SUMMARY OF NEW LOS ALAMOS NATIONAL LABORATORY GROUNDWATER DATA LOADED IN MARCH 2012

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. This report contains results for chemical constituents that meet the seven screening criteria laid out in the Compliance Order on Consent (Consent Order), modified May 13, 2008. 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 3-12 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 are often similar to data gathered before June 14, 2007.

This table includes additional comments on the significance of the results for those that appear to be exceptional or are first-time occurrences of results based on considering monitoring data acquired before June 14, 2007 (using statistics described below).

The table contains supplemental information summarizing monitoring results obtained before June 14, 2007.

The table includes sampling date, the name of the well or spring, the location of the well or spring, the depth of the screened interval, the 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. The definitions for abbreviations in the table may be found at http://www.lanl.gov/environment/all/racer.shtml.

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). In the table, the EPA Regional Screening Levels for tap water are identified as being for cancer (10⁻⁵ excess) or noncancer risk values. The data were screened using 10 times the EPA's 10⁻⁶ excess cancer risk values, as indicated in Section VIII.A.1 of the Consent Order.

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

DESCRIPTION OF TABLE

The table is divided into separate categories that correspond to the seven screening criteria in the Consent Order and included below: they are labeled C1 through C6 and CA for cases where the concentration of a constituent in a well screen or spring has not previously exceeded either the New Mexico Water Quality Control Commission (NMWQCC) standard or the federal MCLs. Some data meet one or more than one criteria and appear in the table multiple times. The table also presents only the instances where the results exceed criteria; therefore, not all seven criteria may appear in the table.

The criteria are as follows:

- CA. The Respondents shall notify the Department orally within one business day after review of the analytical data if such data show detection of a contaminant in a well screen interval or spring at a concentration that exceeds either the NMWQCC water quality standard or the federal MCL if that contaminant has not previously exceeded such water quality standard or maximum contaminant level in such well screen interval or spring.
- 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 over a longer time frame than samples collected after June 14, 2007. 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 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

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

Start Date—sample date

Fld QC Type Code—identifies samples that are field duplicates (definitions for these and other abbreviations may be found at http://www.lanl.gov/environment/all/racer.shtml)

Fld Prep—identifies whether samples are filtered or unfiltered

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

Anyl Suite—gives 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—the analytical result in standard measurement units

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

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

Screen Level—the value of the LVL Type/Risk Code

Exceedance Ratio—the ratio of Std Result to LVL Type/Risk Code, divided by the basis for comparison in the criterion. For example, for a criterion (such as C3) that compares the value to 1/2 the standard, a value equal to a standard has an exceedance ratio of 2.

- C1, C2, and CA refer to a screening value so the exceedance ratio compares the result directly to the screening value.
- C3, C4, and C6 refer to 1/2 of a screening value so the exceedance ratio compares the result to 1/2 the screening value.
- C5 refers to 2 times a screening value so the exceedance ratio compares the result to 2 times the screening value.

Std Mdl—the method detection limit in standard measurement units

Std UOM— the standard units of measurement

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

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

Concat Flag Code—concatenated secondary validation qualifiers produced by an independent contractor who reviews data packages, verifying, for example, that holding times were met, that all documentation is present, and that analytical laboratory quality control measures were applied, documented, and kept within contract requirements

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

Anyl Meth Code—analytical method number

Lab Code—analytical laboratory name

Comment—a comment on the analytical result

Table 1: NMED 3-12 Groundwater Report

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Criteria Code	Visits	Samples	First Event Min Detect	Max Detect	Median Detect	Num Detect	Zone	Location	Port Depth	Start Date	Fld QC Type Code	Lab Sample Type	Code Anyl Suite Code	Analyte Desc	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MdI	Std Uom	ng q	Concat Flag Code	Concat Reason Code	Anyl Meth Code	Lab Code	Comment
C1	2 2	08/	08/11 0.32	0.32	0.32	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	12/12/11	UI	F CS	S VOA	Chloromethane	0.32	1.00	EPA TAP SCRN LVL	190	0.0	0.3	ug/L 1	J	J	J_LAB	SW-846:8260B	GELC	
C1	34 3	9 03/	23/00 0.3	0.52	0.41	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02656	3	01/20/12	U	F CS	S VOA	Chloromethane	0.3	0.73	EPA TAP SCRN LVL	190	0.0	0.3	ug/L 1	J	J	J_LAB	SW-846:8260B	GELC	
C1	34 3	9 03/	23/00 2.47	2.47	2.47	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02656	3	01/20/12	U	F CS	S VOA	Butanone[2-]	2.47	1.00	EPA TAP SCRN LVL N	7100	0.0	1.3	ug/L 1	J	J .	J_LAB	SW-846:8260B	GELC	
C1	1 2		16/12 0.59	0.67	0.63	2 Los Alamos Canyon	Regional	R-66	0	01/16/12		F CS		Toluene	0.59	0.94	NM GW STD	750	0.0	_	ug/L 1	J			SW-846:8260B	GELC	
C1 C2	1 2		16/12 0.59 08/11 3.93	0.67 3.93	0.63 3.93	Los Alamos Canyon Lower Los Alamos Canyon (San Ildefonso	Regional Intermediate	R-66 Vine Tree Spring	0	01/16/12 12/12/11	FD U	F CS		Toluene Zinc	0.67 3.93	1.06	NM GW STD LANL Int BG LVL	750	2.0	0.25 3.3	ug/L 1	J			SW-846:8260B SW-846:6010B	GELC GELC	
						Pueblo)	Spring		Ů													J	,	_			
C2			23/07 53.9	81.7	68.9	10 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02656	3	01/20/12	F	CS		,	81.7	1.19	LANL AVI BG LVL	76	1.1		mg/L 1				EPA:310.1	GELC	
C2			23/00 14.8	32	19.3	41 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02656	3	01/20/12	F	CS		G Calcium	26.5	1.37	LANL AVI BG LVL	26.36		0.05	mg/L 1				SW-846:6010B	GELC	
C2			23/00 0.964		1.7	9 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02656	3	01/20/12	F	CS		Cobalt	2.19	1.29	LANL AVI BG LVL	0.5	4.4	1	ug/L 1	J	J	_	SW-846:6010B	GELC	
C2	1 1	01/	25/12 97.8	97.8	97.8	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	01/25/12	F	CS	S GENINOF	RG Alkalinity-CO3+HCO3	97.8	1.00	LANL AVI BG LVL	76	1.3	0.73	mg/L 1				EPA:310.1	GELC	
C2	1 1	01/	25/12 0.131	0.131	0.131	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	01/25/12	F	CS	S GENINOF	G Bromide	0.131	1.00	LANL AVI BG LVL	0.07	1.9	0.066	mg/L 1	J	J	J_LAB	EPA:300.0	GELC	
C2	1 1	01/	25/12 0.184	0.184	0.184	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	01/25/12	F	CS	S GENINOF	Perchlorate	0.184	1.00	LANL AvI BG LVL	0.05	3.7	0.05	ug/L 1	J	J	J_LAB	SW-846:6850	GELC	
C2	1 1	01/	25/12 0.0833	0.0833	0.0833	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	01/25/12	F	CS	S GENINOF	G Ammonia as Nitrogen	0.0833	3 1.00	LANL AVI BG LVL	0.04	2.1	0.016	mg/L 1				EPA:350.1	GELC	
C2	1 1	01/	25/12 214	214	214	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	01/25/12	F	CS	S GENINOF	Total Dissolved Solids	214	1.00	LANL Avi BG LVL	139	1.5	3.4	mg/L 1		J I	4a	EPA:160.1	GELC	
C2	7 1	3 04/	02/10 2.96	2.96	2.96	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-611923	3.2	01/25/12	F	CS	S METALS	Vanadium	2.96	1.00	LANL AVI BG LVL	1	3.0	1	ug/L 1	J	J	J_LAB	SW-846:6010B	GELC	
C2	38 4	5 03/	28/00 1.5	4.42	1.9	7 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02659	1.7	01/19/12	F	CS	S METALS	Copper	4.42	2.33	LANL AVI BG LVL	3	1.5	3	ug/L 1	J	J	J_LAB	SW-846:6010B	GELC	
C2	56 7	1 01/	10/00 1.1	31.3	3.3	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	01/10/12	F	CS	S METALS	Zinc	3.47	1.05	LANL Int BG LVL	2	1.7	3.3	ug/L 1	J	J	J_LAB	SW-846:6010B	GELC	
C2	16 2	0 08/	25/05 109	155	143	20 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	01/18/12	F	CS	S METALS	Strontium	155	1.08	LANL Int BG LVL	154.76	1.0	1	ug/L 1				SW-846:6010B	GELC	
C2	17 2	0 04/	13/05 0.0702	0.0702	0.0702	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	01/26/12	F	CS	S GENINOF	G Bromide	0.0702	2 1.00	LANL Int BG LVL	0.03	2.3	0.066	mg/L 1	J	J	J_LAB	EPA:300.0	GELC	
C2	6 9	04/	20/10 0.284	0.838	0.57	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	16-26644	130	01/13/12	F	CS	S METALS	Uranium	0.838	1.47	LANL Int BG LVL	0.72	1.2	0.067	ug/L 1				SW-846:6020	GELC	
C2	5 5	05/	04/01 55.7	190	86.4	5 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S GENINOF	RG Alkalinity-CO3+HCO3	55.7	0.64	LANL Int BG LVL	52	1.1	0.73	mg/L 1				EPA:310.1	GELC	
C2	6 7	11/	15/00 0.095	0.216	0.156	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S GENINOF	RG Bromide	0.216	1.38	LANL Int BG LVL	0.03	7.2	0.066	mg/L 1				EPA:300.0	GELC	
C2	6 7	11/	15/00 8.81	25.3	11	7 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S GENINOF	RG Chloride	25.3	2.30	LANL Int BG LVL	7.78	3.3	0.13	mg/L 2				EPA:300.0	GELC	
C2	6 6	11/	15/00 17.4	108	64.5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS		RG Sodium	17.4	0.27	LANL Int BG LVL	12.19	1.4	0.1	mg/L 1				SW-846:6010B	GELC	
C2	3 3	02/	05/02 0.665	18.1	7.38	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S GENINOF	G Total Phosphate as Phosphorus	0.665	0.09	LANL Int BG LVL	0.08	8.3	0.015	mg/L 1		J I	4a	EPA:365.4	GELC	
C2	4 5	08/	08/02 167	376	335	5 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S GENINOF	G Total Dissolved Solids	167	0.50	LANL Int BG LVL	127	1.3	3.4	mg/L 1				EPA:160.1	GELC	
C2	6 6	11/	15/00 167	640	425	6 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S METALS	Boron	167	0.39	LANL Int BG LVL	15.12	11.0	15	ug/L 1				SW-846:6010B	GELC	
C2	6 6	11/	15/00 7.2	36.8	22	2 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S METALS	Cobalt	36.8	1.67	LANL Int BG LVL	0.5	73.6	1	ug/L 1				SW-846:6010B	GELC	
C2	6 6	11/	15/00 0.71	19.1	1.52	6 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S METALS	Chromium	19.1	12.57	LANL Int BG LVL	1	19.1	2	ug/L 1				SW-846:6020	GELC	First sample since 2005, one of the highest F values in R-25; values before 2005 were 2 ug/L or lower
C2	6 6	11/	15/00 117	20900	310	5 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S METALS	Iron	20900	67.42	LANL Int BG LVL	839.99	24.9	30	ug/L 1				SW-846:6010B	GELC	First sample since 2005, values before 2005 were 2300 ug/L or lower
C2	6 6	11/	15/00 9.1	686	17.7	6 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S METALS	Manganese	686	38.76	LANL Int BG LVL	2	343.0	2	ug/L 1				SW-846:6010B	GELC	First sample since 2005, values before 2005 were 150 ug/L or lower
C2	6 6	11/	15/00 5.78	21	10.4	6 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S METALS	Molybdenum	5.78	0.56	LANL Int BG LVL	2	2.9	0.17	ug/L 1				SW-846:6020	GELC	
C2	6 6	11/	15/00 2	3730	6	6 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S METALS	Nickel	3730	621.6	7 LANL Int BG LVL	1	3730.0	50	ug/L 10	00			SW-846:6020	GELC	First sample since 2005, values before 2005 were 520 ug/L or lower
C2	1 1	01/	12/12 58.2	58.2	58.2	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S METALS	Silicon Dioxide	58.2	1.00	LANL Int BG LVL	50.72	1.2	0.053	mg/L 1				SW-846:6010B	GELC	-
C2	6 6	11/	15/00 2.8	9.44	7.46	4 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	S METALS	Zinc	9.44	1.27	LANL Int BG LVL	2	4.7	3.3	ug/L 1	J	J .	J_LAB	SW-846:6010B	GELC	
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Cz Criteria Code		Pirst Event	Min Detect 0.0528	Max Detect	Median Detect	D D D D D D D D D D D D D D D D D D D	Zone	Location	Port Depth	Start Date 01/17/12	Fld QC Type Code	Code	Code Anyl Suite Code	Analyte Desc	Std Result	Result/Median	LANL Reg BG LVL	Screen Level	1.1 Exceedance Ratio	Std Mdl	Std Uom Dilution Factor	og Ge	Concat Flag Code	Anyl Meth Code	CODE CODE	Comment
						Potrillo, and Fence Canyons)	Regional	R-25			٢						-			0.016	Ĭ					
C3 6		11/15/00		36.8	22	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate			01/12/12	F	CS	METALS	Cobalt	36.8	1.67	NM GW STD	50	1.5	1	ug/L 1			SW-846:6010B	GELC	
C3 6	6	11/15/00	0 117	20900	310	5 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	METALS	Iron	20900	67.42	NM GW STD	1000	41.8	30	ug/L 1			SW-846:6010B	GELC	First sample since 2005, values before 2005 were 2300 ug/L or lower
C3 6	6	11/15/00	0 9.1	686	17.7	6 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	METALS	Manganese	686	38.76	NM GW STD	200	6.9	2	ug/L 1			SW-846:6010B	GELC	First sample since 2005, values before 2005 were 150 ug/L or lower
C3 6	6	11/15/00	0 2	3730	6	6 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	METALS	Nickel	3730	621.67	NM GW STD	200	37.3	50	ug/L 100)		SW-846:6020	GELC	First sample since 2005, values before 2005 were 520 ug/L or lower
C5 4	5	05/20/11	1 2.96	7.37	5.96	5 Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	02/07/12	F	CS	GENINORG	Perchlorate	7.37	1.24	LANL Reg BG LVL	0.46	8.0	0.5	ug/L 10			SW-846:6850	GELC	above CO screening level, highest of 4 sample events
C5 4	5	05/20/11	1 0.77	10.1	1.08	5 Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	02/07/12	UF	cs	GENINORG	Total Organic Carbon	0.86	0.80	LANL Reg BG LVL	0.33	1.3	0.33	mg/L 1	J .	J_L	AB SW-846:9060	GELC	·
C5 4	5	05/20/11	1 1.8	2.85	2.34	4 Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	02/07/12	F	CS	METALS	Cobalt	1.8	0.77	LANL Reg BG LVL	0.5	1.8	1	ug/L 1	J .	J_L	AB SW-846:6010B	GELC	
C5 4	5	05/20/11	1 35.3	2550	920	5 Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	02/07/12	F	CS	METALS	Iron	1150	1.25	LANL Reg BG LVL	21	27.4	30	ug/L 1			SW-846:6010B	GELC	values somewhat steady
C5 4	5	05/20/1	1 113	1100	902	5 Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	02/07/12	F	CS	METALS	Manganese	554	0.61	LANL Reg BG LVL	2.94	94.2	2	ug/L 1			SW-846:6010B	GELC	values declining
C5 4	4	05/24/11	1 0.573	14.7	1.677	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220.4	02/08/12	UF	CS	GENINORG	Total Organic Carbon	0.864	0.52	LANL Reg BG LVL	0.33	1.3	0.33	mg/L 1	J	J_L	AB SW-846:9060	GELC	
C5 4	4	05/24/11	1 1.07	2.45	1.99	3 Mortandad Canyon (includes Ten Site Canyon	Regional	R-61	1220.4	02/08/12	F	CS	METALS	Cobalt	1.99	1.00	LANL Reg BG LVL	0.5	2.0	1	ug/L 1	J	J_L	AB SW-846:6010B	GELC	
C5 4	4	05/24/11	1 148	5590	1750	and Canada del Buey) 3 Mortandad Canyon (includes Ten Site Canyon	Regional	R-61	1220.4	02/08/12	F	CS	METALS	Iron	148	0.08	LANL Reg BG LVL	21	3.5	30	ug/L 1			SW-846:6010B	GELC	values declining
C5 4	4	05/24/11	1 22.2	908	655	and Canada del Buey) 4 Mortandad Canyon (includes Ten Site Canyon	Regional	R-61	1220.4	02/08/12	F	CS	METALS	Manganese	744	1.14	LANL Reg BG LVL	2.94	126.5	2	ug/L 1			SW-846:6010B	GELC	values somewhat steady
C5 4	4	05/24/11	1 1.6	10.9	5.2	and Canada del Buey) 4 Mortandad Canyon (includes Ten Site Canyon	Regional	R-61	1220.4	02/08/12	F	CS	METALS	Molybdenum	4.71	0.91	LANL Reg BG LVL	2	1.2	0.17	ug/L 1			SW-846:6020	GELC	
C5 8	10	01/23/07	7 0.158	0.419	0.393	and Canada del Buey) 10 Water Canyon (includes Canyon del Valle,	Alluvial	CDV-16-02656	3	01/20/12	F	CS	GENINORG	Perchlorate	0.418	1.06	LANL AVI BG LVL	0.05	4.2	0.05	ug/L 1			SW-846:6850	GELC	
C5 3	6 41	03/23/00	0 2030	5150	3180	Potrillo, and Fence Canyons) 40 Water Canyon (includes Canyon del Valle,	Alluvial	CDV-16-02656	3	01/20/12	F	CS	METALS	Barium	3870	1.22	LANL AvI BG LVL	68.57	28.2	1	ug/L 1			SW-846:6010B	GELC	
C5 7	13	04/02/10	0 10600	49400	18100		Alluvial	CDV-16-611923	3.2	01/25/12	F	CS	METALS	Barium	13700	0.76	LANL AVI BG LVL	68.57	99.9	1	ug/L 1			SW-846:6010B	GELC	
C5 7	13	04/02/10	0 2.2	33.4	5.4	Potrillo, and Fence Canyons) 13 Water Canyon (includes Canyon del Valle,	Alluvial	CDV-16-611923	3.2	01/25/12	F	CS	METALS	Cobalt	6.44	1.19	LANL Avi BG LVL	0.5	6.4	1	ug/L 1	+ +		SW-846:6010B	GELC	
C5 7	13	04/02/10	0 463	7510	1260	Potrillo, and Fence Canyons) 13 Water Canyon (includes Canyon del Valle,	Alluvial	CDV-16-611923	3.2	01/25/12	F	CS	METALS	Manganese	463	0.37	LANL AVI BG LVL	2	115.8	2	ug/L 1			SW-846:6010B	GELC	
C5 7	13	04/02/10	0 1.7	7.6	3.2	Potrillo, and Fence Canyons) 13 Water Canyon (includes Canyon del Valle,	Alluvial	CDV-16-611923	3.2	01/25/12	F	CS	METALS	Nickel	7.6	2.38	LANL AVI BG LVL	1	3.8	0.5	ug/L 1			SW-846:6020	GELC	
C5 3		11/01/10		1250	496	Potrillo, and Fence Canyons) 5 Water Canyon (includes Canyon del Valle,	Alluvial	CDV-16-611923	3.2	01/25/12	F	CS		Strontium	335	0.68	LANL AVI BG LVL	120	1.4	1	ug/L 1			SW-846:6010B	GELC	
	8 45			13600		Potrillo, and Fence Canyons) 45 Water Canyon (includes Canyon del Valle,	Alluvial	CDV-16-02659	1.7	01/19/12		cs		Barium	8980	1.40	LANL AVI BG LVL	68.57		1	ug/L 1			SW-846:6010B	GELC	
			7 0.055			Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	01/23/12	<u>'</u>			Ammonia as Nitrogen		-		0.04		0.016	mg/L 1			EPA:350.1	GELC	
						Potrillo, and Fence Canyons)															J					
		03/23/00		347	234	25 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	01/23/12	F	CS		Boron	169	0.72	LANL AVI BG LVL	51.89		15	ug/L 1			SW-846:6010B	GELC	
C5 3				300	146	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	01/23/12	F	CS		Barium	207	1.42	LANL AVI BG LVL	68.57		1	ug/L 1			SW-846:6010B	GELC	
	3 35			10.1	2.8	20 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	01/23/12	F	CS		Cobalt	1.81	0.65	LANL AVI BG LVL	0.5	1.8	1	ug/L 1	J		AB SW-846:6010B	GELC	
C5 3	3 35	03/23/00		7.13	2.6	17 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	01/23/12	F	CS	METALS	Chromium	4.85	1.87	LANL AvI BG LVL	1	2.4	2	ug/L 1	J	J_L	AB SW-846:6020	GELC	
C5 3	3 35	03/23/00	0 11.7	3340	169	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	01/23/12	F	CS	METALS	Manganese	178	1.05	LANL Avi BG LVL	2	44.5	2	ug/L 1			SW-846:6010B	GELC	
		03/23/00	0 1.5	57.1	3.7	25 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	01/23/12	F	CS	METALS	Nickel	3.71	1.00	LANL Avi BG LVL	1	1.9	0.5	ug/L 1	$\perp \rfloor$		SW-846:6020	GELC	
C5 3	3 35	03/23/00	0 4.9	79	15.4	27 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	01/23/12	F	CS	METALS	Zinc	19.4	1.26	LANL Avi BG LVL	2	4.9		ug/L 1			SW-846:6010B	GELC	
C5 1	17	01/29/07	7 13.9	42	19.8	17 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	01/10/12	F	CS	GENINORG	Chloride	42	2.12	LANL Int BG LVL	7.78	2.7	0.33	mg/L 5			EPA:300.0	GELC	
C5 1	0 15	01/29/07	7 0.518	0.715	0.599	15 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring		0	01/10/12	F	CS	GENINORG	Perchlorate	0.615	1.03	LANL Int BG LVL	0.05	6.2	0.05	ug/L 1			SW-846:6850	GELC	
C5 5	6 71	01/10/00	0 146	266	180	65 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring		0	01/10/12	F	CS	METALS	Barium	266	1.48	LANL Int BG LVL	71.83	1.9	1	ug/L 1			SW-846:6010B	GELC	
C5 1	0 13	01/30/07	7 19.2	37.2	24.4	13 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)		Martin Spring	0	01/18/12	F	CS	GENINORG	Chloride	37	1.52	LANL Int BG LVL	7.78	2.4	0.33	mg/L 5			EPA:300.0	GELC	
C5 1	0 13	01/30/07	7 19.2	37.2	24.4	13 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)		Martin Spring	0	01/18/12	FD F	CS	GENINORG	Chloride	37.2	1.52	LANL Int BG LVL	7.78	2.4	0.33	mg/L 5	1		EPA:300.0	GELC	

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Zone	Location	Port Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Std Result	Result/Median	LVI Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	٥	Concat Flag Code Concat Reason Code	Anyl Meth Code	Lab Code
C5			1/30/07		0.707	0.564	13 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	01/18/12			CS	GENINORG Perchlorate		1.25	LANL Int BG LVL	0.05	7.1	0.05	ug/L				SW-846:6850	GELC
C5	10 1	13 0	1/30/07	0.459	0.707	0.564		Intermediate Spring	Martin Spring	0	01/18/12	2	F	cs	GENINORG Perchlorate	0.689	1.22	LANL Int BG LVL	0.05	6.9	0.05	ug/L	1			SW-846:6850	GELC
C5	10 1	13 0	1/30/07	0.349	0.683	0.493	13 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	01/18/12	2	F	CS	GENINORG Fluoride	0.547	1.11	LANL Int BG LVL	0.23	1.2	0.033	mg/L	1			EPA:300.0	GELC
C5	10 1	13 0	1/30/07	0.349	0.683	0.493	13 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	01/18/12	2 FD	F	CS	GENINORG Fluoride	0.562	1.14	LANL Int BG LVL	0.23	1.2	0.033	mg/L	1			EPA:300.0	GELC
C5	52 5	57 0	1/10/00	17	50.2	34.5	57 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	01/18/12	2	F	CS	GENINORG Sodium	39.8	1.15	LANL Int BG LVL	12.19	1.6	0.1	mg/L	1			SW-846:6010B	GELC
	52 5	57 0	1/10/00	17	50.2	34.5	57 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	01/18/12			cs	GENINORG Sodium		1.12		12.19		0.1	mg/L	1			SW-846:6010B	GELC
C5	48 5		1/10/00		2840	1880	53 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	01/18/12	2 FD	F	CS	METALS Boron	1260	0.67	LANL Int BG LVL	15.12	41.7	15	ug/L	1			SW-846:6010B	GELC
	48 5		1/10/00		2840		53 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	01/18/12			CS	METALS Boron		0.69	LANL Int BG LVL	15.12		15	ug/L				SW-846:6010B	GELC
C5			1/10/00		243		50 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring		0	01/18/12			cs	METALS Barium	188	1.06		71.83		1	ug/L				SW-846:6010B	GELC
	52 5		1/10/00		243		50 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring		0	01/18/12			cs	METALS Barium	192	1.08		71.83		1	ug/L				SW-846:6010B	GELC
C5				0.204			16 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate		659.3	01/26/12			cs	GENINORG Perchlorate	0.248	1.08		0.05	2.5	0.05	Ŭ				SW-846:6850	GELC
C5			4/13/05		14		10 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate		659.3	01/26/12			CS	METALS Zinc	14	5.49		2		3.3	ug/L				SW-846:6010B	GELC
C5						0.0865	Potrillo, and Fence Canyons)	Intermediate		130	01/13/12			cs	GENINORG Bromide	0.0887			0.03	1.5		mg/L		J J	J_LAB	EPA:300.0	GELC
C5			4/20/10		20.6	19.8	9 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate		130	01/13/12			cs	GENINORG Chloride	20.3	1.03		7.78	1.3		mg/L				EPA:300.0	GELC
C5			4/20/10			0.512	9 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate		130	01/13/12			cs	GENINORG Perchlorate	0.46	0.90		0.05	4.6		ug/L				SW-846:6850	GELC
C5			1/05/09		0.306	0.286	9 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate		750	01/23/12			cs	GENINORG Perchlorate		1.03		0.05	2.9		ug/L				SW-846:6850	GELC
C5			1/05/09		1420	39.6	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate		750	01/23/12			CS	METALS Zinc	13.9	0.35	2, 11, 2 11, 2 0 2 1 2	2	3.5	3.3	ug/L				SW-846:6010B	GELC
C5			8/02/05		0.584	0.566	7 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate		754.8	01/11/12			CS	GENINORG Perchlorate	0.56	0.99		0.05	5.6	0.05	Ŭ				SW-846:6850	GELC
C5			2/04/00			0.104	7 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate			01/12/12			CS	GENINORG Bromide	0.13	1.25		0.03	2.2		mg/L		J J		EPA:300.0	GELC
	15 1		2/04/00				12 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25		01/12/12			CS	METALS Zinc		0.62		2	1.1	3.3	ug/L	1	J J	J_LAB	SW-846:6010B	GELC
C5			2/05/07			0.289	Potrillo, and Fence Canyons)	Intermediate		850	01/18/12		F	CS	GENINORG Perchlorate		1.06		0.05	3.1	0.05	ug/L	1			SW-846:6850	GELC
C5	10 1	17 0:	2/05/07	0.242	0.305	0.289	Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	01/18/12	2	F	CS	GENINORG Perchlorate	0.299	1.03	LANL Int BG LVL	0.05	3.0	0.05	ug/L	1			SW-846:6850	GELC
	13 2		2/15/05				17 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	`,	850	01/18/12			CS	METALS Zinc	13.1	1.01	LANL Int BG LVL	2		3.3	ug/L				SW-846:6010B	GELC
			2/15/05				17 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)		CdV-16-2(i)r		01/18/12				METALS Zinc						3.3	ug/L				SW-846:6010B	GELC
C5	8 1	10 1:	2/21/09			0.235	10 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-47i	840	01/24/12	2	F	CS	GENINORG Perchlorate	0.235	1.00		0.05	2.4	0.05	ug/L	1			SW-846:6850	GELC
C5	7 7		2/08/10		0.257	0.125	 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons) 	Intermediate	CDV-37-1(i)	632	01/24/12	2	F	CS	GENINORG Perchlorate	0.125	1.00	LANL Int BG LVL	0.05	1.3	0.05	ug/L	1	J J		SW-846:6850	GELC
C5	7 7	7 0	2/08/10	6.93	22.8	15.1	 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons) 	Intermediate	CDV-37-1(i)	632	01/24/12	2	F	CS	METALS Manganese	6.93	0.46	LANL Int BG LVL	2	1.7	2	ug/L	1	J J	J_LAB	SW-846:6010B	GELC
C5	7 7	7 0	2/08/10	9.63	30.7	12.8	 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons) 	Intermediate	CDV-37-1(i)	632	01/24/12	2	F	CS	METALS Zinc	9.63	0.75	LANL Int BG LVL	2	2.4	3.3	ug/L	1	J J	J_LAB	SW-846:6010B	GELC
C5	7 7	7 1:	2/11/09	0.117	0.134	0.124	 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons) 	Intermediate	R-27i	619	02/03/12	2	F	CS	GENINORG Perchlorate	0.123	0.99	LANL Int BG LVL	0.05	1.2	0.05	ug/L	1	J J	J_LAB	SW-846:6850	GELC
C5	6	6 0	2/07/02	1.12	3.45	1.98	6 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	R-25	1303.4	01/13/12			CS	GENINORG Total Phosphate as Phosphorus	1.91	0.96	LANL Reg BG LVL	0.16	6.0	0.015	mg/L	1			EPA:365.4	GELC
C5	9 1	10 0	5/08/01	2.25	10.3	4.45	10 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	R-25	1303.4	01/13/12	2	UF	cs	GENINORG Total Organic Carbon	2.25	0.51		0.33	3.4	0.33	mg/L	1			SW-846:9060	GELC
C5	13 1	13 1:	2/07/00	2.2	396	7.5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	R-25	1303.4	01/13/12	2	F	CS	METALS Manganese	6.34	0.85	· ·	2.94	1.1	2	ug/L	1	J J	J_LAB	SW-846:6010B	GELC
C5	13 1	13 0:	2/08/02	0.22	4.2	0.75	13 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	R-25	1406.3	01/13/12	2	F	CS	GENINORG Total Phosphate as Phosphorus	0.595	0.79	LANL Reg BG LVL	0.16	1.9	0.015	mg/L	1			EPA:365.4	GELC
C5	8 8	8 0	5/10/10	1.09	1.42	1.22	6 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	R-29	1170	02/02/12	2	F	CS	METALS Cobalt	1.42	1.16	LANL Reg BG LVL	0.5	1.4	1	ug/L	1	J J	J_LAB	SW-846:6010B	GELC
C5	8 8	8 0	5/10/10	16.9	214	40.6	8 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	R-29	1170	02/02/12	2	F	CS	METALS Manganese	16.9	0.42	LANL Reg BG LVL	2.94	2.9	2	ug/L	1			SW-846:6010B	GELC
C6	15 2	27 1:	2/15/05	43.3	82.3	58.3	26 Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	01/18/12	2 FD	UF	DL	HEXP RDX	82.3	1.41	EPA TAP SCRN LVL C-5	6.1	27.0	1	ug/L	20			SW-846:8321A_MOD	GELC general increase from 48 ug/L in 2005

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Criteria Code	Visits	_	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Port Depth	Start Date		Lab Sample Type Code		Analyte Desc	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code Concat Flag Code	Concat Reason Code	Anyl Meth Code	Lab Code	Comment
CA	6 6	11/15/0	0 117	20900	310		Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	METALS	Iron	20900	67.42	NM GW STD	1000	20.9	30	ug/L	1			SW-846:6010B		First sample since 2005, values before 2005 were 2310 ug/L or lower
CA	6 6	11/15/0	9.1	686	17.7		Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	METALS	Manganese	686	38.76	NM GW STD	200	3.4	2	ug/L	1			SW-846:6010B		First sample since 2005, values before 2005 were 150 ug/L or lower
CA	6 6	11/15/0	0 2	3730	6	6	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	891.8	01/12/12	F	CS	METALS	Nickel	3730	621.67	NM GW STD	200	18.7	50	ug/L	100			SW-846:6020		First sample since 2005, values before 2005 were 520 ug/L or lower