23	02/22/06	4.71	4.71	4.71	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-26 S1	651.8	03/23/16	REG	F	INIT	METALS	Tin	Sn	4.71	1	LANL Int BG LVL	3.26	1.4	2.5	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	30	47	03/07/06	87.1	270	112	47	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-18	1358	03/15/16	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	270	2.4	LANL Reg BG LVL	191.7	1.4	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	reanalysis is requested
C2	13	19	05/19/10	1.22	1.22	1.22	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Regional	R-30	1140	03/04/16	REG	F	INIT	METALS	Cobalt	Co	1.22	1	LANL Reg BG LVL	0.5	2.4	1	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	13	19	05/19/10	3.48	3.48	3.48	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Regional	R-30	1140	03/04/16	REG	F	INIT	METALS	Tin	Sn	3.48	1	LANL Reg BG LVL	3.26	1.1	2.5	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
C2	13	14	08/23/05	5.71	5.71	5.71	1	Ancho Canyon	Regional	R-31 S4	826.6	03/09/16	REG	F	INIT	METALS	Tin	Sn	5.71	1	LANL Reg BG LVL	3.26	1.8	2.5	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	10	10	08/24/05	6.99	6.99	6.99	1	Ancho Canyon	Regional	R-31 S5	1007.1	03/10/16	REG	F	INIT	METALS	Tin	Sn	6.99	1	LANL Reg BG LVL	3.26	2.1	2.5	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C2	14	15	04/12/11	4.94	4.94	4.94	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Regional	R-63	1325	03/29/16	REG	F	INIT	METALS	Tin	Sn	4.94	1	LANL Reg BG LVL	3.26	1.5	2.5	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C3	6	10	11/25/14	1.57	1.57	1.57	1	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Regional	R-47	1322	03/21/16	REG	UF	INIT	SVOC	Nitrosodimethylamine[N-]	62-75-9	1.57	1	EPA TAP SCRN LVL	0.0011	1427	1.5	ug/L	1	J	J	J_LAB	SW-846:8270D	GELC	Low detection method with MDL 0.0714 ug/L was nondetect.
C3	17	18	01/05/09	32.5	600	130	9	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	03/16/16	REG	F	INIT	METALS	Iron	Fe	600	4.6	NM GW STD	1000	0.6	30	ug/L	1		NQ	NQ	SW-846:6010C	GELC	High iron is likely a result of TA-16 260 tracer injections. Both field parameters of specific conductance (SC=1140 us/cm) and turbidity (TURB>100 NTU) of the sample were significantly greater than their historical values. Tracers were injected at CdV-9-1(i), CdV-16-1(i) and R-25b during FY 2016 Q1. Detailed tracer sampling and analysis data will be presented in the TA-16 260 Monitoring Group PMR submitted to NMED on August 31, 2016.
C3	16	17	01/05/09	32.9	1880	123	17	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	03/16/16	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	1880	15.3	NM GW STD	1000	1.9	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	High TDS is likely a result of TA-16 260 tracer injections. Tracers were injected at CdV-9-1(i), CdV-16-1(i) and R-25b during FY 2016 Q1. Detailed tracer sampling and analysis data will be presented in the TA-16 260 Monitoring Group PMR submitted to NMED on August 31, 2016.
C5	6	7	11/25/14	14.5	30.1	20.8	7	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Regional	R-47	1322.0	03/21/16	REG	F	INIT	METALS	Zinc	Zn	15.8	0.8	LANL Reg BG LVL	3.89	4.1	3.3	ug/L	1.0		NQ	NQ	SW-846:6010C	GELC	
C5	43	48	03/23/00	2030	5150	3180	48	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02656	3	03/25/16	REG	F	INIT	METALS	Barium	Ba	2460	0.8	LANL Avl BG LVL	68.57	35.9	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	13	15	01/23/07	0.158	0.935	0.407	15	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02656	3	03/25/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.75	1.8	LANL Avl BG LVL	0.05	15	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	46	55	03/28/00	4580	13600	6400	55	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02659	1.7	03/14/16	REG	F	INIT	METALS	Barium	Ba	5660	0.9	LANL Avl BG LVL	68.57	82.5	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	9	9	11/14/00	102	283	175	7	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06293	2	03/16/16	REG	F	INIT	METALS	Barium	Ba	175	1	LANL Avl BG LVL	68.57	2.6	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	8	8	11/14/00	623	2250	1150.5	8	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06293	2	03/16/16	REG	F	INIT	METALS	Boron	B	991	0.9	LANL Avl BG LVL	51.89	19.1	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	9	9	11/14/00	19.2	182	35.8	8	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06293	2	03/16/16	REG	F	INIT	METALS	Manganese	Mn	19.3	0.5	LANL Avl BG LVL	2	9.7	2	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	9	9	11/14/00	23.9	55	45.5	9	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06293	2	03/16/16	REG	F	INIT	GENINORG	Sodium	Na	50.1	1.1	LANL Avl BG LVL	15.54	3.2	0.1	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	9	9	11/14/00	35.4	413	196.5	8	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06293	2	03/16/16	REG	F	INIT	METALS	Zinc	Zn	173	0.9	LANL Avl BG LVL	2	86.5	3.3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	23	23	11/14/00	123	283	197	21	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06294	2.5	03/16/16	REG	F	INIT	METALS	Barium	Ba	152	0.8	LANL Avl BG LVL	68.57	2.2	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	19	19	11/14/00	149	502	297	19	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06294	2.5	03/16/16	REG	F	INIT	METALS	Boron	B	294	1	LANL Avl BG LVL	51.89	5.7	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	23	23	11/14/00	1.2	4.8	2.11	10	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06294	2.5	03/16/16	REG	F	INIT	METALS	Chromium	Cr	2.04	1	LANL Avl BG LVL	1	2	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C5	23	23	11/14/00	11.2	1300	174	23	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06294	2.5	03/16/16	REG	F	INIT	METALS	Manganese	Mn	39.4	0.2	LANL Avl BG LVL	2	19.7	2	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	23	23	11/14/00	2.17	7.5	3.57	18	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06294	2.5	03/16/16	REG	F	INIT	METALS	Nickel	Ni	2.54	0.7	LANL Avl BG LVL	1	2.5	0.5	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	23	23	11/14/00	1.6	14.8	4.43	17	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06294	2.5	03/16/16	REG	F	INIT	METALS	Vanadium	V	6.56	1.5	LANL Avl BG LVL	1	6.6	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	23	23	11/14/00	5.04	36.8	15.4	19	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06294	2.5	03/16/16	REG	F	INIT	METALS	Zinc	Zn	7.56	0.5	LANL Avl BG LVL	2	3.8	3.3	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	11	14	04/20/10	15.2	22.9	19.8	14	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	16-26644	130	03/15/16	REG	F	INIT	GENINORG	Chloride	Cl(-1)	22.9	1.2	LANL Int BG LVL	7.78	2.9	0.335	mg/L	5		NQ	NQ	EPA:300.0	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	10	13	04/20/10	0.431	0.762	0.472	13	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	16-26644	130	03/15/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.435	0.9	LANL Int BG LVL	0.05	8.7	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	22	27	06/01/05	51	75.9	60.3	27	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	03/24/16	REG	F	INIT	METALS	Boron	B	70.8	1.2	LANL Int BG LVL	15.12	4.7	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	19	24	06/01/05	0.075	0.117	0.0965	14	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	03/24/16	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.075	0.8	LANL Int BG LVL	0.03	2.5	0.067	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	
C5	22	27	06/01/05	3.4	24.8	8.59	25	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	03/24/16	REG	F	INIT	METALS	Copper	Cu	12.7	1.5	LANL Int BG LVL	5.32	2.4	3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	22	27	06/01/05	2.36	12.2	4.7	27	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	03/24/16	REG	F	INIT	METALS	Nickel	Ni	4.15	0.9	LANL Int BG LVL	1	4.2	0.5	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	15	19	05/21/07	0.449	0.589	0.52	19	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	03/24/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.542	1	LANL Int BG LVL	0.05	10.8	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	22	27	06/01/05	4.9	70.7	11.5	23	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	03/24/16	REG	F	INIT	METALS	Zinc	Zn	30.4	2.6	LANL Int BG LVL	2	15.2	3.3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	15	19	08/31/10	60.4	115	66.9	19	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-16-4ip S1	815.6	03/14/16	REG	F	INIT	METALS	Boron	B	60.4	0.9	LANL Int BG LVL	15.12	4	15	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	14	18	08/31/10	0.337	0.397	0.3645	18	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-16-4ip S1	815.6	03/14/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.372	1	LANL Int BG LVL	0.05	7.4	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	11	12	02/08/10	1.41	7.07	2.685	12	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-37-1(i)	632	03/18/16	REG	F	INIT	METALS	Nickel	Ni	7.07	2.6	LANL Int BG LVL	1	7.1	0.5	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	10	11	02/08/10	0.112	0.257	0.127	11	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-37-1(i)	632	03/18/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.132	1	LANL Int BG LVL	0.05	2.6	0.05	ug/L	1	J	J	J_LAB	SW-846:6850	GELC	
C5	11	12	02/08/10	3.51	30.7	10.3	11	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-37-1(i)	632	03/18/16	REG	F	INIT	METALS	Zinc	Zn	12.8	1.2	LANL Int BG LVL	2	6.4	3.3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	3	5	05/21/15	33.7	52.4	50.5	5	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-9-1(i)	937.4	03/17/16	FD	F	INIT	METALS	Boron	B	34.4	0.7	LANL Int BG LVL	15.12	2.3	15	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	3	5	05/21/15	33.7	52.4	50.5	5	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-9-1(i)	937.4	03/17/16	REG	F	INIT	METALS	Boron	B	33.7	0.7	LANL Int BG LVL	15.12	2.2	15	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	

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C5	3	5	05/21/15	0.0745	2.75	0.0855	5	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-9-1(i)	937.4	03/17/16	FD	F	INIT	GENINORG	Bromide	Br(-1)	2.75	32.2	LANL Int BG LVL	0.03	91.7	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C5	3	5	05/21/15	0.0745	2.75	0.0855	5	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-9-1(i)	937.4	03/17/16	REG	F	INIT	GENINORG	Bromide	Br(-1)	2.44	28.5	LANL Int BG LVL	0.03	81.3	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C5	3	5	05/21/15	0.389	0.441	0.429	5	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-9-1(i)	937.4	03/17/16	FD	F	INIT	GENINORG	Perchlorate	ClO4	0.441	1	LANL Int BG LVL	0.05	8.8	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	3	5	05/21/15	0.389	0.441	0.429	5	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-9-1(i)	937.4	03/17/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.43	1	LANL Int BG LVL	0.05	8.6	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	14	15	01/05/09	0.208	0.313	0.289	15	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	03/16/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.313	1.1	LANL Int BG LVL	0.05	6.3	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	9	9	04/15/09	2.15	95	5.41	9	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-26 PZ-2	150	03/24/16	REG	F	INIT	METALS	Cobalt	Co	17.1	3.2	LANL Int BG LVL	0.5	34.2	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	9	9	04/15/09	12	1380	41.25	8	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-26 PZ-2	150	03/24/16	REG	F	INIT	METALS	Manganese	Mn	266	6.4	LANL Int BG LVL	2	133	2	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	9	9	04/15/09	2.17	7.35	5.33	9	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-26 PZ-2	150	03/24/16	REG	F	INIT	METALS	Nickel	Ni	5.63	1.1	LANL Int BG LVL	1	5.6	0.5	ug/L	1		NQ	NQ	SW-846:6020	GELC	
C5	9	9	04/15/09	4.08	31.5	7.19	7	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-26 PZ-2	150	03/24/16	REG	F	INIT	METALS	Zinc	Zn	5.23	0.7	LANL Int BG LVL	2	2.6	3.3	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	17	21	02/01/07	0.204	0.262	0.226	21	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-26 S1	651.8	03/23/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.209	0.9	LANL Int BG LVL	0.05	4.2	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	22	26	04/13/05	2.31	19.6	12.8	16	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-26 S1	651.8	03/23/16	REG	F	INIT	METALS	Zinc	Zn	14.2	1.1	LANL Int BG LVL	2	7.1	3.3	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	10	10	12/11/09	0.112	0.134	0.1235	10	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-27i	619	03/18/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.124	1	LANL Int BG LVL	0.05	2.5	0.05	ug/L	1	J	J	J_LAB	SW-846:6850	GELC	
C5	29	40	10/21/08	354	796	419.5	40	Sandia Canyon	Intermediate	SCI-2	548	02/11/16	REG	F	RE	GENINORG	Total Dissolved Solids	TDS	357	0.9	LANL Int BG LVL	127	2.8	3.4	mg/L	1	H	NQ	NQ	EPA:160.1	GELC	
C5	22	24	09/09/04	12.1	27.5	17.45	24	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	03/30/16	FD	F	INIT	GENINORG	Chloride	Cl(-1)	17.4	1	LANL Int BG LVL	7.78	2.2	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	

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C5	22	24	09/09/04	12.1	27.5	17.45	24	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	03/30/16	REG	F	INIT	GENINORG	Chloride	Cl(-1)	17.5	1	LANL Int BG LVL	7.78	2.2	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C5	20	22	06/22/05	0.537	0.947	0.7345	22	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	03/30/16	FD	F	INIT	GENINORG	Perchlorate	ClO4	0.721	1	LANL Int BG LVL	0.05	14.4	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	20	22	06/22/05	0.537	0.947	0.7345	22	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	03/30/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.748	1	LANL Int BG LVL	0.05	15	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	65	80	01/10/00	146	266	185.5	74	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	03/25/16	REG	F	INIT	METALS	Barium	Ba	163	0.9	LANL Int BG LVL	71.83	2.3	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	16	21	01/29/07	0.518	0.717	0.599	21	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	03/25/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.585	1	LANL Int BG LVL	0.05	11.7	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	30	30	01/10/00	209	371	270.5	30	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	SWSC Spring	0	03/25/16	REG	F	INIT	METALS	Barium	Ba	227	0.8	LANL Int BG LVL	71.83	3.2	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	8	8	05/10/07	13.4	24	18.6	8	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	SWSC Spring	0	03/25/16	REG	F	INIT	GENINORG	Chloride	Cl(-1)	17.4	0.9	LANL Int BG LVL	7.78	2.2	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C5	31	31	01/10/00	4.79	85	10	19	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	SWSC Spring	0	03/25/16	REG	F	INIT	METALS	Manganese	Mn	19.7	2	LANL Int BG LVL	2	9.8	2	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C5	8	8	05/10/07	0.511	0.721	0.5935	8	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate Spring	SWSC Spring	0	03/25/16	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.613	1	LANL Int BG LVL	0.05	12.3	0.05	ug/L	1		NQ	NQ	SW-846:6850	GELC	
C5	14	17	05/10/10	6.91	214	16.1	17	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Regional	R-29	1170	03/04/16	FD	F	INIT	METALS	Manganese	Mn	6.97	0.4	LANL Reg BG LVL	2.94	2.4	2	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C5	14	17	05/10/10	6.91	214	16.1	17	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Regional	R-29	1170	03/04/16	REG	F	INIT	METALS	Manganese	Mn	6.94	0.4	LANL Reg BG LVL	2.94	2.4	2	ug/L	1	J	J	J_LAB	SW-846:6010C	GELC	
C6	23	23	11/14/00	103	11700	1350	23	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06294	2.5	03/16/16	REG	F	INIT	METALS	Aluminum	Al	3070	2.3	NM GW STD	5000	0.6	68	ug/L	1		NQ	NQ	SW-846:6010C	GELC	

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CA	16	17	01/05/09	32.9	1880	123	17	Water Canyon (includes Cañon de Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	03/16/16	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	1880	15.3	NM GW STD	1000	1.9	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	High TDS is likely a result of TA-16 260 tracer injections. Tracers were injected at CdV-9-1(i), CdV-16-1(i) and R-25b during FY 2016 Q1. Detailed tracer sampling and analysis data will be presented in the TA-16 260 Monitoring Group PMR submitted to NMED on August 31, 2016.