SUMMARY OF NEW LOS ALAMOS NATIONAL LABORATORY GROUNDWATER DATA LOADED IN DECEMBER 2009

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 12-09 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. Over time, the data that exceed the reference data have decreased substantially.

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: these are labeled (in the first column) C1 through C6 for the numbered criteria 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 more than one criterion and appear in the table multiple times. 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 on 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 12-09 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Port 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	Concat Flag Code	Concat Reason Code	Anyl Meth Code	Lab Code	Comments
C1	3	5	04/28/09	0.00000256	0.00000256	0.00000256	1	Sandia Canyon	Regional	R-36	766.9	11/04/09		UF	CS	DIOX/FUR	Octachlorodibenzodioxin[1,2,3,4,6,7,8,9-]	3268-87-9	0.00000256	1.00				0.00000256	ug/L	1	J	J	J_LAB	SW-846:8290	ALTC	found in EQB for another location on this date
C1	7	8	11/24/03	0.414	0.414	0.414	1	Sandia Canyon	Water Supply	PM-3	956	08/11/09		UF	CS	VOA	Chloromethane	74-87-3	0.414	1.00	EPA TAP SCRN LVL N	190	0.0	0.3	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC	
C1	4	4	01/24/07	0.054	0.054	0.054	1	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06294	2.5	10/14/09		UF	CS	PEST/PCB	Aroclor-1260	11096-82-5	0.054	1.00	EPA MCL	0.5	0.1	0.038	ug/L	1	J	J-	P3a	SW-846:8082	GELC	rarely detect in groundwater, near MDL
C1	14	15	12/04/00	0.134	0.26	0.17	3	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	1192.4	10/19/09		UF	CS	HEXP	HMX	2691-41-0	0.26	1.53	EPA TAP SCRN LVL N	1800	0.0	0.1	ug/L	2	J	J	HE7c	SW-846:8321A_MOD	GELC	last detect in 2007
C1	13	13	12/07/00	0.0879	22	0.848	8	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	R-25	1303.4	10/21/09		UF	CS	HEXP	RDX	121-82-4	0.131	0.15	EPA TAP SCRN LVL C-5	6.1	0.0	0.1	ug/L	2	J	J	HE7c	SW-846:8321A_MOD	GELC	last detect in 2007
C2	4	4	02/20/09	0.95	1.44	1.2	2	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	METALS	Nickel	Ni	1.44	1.20	LANL Avl BG LVL	1	1.4	0.5	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C2	3	4	10/11/06	33.2	46.7	42.5	3	Sandia Canyon	Alluvial	SCA-5	55	11/04/09		F	CS	METALS	Manganese	Mn	46.7	1.10	LANL Avl BG LVL	2	23.4	2	ug/L	1				SW-846:6010B	GELC	
C2	10	15	08/29/07	0.018	0.296	0.035	3	Sandia Canyon	Regional	R-35b	825.4	11/03/09		F	CS	GENINORG	Ammonia as Nitrogen	NH3-N	0.296	8.46	LANL Reg BG LVL	0.05	5.9	0.016	mg/L	1		J	I4a	EPA:350.1	GELC	
C2	12	12	06/29/06	17.7	17.7	17.7	1	Sandia Canyon	Regional	R-10	1042	09/23/09		F	CS	METALS	Manganese	Mn	17.7	1.00	LANL Reg BG LVL	2.94	6.0	2	ug/L	1				SW-846:6010B	GELC	
C2	7	8	01/26/07	0.18	0.285	0.217	8	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02659	1.7	10/07/09		F	CS	GENINORG	Fluoride	F(-1)	0.285	1.31	LANL Avl BG LVL	0.27	1.1	0.033	mg/L	1				EPA:300.0	GELC	highest value, lab error
C2	33	39	03/28/00	0.6	2.3	0.7	14	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02659	1.7	10/07/09		F	CS	METALS	Antimony	Sb	0.629	0.90	LANL Avl BG LVL	0.5	1.3	0.5	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C2	7	8	01/24/07	0.169	0.169	0.169	1	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	10/13/09		F	CS	GENINORG	Perchlorate	ClO4	0.169	1.00	LANL Avl BG LVL	0.05	3.4	0.05	ug/L	1	J	J	J_LAB	SW-846:6850	GELC	unusual value
C2	13	14	04/07/04	0.18	2.73	0.33	12	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	10/13/09		F	CS	METALS	Uranium	U	2.73	8.27	LANL Avl BG LVL	1.03	2.7	0.05	ug/L	1				SW-846:6020	GELC	Highest value, UF was 0.99 ug/L Highest turbidity,76 NTU
C2	3	3	10/22/08	2.04	2.04	2.04	1	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	CDV-5.0 SPRING	0	10/19/09		F	CS	METALS	Manganese	Mn	2.04	1.00	LANL Int BG LVL	2	1.0	2	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C2	11	12	04/13/05	0.11	0.273	0.141	10	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	10/19/09		F	CS	GENINORG	Fluoride	F(-1)	0.273	1.94	LANL Int BG LVL	0.23	1.2	0.033	mg/L	1				EPA:300.0	GELC	highest value, lab error
C2	10	10	12/04/00	1	1.18	1.09	2	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	1192.4	10/19/09		F	CS	METALS	Cobalt	Co	1.18	1.08	LANL Int BG LVL	0.5	2.4	1	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C2	10	14	06/01/05	0.082	0.327	0.109	13	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	10/14/09	FD	F	CS	GENINORG	Fluoride	F(-1)	0.324	2.97	LANL Int BG LVL	0.23	1.4	0.033	mg/L	1				EPA:300.0	GELC	highest value, lab error
C2	10	14	06/01/05	0.082	0.327	0.109	13	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	10/14/09		F	CS	GENINORG	Fluoride	F(-1)	0.327	3.00	LANL Int BG LVL	0.23	1.4	0.033	mg/L	1				EPA:300.0	GELC	highest value, lab error
C2	8	12	12/15/05	2.57	4.4	3.49	2	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	10/08/09	FD	F	CS	METALS	Arsenic	As	4.4	1.26	LANL Int BG LVL	4.32	1.0	1.5	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C2	16	18	01/06/04	0.04	0.145	0.093	2	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	CdV-R-15-3	1254.4	10/07/09		F	CS	GENINORG	Ammonia as Nitrogen	NH3-N	0.145	1.56	LANL Reg BG LVL	0.05	2.9	0.016	mg/L	1		J	I4a	EPA:350.1	GELC	
C2	18	21	01/30/02	5.09	318	103	21	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	CdV-R-37-2	1550.6	10/14/09		F	CS	METALS	Manganese	Mn	5.09	0.05	LANL Reg BG LVL	2.94	1.7	2	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C2	10	13	09/25/00	0.438	0.615	0.519	13	White Rock Canyon and Rio Grande	Regional Spring	Spring 1	0	09/28/09		F	CS	GENINORG	Fluoride	F(-1)	0.615	1.18	LANL Reg BG LVL	0.57	1.1	0.033	mg/L	1				EPA:300.0	GELC	highest value, lab error
C2	5	5	09/26/05	0.086	0.086	0.086	1	White Rock Canyon and Rio Grande	Regional Spring	Spring 1	0	09/28/09		F	CS	METALS	Mercury	Hg	0.086	1.00	LANL Reg BG LVL	0.07	1.2	0.066	ug/L	1	J	J	J_LAB	EPA:245.2	GELC	not found in UF sample

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Port 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	Concat Flag Code	Concat Reason Code	Anyl Meth Code	Lab Code	Comments
C2	12	14	09/25/00	0.472	0.662	0.541	14	White Rock Canyon and Rio Grande	Regional Spring	Sandia Spring	0	09/23/09		F	CS	GENINORG	Fluoride	F(-1)	0.644	1.19	LANL Reg BG LVL	0.57	1.1	0.033	mg/L	1		J-	I6a	EPA:300.0	GELC	
C2	12	14	09/25/00	2.4	4.35	2.55	14	White Rock Canyon and Rio Grande	Regional Spring	Sandia Spring	0	09/23/09		F	CS	GENINORG	Potassium	K	2.65	1.04	LANL Reg BG LVL	2.63	1.0	0.05	mg/L	1				SW-846:6010B	GELC	
C3	3	4	10/11/06	1.9	5.91	3.91	2	Sandia Canyon	Alluvial	SCA-5	55	11/04/09		F	CS	METALS	Arsenic	As	5.91	1.51	EPA MCL	10	1.2	1.5	ug/L	1				SW-846:6020	GELC	2 results, rising concentrations
C3	28	30	03/23/00	174	11400	1500	29	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	10/13/09		F	CS	METALS	Aluminum	Al	10900	7.27	NM GW STD	5000	4.4	68	ug/L	1	N	J+	I6b	SW-846:6010B	GELC	highest turbidity, 76 NTU
C5	28	32	10/24/01	1.22	2.97	1.99	32	Pueblo Canyon (includes Acid Canyon)	Water Supply	O-1	1017	08/12/09		UF	CS	GENINORG	Perchlorate	ClO4	1.34	0.67	LANL Reg BG LVL	0.05	13.4	0.1	ug/L	2				SW-846:6850	GELC	
C5	26	28	10/24/01	0.354	0.55	0.38	27	Upper Los Alamos Canyon (includes DP Canyon)	Water Supply	O-4	1115	08/11/09		UF	CS	GENINORG	Perchlorate	ClO4	0.364	0.96	LANL Reg BG LVL	0.05	3.6	0.05	ug/L	1				SW-846:6850	GELC	
C5	4	4	02/20/09	0.404	0.611	0.566	4	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	GENINORG	Bromide	Br(-1)	0.404	0.71	LANL Avl BG LVL	0.07	2.9	0.066	mg/L	1				EPA:300.0	GELC	
C5	4	4	02/20/09	0.536	0.706	0.609	4	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	GENINORG	Fluoride	F(-1)	0.59	0.97	LANL Avl BG LVL	0.27	1.1	0.033	mg/L	1				EPA:300.0	GELC	
C5	4	4	02/20/09	12.1	15.8	14.9	4	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	GENINORG	Potassium	K	12.1	0.81	LANL Avl BG LVL	5.21	1.2	0.05	mg/L	1				SW-846:6010B	GELC	
C5	4	4	02/20/09	75.9	108	87.2	4	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	GENINORG	Sodium	Na	75.9	0.87	LANL Avl BG LVL	15.54	2.4	0.1	mg/L	1				SW-846:6010B	GELC	
C5	4	4	02/20/09	0.674	3.65	2.215	4	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P	1.43	0.65	LANL Avl BG LVL	0.05	14.3	0.015	mg/L	1		J-	I6a	EPA:365.4	GELC	
C5	4	4	02/20/09	396	494	458	4	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	GENINORG	Total Dissolved Solids	TDS	396	0.86	LANL Avl BG LVL	139	1.4	2.4	mg/L	1				EPA:160.1	GELC	
C5	4	5	02/20/09	2.69	18.5	7	4	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	METALS	Chromium	Cr	5.78	0.83	LANL Avl BG LVL	1	2.9	2.5	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C5	4	5	02/20/09	2.69	18.5	7	4	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	METALS	Chromium	Cr	2.69	0.38	LANL Avl BG LVL	1	1.4	2.5	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C5	4	4	02/20/09	559	792	697	4	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	METALS	Manganese	Mn	559	0.80	LANL Avl BG LVL	2	139.8	2	ug/L	1				SW-846:6010B	GELC	
C5	4	4	02/20/09	1.6	3.75	2.84	4	Sandia Canyon	Alluvial	SCA-1-DP	2.16	11/02/09		F	CS	METALS	Vanadium	V	2.01	0.71	LANL Avl BG LVL	1	1.0	1	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C5	10	15	08/29/07	26.2	62.3	38.3	15	Sandia Canyon	Regional	R-35b	825.4	11/03/09		F	CS	METALS	Zinc	Zn	26.2	0.68	LANL Reg BG LVL	3.89	3.4	3.3	ug/L	1				SW-846:6010B	GELC	
C5	10	11	10/12/06	7.9	37.6	11	11	Sandia Canyon	Regional	R-10	874	09/23/09		F	CS	METALS	Zinc	Zn	37.6	3.42	LANL Reg BG LVL	3.89	4.8	3.3	ug/L	1				SW-846:6010B	GELC	highest value
C5	12	12	06/29/06	6.6	48.7	10.1	12	Sandia Canyon	Regional	R-10	1042	09/23/09		F	CS	METALS	Zinc	Zn	48.7	4.82	LANL Reg BG LVL	3.89	6.3	3.3	ug/L	1				SW-846:6010B	GELC	highest value
C5	25	31	10/24/01	0.366	0.58	0.414	30	Sandia Canyon	Water Supply	PM-3	956	08/11/09		UF	CS	GENINORG	Perchlorate	ClO4	0.389	0.94	LANL Reg BG LVL	0.05	3.9	0.05	ug/L	1				SW-846:6850	GELC	
C5	13	13	11/28/01	0.295	0.361	0.337	13	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Water Supply	PM-4	1260	08/11/09		UF	CS	GENINORG	Perchlorate	ClO4	0.295	0.88	LANL Reg BG LVL	0.05	3.0	0.05	ug/L	1				SW-846:6850	GELC	
C5	33	39	03/28/00	4580	8440	6400	39	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	CDV-16-02659	1.7	10/07/09		F	CS	METALS	Barium	Ba	5870	0.92	LANL Avl BG LVL	68.57	42.8	1	ug/L	1				SW-846:6010B	GELC	
C5	23	24	03/23/00	128	347	238	20	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	10/13/09		F	CS	METALS	Boron	B	128	0.54	LANL Avl BG LVL	51.89	1.2	15	ug/L	1				SW-846:6010B	GELC	
C5	28	30	03/23/00	113	300	140	29	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	10/13/09		F	CS	METALS	Barium	Ba	176	1.26	LANL Avl BG LVL	68.57	1.3	1	ug/L	1				SW-846:6010B	GELC	
C5	28	30	03/23/00	11.7	3340	148.5	30	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	10/13/09		F	CS	METALS	Manganese	Mn	96.6	0.65	LANL Avl BG LVL	2	24.2	2	ug/L	1				SW-846:6010B	GELC	
C5	28	30	03/23/00	2.7	13.9	4.5	22	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	10/13/09		F	CS	METALS	Vanadium	V	9.37	2.08	LANL Avl BG LVL	1	4.7	1	ug/L	1				SW-846:6010B	GELC	
C5	3	3	10/22/08	0.391	0.448	0.414	3	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	CDV-5.0 SPRING	0	10/19/09		F	CS	GENINORG	Perchlorate	ClO4	0.391	0.94	LANL Int BG LVL	0.05	3.9	0.05	ug/L	1				SW-846:6850	GELC	
C5	7	8	01/30/07	0.093	0.234	0.119	6	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	10/16/09		F	CS	GENINORG	Bromide	Br(-1)	0.134	1.13	LANL Int BG LVL	0.03	2.2	0.066	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	
C5	7	8	01/30/07	19.2	32.4	23.3	8	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	10/16/09		F	CS	GENINORG	Chloride	Cl(-1)	22.2	0.95	LANL Int BG LVL	7.78	1.4	0.13	mg/L	2				EPA:300.0	GELC	
C5	7	8	01/30/07	0.459	0.694	0.552	8	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	10/16/09		F	CS	GENINORG	Perchlorate	ClO4	0.638	1.16	LANL Int BG LVL	0.05	6.4	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	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	Concat Flag Code	Concat Reason Code	Anyl Meth Code	Lab Code	Comments
C5	47	50	01/10/00	17	50.2	35	50	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	10/16/09		F	CS	GENINORG	Sodium	Na	32.4	0.93	LANL Int BG LVL	12.19	1.3	0.1	mg/L	1				SW-846:6010B	GELC	
C5	43	46	01/10/00	570	2840	2000	46	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	10/16/09		F	CS	METALS	Boron	B	1380	0.69	LANL Int BG LVL	15.12	45.6	15	ug/L	1				SW-846:6010B	GELC	
C5	47	50	01/10/00	122	243	179	43	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	10/16/09		F	CS	METALS	Barium	Ba	166	0.93	LANL Int BG LVL	71.83	1.2	1	ug/L	1				SW-846:6010B	GELC	
C5	13	15	03/29/04	0.31	2.62	0.95	15	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	10/16/09		F	CS	METALS	Uranium	U	2.53	2.66	LANL Int BG LVL	0.72	1.8	0.05	ug/L	1				SW-846:6020	GELC	two consecutive times at this level
C5	7	7	01/30/07	0.192	0.345	0.208	7	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Water Canyon Gallery	0	10/19/09		F	CS	GENINORG	Perchlorate	ClO4	0.199	0.96	LANL Int BG LVL	0.05	2.0	0.05	ug/L	1	J	J	J_LAB	SW-846:6850	GELC	
C5	7	8	02/01/07	0.204	0.246	0.232	8	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	10/19/09		F	CS	GENINORG	Perchlorate	ClO4	0.225	0.97	LANL Int BG LVL	0.05	2.3	0.05	ug/L	1				SW-846:6850	GELC	
C5	10	10	12/04/00	2.9	20.1	7.1	8	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	1192.4	10/19/09		F	CS	METALS	Zinc	Zn	20.1	2.83	LANL Int BG LVL	2	5.0	3.3	ug/L	1				SW-846:6010B	GELC	highest result
C5	6	9	05/21/07	0.449	0.589	0.512	9	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	10/14/09		F	CS	GENINORG	Perchlorate	ClO4	0.565	1.10	LANL Int BG LVL	0.05	5.7	0.05	ug/L	1				SW-846:6850	GELC	highest result
C5	6	9	05/21/07	0.449	0.589	0.512	9	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	10/14/09	FD	F	CS	GENINORG	Perchlorate	ClO4	0.589	1.15	LANL Int BG LVL	0.05	5.9	0.05	ug/L	1				SW-846:6850	GELC	highest result
C5	10	14	06/01/05	51	65.4	59.1	14	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	10/14/09		F	CS	METALS	Boron	B	51.9	0.88	LANL Int BG LVL	15.12	1.7	15	ug/L	1				SW-846:6010B	GELC	
C5	10	14	06/01/05	51	65.4	59.1	14	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	10/14/09	FD	F	CS	METALS	Boron	B	51	0.86	LANL Int BG LVL	15.12	1.7	15	ug/L	1				SW-846:6010B	GELC	
C5	10	14	06/01/05	3.2	7.4	4.6	14	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	10/14/09		F	CS	METALS	Nickel	Ni	4.41	0.96	LANL Int BG LVL	1	2.2	0.5	ug/L	1				SW-846:6020	GELC	
C5	10	14	06/01/05	3.2	7.4	4.6	14	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	10/14/09	FD	F	CS	METALS	Nickel	Ni	4.65	1.01	LANL Int BG LVL	1	2.3	0.5	ug/L	1				SW-846:6020	GELC	
C5	10	14	06/01/05	5	25.5	7.8	12	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	10/14/09	FD	F	CS	METALS	Zinc	Zn	6.54	0.84	LANL Int BG LVL	2	1.6	3.3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C5	10	14	06/01/05	5	25.5	7.8	12	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-1(i)	624	10/14/09		F	CS	METALS	Zinc	Zn	15.9	2.04	LANL Int BG LVL	2	4.0	3.3	ug/L	1				SW-846:6010B	GELC	
C5	5	9	02/05/07	0.275	0.303	0.291	9	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	10/08/09		F	CS	GENINORG	Perchlorate	ClO4	0.277	0.95	LANL Int BG LVL	0.05	2.8	0.05	ug/L	1				SW-846:6850	GELC	
C5	5	9	02/05/07	0.275	0.303	0.291	9	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	10/08/09	FD	F	CS	GENINORG	Perchlorate	ClO4	0.294	1.01	LANL Int BG LVL	0.05	2.9	0.05	ug/L	1				SW-846:6850	GELC	
C5	8	12	12/15/05	5.6	17	12.1	9	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	10/08/09	FD	F	CS	METALS	Zinc	Zn	11.1	0.92	LANL Int BG LVL	2	2.8	3.3	ug/L	1				SW-846:6010B	GELC	
C5	8	12	12/15/05	5.6	17	12.1	9	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CdV-16-2(i)r	850	10/08/09		F	CS	METALS	Zinc	Zn	12.4	1.02	LANL Int BG LVL	2	3.1	3.3	ug/L	1				SW-846:6010B	GELC	
C5	7	7	08/24/05	5.4	10.9	9.9	7	Ancho Canyon	Regional	Test Well DT-5A	1172	10/28/09		F	CS	METALS	Manganese	Mn	10.3	1.04	LANL Reg BG LVL	2.94	1.8	2	ug/L	1				SW-846:6010B	GELC	
C5	7	7	08/24/05	165	228	175	7	Ancho Canyon	Regional	Test Well DT-5A	1172	10/28/09		F	CS	METALS	Zinc	Zn	165	0.94	LANL Reg BG LVL	3.89	21.2	3.3	ug/L	1				SW-846:6010B	GELC	
C5	7	11	07/20/05	88.2	113	100	11	Ancho Canyon	Regional	Test Well DT-9	1040	10/28/09		F	CS	METALS	Zinc	Zn	103	1.03	LANL Reg BG LVL	3.89	13.2	3.3	ug/L	1				SW-846:6010B	GELC	
C5	7	8	07/19/05	65.1	112	76.5	8	Ancho Canyon	Regional	Test Well DT-10	1080	10/22/09		F	CS	METALS	Zinc	Zn	78.7	1.03	LANL Reg BG LVL	3.89	10.1	3.3	ug/L	1				SW-846:6010B	GELC	
C5	4	4	09/18/06	0.586	1.05	0.884	4	White Rock Canyon and Rio Grande	Regional Spring	Spring 1	0	09/28/09		UF	CS	GENINORG	Total Organic Carbon	TOC	0.885	1.00	LANL Reg BG LVL	0.33	1.3	0.33	mg/L	1	J	J	J_LAB	SW-846:9060	GELC	
C5	6	7	09/18/06	1.41	2.39	2.22	7	White Rock Canyon and Rio Grande	Regional Spring	Spring 2	0	09/28/09		UF	CS	GENINORG	Total Organic Carbon	TOC	1.81	0.82	LANL Reg BG LVL	0.33	2.7	0.33	mg/L	1				SW-846:9060	GELC	
C6	43	46	01/10/00	570	2840	2000	46	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate Spring	Martin Spring	0	10/16/09		F	CS	METALS	Boron	B	1380	0.69	NM GW STD	750	3.7	15	ug/L	1				SW-846:6010B	GELC	
CA	28	30	03/23/00	174	11400	1500	29	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Alluvial	MSC-16-06295	1.5	10/13/09		F	CS	METALS	Aluminum	Al	10900	7.27	NM GW STD	5000	2.2	68	ug/L	1	N	J+	I6b	SW-846:6010B	GELC	highest turbidity, 76 NTU