

SUMMARY OF NEW LOS ALAMOS NATIONAL LABORATORY GROUNDWATER DATA LOADED IN OCTOBER 2011

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 10-11 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 10-11 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Port Depth	Start Date	Fid QC Type Code	Fid Prep Code	Lab Sample Type Code	Any/ Suite Code	Analyte Desc	Symbol	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	Any/ Meth Code	Lab Code	Comment	
C1	5	8	10/13/10	27	27	27	1	Pueblo Canyon (includes Acid Canyon)	Regional	R-3	974.5	08/24/11		UF	CS	SVOA	Diethylphthalate		27	1.00	EPA TAP SCR N LVL N	29000	0.0	3	ug/L					SW-846:8270C	GELC		
C1	2	4	05/20/11	1.52	1.52	1.52	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	08/18/11		UF	CS	VOA	Methyl-2-pentanone[4-]		1.52	1.00	EPA TAP SCR N LVL N	2000	0.0	1.3	ug/L		J	J	J_LAB	SW-846:8260B	GELC		
C1	2	4	05/20/11	75.6	78.1	76.9	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	08/18/11		UF	CS	VOA	Acetone		78.1	1.02	EPA TAP SCR N LVL N	22000	0.0	3.5	ug/L		J	V7c	SW-846:8260B	GELC			
C1	2	4	05/20/11	75.6	78.1	76.9	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	08/18/11	FD	UF	CS	VOA	Acetone		75.6	0.98	EPA TAP SCR N LVL N	22000	0.0	3.5	ug/L		J	V7c	SW-846:8260B	GELC			
C1	2	2	05/24/11	0.0117	0.0117	0.0117	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220.4	08/19/11		UF	CS	PEST/PCB	BHC[beta-]		0.0117	1.00	EPA TAP SCR N LVL C-5	0.37	0.0	0.007	ug/L		J	J	J_LAB	SW-846:8081A	GELC		
C1	2	4	05/24/11	4.11	4.58	4.35	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220.4	08/19/11		UF	CS	SVOA	Methylphenol[4-]		4.11	0.94	EPA TAP SCR N LVL N	180	0.0	3	ug/L		J	J	J_LAB	SW-846:8270C	GELC		
C1	2	4	05/24/11	4.11	4.58	4.35	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220.4	08/19/11	FD	UF	CS	SVOA	Methylphenol[4-]		4.58	1.05	EPA TAP SCR N LVL N	180	0.0	3.3	ug/L		J	J	J_LAB	SW-846:8270C	GELC		
C1	2	4	05/24/11	6.52	6.62	6.57	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220.4	08/19/11		UF	CS	VOA	Acetone		6.52	0.99	EPA TAP SCR N LVL N	22000	0.0	3.5	ug/L		J	J	V7c	SW-846:8260B	GELC		
C1	2	4	05/24/11	6.52	6.62	6.57	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220.4	08/19/11	FD	UF	CS	VOA	Acetone		6.62	1.01	EPA TAP SCR N LVL N	22000	0.0	3.5	ug/L		J	J	V7c	SW-846:8260B	GELC		
C1	2	4	05/24/11	1.87	1.88	1.88	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220.4	08/19/11	FD	UF	CS	VOA	Butanone[2-]		1.88	1.00	EPA TAP SCR N LVL N	7100	0.0	1.3	ug/L		J	J	V7c	SW-846:8260B	GELC		
C1	2	4	05/24/11	1.87	1.88	1.88	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220.4	08/19/11		UF	CS	VOA	Butanone[2-]		1.87	0.99	EPA TAP SCR N LVL N	7100	0.0	1.3	ug/L		J	J	V7c	SW-846:8260B	GELC		
C1	8	8	08/14/02	9.12	9.12	9.12	1	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	R-25	1796	09/14/11		UF	CS	SVOA	Diethylphthalate		9.12	1.00	EPA TAP SCR N LVL N	29000	0.0	3	ug/L		J	J	J_LAB	SW-846:8270C	GELC		
C2	1	1	09/06/11	0.343	0.343	0.343	1	Upper Los Alamos Canyon (includes DP Canyon)	Regional	R-64	1285	09/06/11		F	CS	GENINORG	Total Phosphate as Phosphorus		0.343	1.00	LANL Reg BG LVL	0.16	2.1	0.015	mg/L					EPA:365.4	GELC		
C2	1	1	09/06/11	60.7	60.7	60.7	1	Upper Los Alamos Canyon (includes DP Canyon)	Regional	R-64	1285	09/06/11		F	CS	METALS	Iron		60.7	1.00	LANL Reg BG LVL	21	2.9	30	ug/L		J	J	J_LAB	SW-846:6010B	GELC		
C2	1	1	09/06/11	6.1	6.1	6.1	1	Upper Los Alamos Canyon (includes DP Canyon)	Regional	R-64	1285	09/06/11		F	CS	METALS	Manganese		6.1	1.00	LANL Reg BG LVL	2.94	2.1	2	ug/L		J	J	J_LAB	SW-846:6010B	GELC		
C2	8	10	04/26/07	0.048	0.323	0.056	4	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Los Alamos Spring	0	08/03/11		F	CS	GENINORG	Total Phosphate as Phosphorus		0.323	5.77	LANL Int BG LVL	0.08	4.0	0.015	mg/L		J	I4a	EPA:365.4	GELC			
C2	1	1	08/08/11	84.9	84.9	84.9	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Alkalinity-CO3+HCO3		84.9	1.00	LANL Int BG LVL	52	1.6	0.73	mg/L					EPA:310.1	GELC		
C2	1	1	08/08/11	0.155	0.155	0.155	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Bromide		0.155	1.00	LANL Int BG LVL	0.03	5.2	0.066	mg/L		J	J	J_LAB	EPA:300.0	GELC		
C2	1	1	08/08/11	29.9	29.9	29.9	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Calcium		29.9	1.00	LANL Int BG LVL	17.31	1.7	0.05	mg/L					SW-846:6010B	GELC		
C2	1	1	08/08/11	18.6	18.6	18.6	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Chloride		18.6	1.00	LANL Int BG LVL	7.78	2.4	0.066	mg/L					EPA:300.0	GELC		
C2	1	1	08/08/11	5.58	5.58	5.58	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Perchlorate		5.58	1.00	LANL Int BG LVL	0.05	111.6	0.5	ug/L		10			SW-846:6850	GELC	similar to nearby Basalt Spring	
C2	1	1	08/08/11	0.458	0.458	0.458	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Fluoride		0.458	1.00	LANL Int BG LVL	0.23	2.0	0.033	mg/L					EPA:300.0	GELC		
C2	1	1	08/08/11	8.13	8.13	8.13	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Magnesium		8.13	1.00	LANL Int BG LVL	6.12	1.3	0.11	mg/L					SW-846:6010B	GELC		
C2	1	1	08/08/11	3.72	3.72	3.72	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Nitrate-Nitrite as Nitrogen		3.72	1.00	LANL Int BG LVL	2.41	1.5	0.05	mg/L		5		J	I4a	EPA:353.2	GELC	similar to nearby Basalt Spring
C2	1	1	08/08/11	19.4	19.4	19.4	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Sodium		19.4	1.00	LANL Int BG LVL	12.19	1.6	0.1	mg/L					SW-846:6010B	GELC		
C2	1	1	08/08/11	0.382	0.382	0.382	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Total Phosphate as Phosphorus		0.382	1.00	LANL Int BG LVL	0.08	4.8	0.015	mg/L					EPA:365.4	GELC		
C2	1	1	08/08/11	183	183	183	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Total Dissolved Solids		183	1.00	LANL Int BG LVL	127	1.4	3.4	mg/L					EPA:160.1	GELC		
C2	1	1	08/08/11	33.7	33.7	33.7	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	METALS	Boron		33.7	1.00	LANL Int BG LVL	15.12	2.2	15	ug/L		J	J	J_LAB	SW-846:6010B	GELC		
C2	1	1	08/08/11	3.47	3.47	3.47	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	METALS	Chromium		3.47	1.00	LANL Int BG LVL	1	3.5	2	ug/L		J	J	J_LAB	SW-846:6020	GELC		
C2	1	1	08/08/11	2.51	2.51	2.51	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	METALS	Molybdenum		2.51	1.00	LANL Int BG LVL	2	1.3	0.17	ug/L					SW-846:6020	GELC		
C2	1	1	08/08/11	1.73	1.73	1.73	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	METALS	Nickel		1.73	1.00	LANL Int BG LVL	1	1.7	0.5	ug/L		J	J	J_LAB	SW-846:6020	GELC		
C2	1	1	08/08/11	1.76	1.76	1.76	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	METALS	Uranium		1.76	1.00	LANL Int BG LVL	0.72	2.4	0.067	ug/L					SW-846:6020	GELC		
C2	1	1	08/08/11	7.48	7.48	7.48	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	METALS	Vanadium		7.48	1.00	LANL Int BG LVL	4.91	1.5	1	ug/L					SW-846:6010B	GELC		
C2	2	2	05/20/11	3.36	4.69	4.03	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	08/18/11		F	CS	GENINORG	Magnesium		4.69	1.16	LANL Reg BG LVL	4.15	1.1	0.11	mg/L					SW-846:6010B	GELC		
C2	2	2	05/20/11	23.2	61.6	42.4	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	08/18/11		F	CS	METALS	Barium		61.6	1.45	LANL Reg BG LVL	56.83	1.1	1	ug/L					SW-846:6010B	GELC		

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Port Depth	Start Date	Fid QC Type Code	Fid Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Symbol	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
C5	8	10	04/26/07	1.53	2.8	1.74	10	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Los Alamos Spring	0	08/03/11		F	CS	METALS	Uranium		1.68	0.97	LANL Int BG LVL	0.72	1.2	0.067	ug/L	1				SW-846:6020	GELC	
C5	17	18	08/30/07	68	380	330	18	Sandia Canyon	Regional	R-35a	1013.1	08/17/11		F	CS	METALS	Barium		380	1.15	LANL Reg BG LVL	56.83	3.3	1	ug/L	1				SW-846:6010B	GELC	
C5	17	18	08/30/07	1.2	22.2	10.7	17	Sandia Canyon	Regional	R-35a	1013.1	08/17/11		F	CS	METALS	Nickel		11	1.03	LANL Reg BG LVL	3.09	1.8	0.5	ug/L	1				SW-846:6020	GELC	
C5	23	25	11/30/05	6.7	111	8.9	24	Sandia Canyon	Regional	R-10a	690	08/09/11		F	CS	METALS	Zinc		8.03	0.90	LANL Reg BG LVL	3.89	1.0	3.3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C5	12	18	05/12/04	2.14	154	13.4	18	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-16	863.4	08/18/11		F	CS	METALS	Manganese		12.8	0.96	LANL Reg BG LVL	2.94	2.2	2	ug/L	1				SW-846:6010B	GELC	
C5	12	18	05/12/04	2.14	154	13.4	18	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-16	863.4	08/18/11	FD	F	CS	METALS	Manganese		12.3	0.92	LANL Reg BG LVL	2.94	2.1	2	ug/L	1				SW-846:6010B	GELC	
C5	11	15	03/19/04	3.74	54.9	10.7	15	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-16	1237	08/18/11		F	CS	METALS	Manganese		54.9	5.13	LANL Reg BG LVL	2.94	9.3	2	ug/L	1				SW-846:6010B	GELC	
C5	5	5	10/22/07	260	743	364	5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	FLC-16-25278	1.6	09/14/11		F	CS	METALS	Barium		743	2.04	LANL Avi BG LVL	68.57	5.4	1	ug/L	1				SW-846:6010B	GELC	
C5	5	5	10/22/07	1.31	7.9	4.89	4	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	FLC-16-25278	1.6	09/14/11		F	CS	METALS	Cobalt		7.02	1.44	LANL Avi BG LVL	0.5	7.0	1	ug/L	1				SW-846:6010B	GELC	
C5	5	5	10/22/07	36.3	1370	105	5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	FLC-16-25278	1.6	09/14/11		F	CS	METALS	Manganese		927	8.83	LANL Avi BG LVL	2	231.8	2	ug/L	1				SW-846:6010B	GELC	
C5	5	5	10/22/07	2.2	9.48	6.79	5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	FLC-16-25278	1.6	09/14/11		F	CS	METALS	Nickel		9.48	1.40	LANL Avi BG LVL	1	4.7	0.5	ug/L	1				SW-846:6020	GELC	
C5	5	5	10/22/07	2.1	16	6.6	5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	FLC-16-25278	1.6	09/14/11		F	CS	METALS	Vanadium		3.76	0.57	LANL Avi BG LVL	1	1.9	1	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C5	5	5	10/22/07	3.7	41	11.5	5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	FLC-16-25278	1.6	09/14/11		F	CS	METALS	Zinc		8.41	0.73	LANL Avi BG LVL	2	2.1	3.3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C5	9	10	01/24/07	0.109	0.41	0.253	9	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	09/12/11		F	CS	GENINORG	Total Phosphate as Phosphorus		0.273	1.08	LANL Avi BG LVL	0.05	2.7	0.015	mg/L	1		J	I4a	EPA:365.4	GELC	
C5	27	28	03/23/00	128	347	238	24	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	09/12/11		F	CS	METALS	Boron		261	1.10	LANL Avi BG LVL	51.89	2.5	15	ug/L	1				SW-846:6010B	GELC	
C5	32	34	03/23/00	113	300	144	33	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	09/12/11		F	CS	METALS	Barium		217	1.51	LANL Avi BG LVL	68.57	1.6	1	ug/L	1				SW-846:6010B	GELC	
C5	32	34	03/23/00	1.1	10.1	2.8	19	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	09/12/11		F	CS	METALS	Cobalt		1.71	0.61	LANL Avi BG LVL	0.5	1.7	1	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C5	32	34	03/23/00	0.79	7.13	2.53	16	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	09/12/11		F	CS	METALS	Chromium		2.81	1.11	LANL Avi BG LVL	1	1.4	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C5	32	34	03/23/00	11.7	3340	148.5	34	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	09/12/11		F	CS	METALS	Manganese		386	2.60	LANL Avi BG LVL	2	96.5	2	ug/L	1				SW-846:6010B	GELC	
C5	32	34	03/23/00	1.5	57.1	3.6	24	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	09/12/11		F	CS	METALS	Nickel		4.78	1.33	LANL Avi BG LVL	1	2.4	0.5	ug/L	1				SW-846:6020	GELC	
C5	32	34	03/23/00	4.9	79	15.2	26	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	09/12/11		F	CS	METALS	Zinc		7.29	0.48	LANL Avi BG LVL	2	1.8	3.3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C5	9	16	01/29/07	13.9	24.7	19.7	16	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	09/15/11		F	CS	GENINORG	Chloride		21.5	1.09	LANL Int BG LVL	7.78	1.4	0.13	mg/L	2				EPA:300.0	GELC	
C5	9	14	01/29/07	0.518	0.715	0.596	14	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	09/15/11		F	CS	GENINORG	Perchlorate		0.599	1.01	LANL Int BG LVL	0.05	6.0	0.05	ug/L	1				SW-846:6850	GELC	
C5	55	70	01/10/00	146	265	180	64	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Burning Ground Spring	0	09/15/11		F	CS	METALS	Barium		225	1.25	LANL Int BG LVL	71.83	1.6	1	ug/L	1				SW-846:6010B	GELC	
C5	9	11	01/30/07	19.2	32.4	22.2	11	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11	FD	F	CS	GENINORG	Chloride		19.2	0.86	LANL Int BG LVL	7.78	1.2	0.13	mg/L	2				EPA:300.0	GELC	
C5	9	11	01/30/07	19.2	32.4	22.2	11	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11		F	CS	GENINORG	Chloride		19.2	0.86	LANL Int BG LVL	7.78	1.2	0.13	mg/L	2				EPA:300.0	GELC	
C5	9	11	01/30/07	0.459	0.706	0.558	11	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11		F	CS	GENINORG	Perchlorate		0.564	1.01	LANL Int BG LVL	0.05	5.6	0.05	ug/L	1				SW-846:6850	GELC	
C5	9	11	01/30/07	0.459	0.706	0.558	11	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11	FD	F	CS	GENINORG	Perchlorate		0.572	1.03	LANL Int BG LVL	0.05	5.7	0.05	ug/L	1				SW-846:6850	GELC	
C5	9	11	01/30/07	0.349	0.683	0.491	11	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11		F	CS	GENINORG	Fluoride		0.493	1.00	LANL Int BG LVL	0.23	1.1	0.033	mg/L	1				EPA:300.0	GELC	
C5	9	11	01/30/07	0.349	0.683	0.491	11	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11	FD	F	CS	GENINORG	Fluoride		0.498	1.01	LANL Int BG LVL	0.23	1.1	0.033	mg/L	1				EPA:300.0	GELC	
C5	51	55	01/10/00	17	50.2	34.3	55	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11		F	CS	GENINORG	Sodium		28.4	0.83	LANL Int BG LVL	12.19	1.2	0.1	mg/L	1				SW-846:6010B	GELC	
C5	51	55	01/10/00	17	50.2	34.3	55	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11	FD	F	CS	GENINORG	Sodium		28.3	0.83	LANL Int BG LVL	12.19	1.2	0.1	mg/L	1				SW-846:6010B	GELC	
C5	47	51	01/10/00	570	2840	1890	51	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11		F	CS	METALS	Boron		1240	0.66	LANL Int BG LVL	15.12	41.0	15	ug/L	1				SW-846:6010B	GELC	
C5	47	51	01/10/00	570	2840	1890	51	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11	FD	F	CS	METALS	Boron		1250	0.66	LANL Int BG LVL	15.12	41.3	15	ug/L	1				SW-846:6010B	GELC	
C5	51	55	01/10/00	122	243	177	48	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11		F	CS	METALS	Barium		151	0.85	LANL Int BG LVL	71.83	1.1	1	ug/L	1				SW-846:6010B	GELC	
C5	51	55	01/10/00	122	243	177	48	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	09/15/11	FD	F	CS	METALS	Barium		149	0.84	LANL Int BG LVL	71.83	1.0	1	ug/L	1				SW-846:6010B	GELC	
C5	7	8	01/05/09	0.208	0.306	0.271	8	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	R-25b	750	09/15/11		F	CS	GENINORG	Perchlorate		0.299	1.10	LANL Int BG LVL	0.05	3.0	0.05	ug/L	1				SW-846:6850	GELC	

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Port Depth	Start Date	Fid QC Type Code	Fid Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Symbol	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
C5	7	8	01/05/09	24.1	1420	43.2	8	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25b	750	09/15/11		F	CS	METALS	Zinc		34.7	0.80	LANL Int BG LVL	2	8.7	3.3	ug/L	1				SW-846:6010B	GELC	
C5	6	6	08/02/05	0.512	0.584	0.566	6	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	754.8	09/09/11		F	CS	GENINORG	Perchlorate		0.584	1.03	LANL Int BG LVL	0.05	5.8	0.05	ug/L	1				SW-846:6850	GELC	
C5	10	10	11/14/00	91	270	136	10	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	754.8	09/09/11		F	CS	METALS	Boron		109	0.80	LANL Int BG LVL	15.12	3.6	15	ug/L	1				SW-846:6010B	GELC	
C5	10	10	11/14/00	1.7	11.5	5.7	9	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	754.8	09/09/11		F	CS	METALS	Cobalt		5.69	1.00	LANL Int BG LVL	0.5	5.7	1	ug/L	1				SW-846:6010B	GELC	
C5	10	11	11/14/00	0.82	9.12	6.16	10	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	754.8	09/09/11		F	CS	METALS	Chromium		9.12	1.48	LANL Int BG LVL	1	4.6	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C5	10	10	11/14/00	6.9	183	85	10	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	754.8	09/09/11		F	CS	METALS	Manganese		76.1	0.90	LANL Int BG LVL	2	19.0	2	ug/L	1				SW-846:6010B	GELC	
C5	10	10	11/14/00	9.5	731	457	10	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	754.8	09/09/11		F	CS	METALS	Nickel		493	1.08	LANL Int BG LVL	1	246.5	0.5	ug/L	1				SW-846:6020	GELC	
C5	9	15	02/05/07	0.242	0.303	0.287	15	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	09/06/11	FD	F	CS	GENINORG	Perchlorate		0.278	0.97	LANL Int BG LVL	0.05	2.8	0.05	ug/L	1				SW-846:6850	GELC	
C5	9	15	02/05/07	0.242	0.303	0.287	15	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	09/06/11		F	CS	GENINORG	Perchlorate		0.292	1.02	LANL Int BG LVL	0.05	2.9	0.05	ug/L	1				SW-846:6850	GELC	
C5	12	18	12/15/05	5.6	17	12.4	15	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	09/06/11		F	CS	METALS	Zinc		9.19	0.74	LANL Int BG LVL	2	2.3	3.3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C5	12	18	12/15/05	5.6	17	12.4	15	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	09/06/11	FD	F	CS	METALS	Zinc		9.43	0.76	LANL Int BG LVL	2	2.4	3.3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C5	7	9	12/21/09	0.222	0.272	0.235	9	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-47i	840	09/08/11		F	CS	GENINORG	Perchlorate		0.234	1.00	LANL Int BG LVL	0.05	2.3	0.05	ug/L	1				SW-846:6850	GELC	
C5	12	12	02/08/02	0.22	4.2	0.76	12	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	R-25	1406.3	09/15/11		F	CS	GENINORG	Total Phosphate as Phosphorus		0.741	0.98	LANL Reg BG LVL	0.16	2.3	0.015	mg/L	1		J	I4a	EPA:365.4	GELC	
CA	1	1	08/08/11	5.58	5.58	5.58	1	Lower Los Alamos Canyon (San Ildefonso Pueblo)	Intermediate Spring	Vine Tree Spring	0	08/08/11		F	CS	GENINORG	Perchlorate		5.58	1.00	NM GW CONS	4	1.4	0.5	ug/L	10				SW-846:6850	GELC	similar to nearby Basalt Spring
CA	2	2	05/20/11	35.3	2550	1292.7	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	08/18/11		F	CS	METALS	Iron		2550	1.97	NM GW STD	1000	2.6	30	ug/L	1				SW-846:6010B	GELC	Second sample, big increase in Fe & Mn
CA	2	2	05/20/11	113	1100	607	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	08/18/11		F	CS	METALS	Manganese		1100	1.81	NM GW STD	200	5.5	2	ug/L	1				SW-846:6010B	GELC	Second sample, big increase in Fe & Mn
CA	2	2	05/24/11	5590	5590	5590	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220.4	08/19/11		F	CS	METALS	Iron		5590	1.00	NM GW STD	1000	5.6	30	ug/L	1				SW-846:6010B	GELC	Second sample, big increase in Fe & Mn
CA	2	2	05/24/11	22.2	908	465.1	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220.4	08/19/11		F	CS	METALS	Manganese		908	1.95	NM GW STD	200	4.5	2	ug/L	1				SW-846:6010B	GELC	Second sample, big increase in Fe & Mn