

SUMMARY OF NEW LOS ALAMOS NATIONAL LABORATORY GROUNDWATER DATA LOADED IN JULY 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 7-11 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 the first sampling event included in the statistics, the numbers of sampling events and samples analyzed, the number of detections, and the minimum, maximum, and median concentration for detections. This information indicates whether the new result is consistent with the range of earlier data.

The subsequent columns contain location and sampling information:

Hdr 1—canyon where monitoring location is found

Zone—groundwater zone sampled by monitoring location (such as alluvial spring)

Location—monitoring location name

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 7-11 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	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Iom	Dilution Factor	Lab Qual Code	Concat Flag Code	Concat Reason Code	Anyl Meth Code	Lab Code	Comment
C1	18	20	06/09/05	5.28	5.28	5.28	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-5	689	05/26/11		UF	CS	SVOA	Diethylphthalate	84-66-2	5.28	1.00	EPA TAP SCRN LVL N	29000	0.0	2	ug/L	1	J	J	J_LAB	SW-846:8270C	GELC	
C1	19	27	09/12/05	1.95	1.95	1.95	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-1	1031.1	06/03/11		UF	CS	VOA	Acrolein	107-02-8	1.95	1.00	EPA TAP SCRN LVL N	0.042	46.4	1.3	ug/L	1	HJ	J-	V9	SW-846:8260B	GELC	first detect of 27 samples, holding time exceeded
C1	1	2	05/20/11	0.36	0.36	0.36	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11		UF	CS	SVOA	Dibenz(a,h)anthracene	53-70-3	0.36	1.00	EPA TAP SCRN LVL C-5	0.029	12.4	0.2	ug/L	1	J	J	SV7c	SW-846:8270C	GELC	not found in field duplicate, calibration outside method limits
C1	1	2	05/20/11	14.3	14.3	14.5	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11		UF	CS	VOA	Toluene	108-88-3	14.6	1.01	NM GW STD	750	0.0	0.25	ug/L	1				SW-846:8260B	GELC	
C1	1	2	05/20/11	14.3	14.6	14.5	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	FD	UF	CS	VOA	Toluene	108-88-3	14.3	0.99	NM GW STD	750	0.0	0.25	ug/L	1				SW-846:8260B	GELC	
C1	1	2	05/24/11	10.1	15.8	13	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220	05/24/11	FD	UF	CS	SVOA	Diethylphthalate	84-66-2	10.1	0.78	EPA TAP SCRN LVL N	29000	0.0	2	ug/L	1				SW-846:8270C	GELC	
C1	1	2	05/24/11	10.1	15.8	13	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220	05/24/11		UF	CS	SVOA	Diethylphthalate	84-66-2	15.8	1.22	EPA TAP SCRN LVL N	29000	0.0	2	ug/L	1				SW-846:8270C	GELC	
C1	1	2	05/24/11	0.38	0.39	0.39	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220	05/24/11	FD	UF	CS	VOA	Toluene	108-88-3	0.39	1.00	NM GW STD	750	0.0	0.25	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC	
C1	1	2	05/24/11	0.38	0.39	0.39	2	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1220	05/24/11		UF	CS	VOA	Toluene	108-88-3	0.38	0.97	NM GW STD	750	0.0	0.25	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC	
C1	14	17	04/13/05	0.51	2.48	1.75	3	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11		UF	CS	VOA	Toluene	108-88-3	0.51	0.29	NM GW STD	750	0.0	0.25	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC	
C1	14	17	04/13/05	0.51	2.48	1.75	3	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11		UF	CS	VOA	Toluene	108-88-3	2.48	1.42	NM GW STD	750	0.0	0.25	ug/L	1				SW-846:8260B	GELC	
C1	14	17	04/13/05	0.51	2.48	1.75	3	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11		UF	CS	VOA	Toluene	108-88-3	1.75	1.00	NM GW STD	750	0.0	0.25	ug/L	1				SW-846:8260B	GELC	
C2	10	12	11/10/08	17.8	40.3	32.9	12	Sandia Canyon	Regional	R-43	969.1	05/18/11	F	CS	METALS	Boron	B	40.3	1.22	LANL Reg BG LVL	38.77	1.0	15	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC		
C2	10	10	08/20/08	3	6.98	5.28	9	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-14	1200.6	05/18/11	F	CS	METALS	Chromium	Cr	6.98	1.32	LANL Reg BG LVL	5.75	1.2	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC		
C2	24	30	05/19/05	3.16	3.16	3.16	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-1	1031.1	06/03/11	F	CS	METALS	Copper	Cu	3.16	1.00	LANL Reg BG LVL	3	1.1	3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC		
C2	24	30	05/19/05	2.81	4.2	2.98	3	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-1	1031.1	06/03/11	F	CS	METALS	Manganese	Mn	2.98	1.00	LANL Reg BG LVL	2.94	1.0	2	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC		
C2	27	32	02/24/00	0.056	0.114	0.073	6	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-15	958.6	05/31/11	F	CS	GENINORG	Bromide	Br(-1)	0.114	1.56	LANL Reg BG LVL	0.1	1.1	0.066	mg/L	1	J	J	J_LAB	EPA:300.0	GELC		
C2	12	13	10/09/08	2.17	2.64	2.29	13	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	05/31/11	F	CS	GENINORG	Potassium	K	2.64	1.15	LANL Reg BG LVL	2.63	1.0	0.05	mg/L	1	E	J	I4a	SW-846:6010B	GELC		
C2	26	29	05/20/05	3.28	3.28	3.28	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-28	934.3	06/01/11	F	CS	METALS	Copper	Cu	3.28	1.00	LANL Reg BG LVL	3	1.1	3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC		
C2	1	1	05/20/11	3.59	3.59	3.59	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	F	CS	GENINORG	Chloride	Cl(-1)	3.59	1.00	LANL Reg BG LVL	3.57	1.0	0.066	mg/L	1				EPA:300.0	GELC		
C2	1	1	05/20/11	6.54	6.54	6.54	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	F	CS	GENINORG	Perchlorate	ClO4	6.54	1.00	LANL Reg BG LVL	0.46	14.2	0.5	ug/L	10				SW-846:6850	GELC	similar to R-15	
C2	1	1	05/20/11	1.32	1.32	1.32	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	F	CS	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.32	1.00	LANL Reg BG LVL	0.89	1.5	0.05	mg/L	5				EPA:353.2	GELC	half of R-15 result	
C2	1	1	05/20/11	0.253	0.253	0.253	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.253	1.00	LANL Reg BG LVL	0.16	1.6	0.015	mg/L	1		J	I4a	EPA:365.4	GELC		
C2	1	1	05/20/11	0.77	0.77	0.77	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	UF	CS	GENINORG	Total Organic Carbon	TOC	0.77	1.00	LANL Reg BG LVL	0.33	2.3	0.33	mg/L	1	J	J	J_LAB	SW-846:9060	GELC		
C2	1	1	05/20/11	16.8	16.8	16.8	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	F	CS	METALS	Chromium	Cr	16.8	1.00	LANL Reg BG LVL	5.75	2.9	2	ug/L	1				SW-846:6020	GELC	about 3x background	
C2	1	1	05/20/11	35.3	35.3	35.3	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	F	CS																		

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	Any 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	Any Meth Code	Lab Code	Comment
C2	9	12	04/13/05	0.039	0.616	0.111	5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11	F	CS	GENINORG	Total Kjeldahl Nitrogen	TKN	0.111	1.00	LANL Int BG LVL	0.04	2.8	0.035	mg/L	1			EPA:351.2	GELC			
C2	9	12	04/13/05	0.039	0.616	0.111	5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11	F	CS	GENINORG	Total Kjeldahl Nitrogen	TKN	0.151	1.36	LANL Int BG LVL	0.04	3.8	0.035	mg/L	1			EPA:351.2	GELC			
C2	14	17	04/13/05	1.5	5.9	5.4	5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11	F	CS	METALS	Manganese	Mn	5.41	1.00	LANL Int BG LVL	2	2.7	2	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC		
C2	14	17	04/13/05	1.5	5.9	5.4	5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11	F	CS	METALS	Manganese	Mn	5.78	1.07	LANL Int BG LVL	2	2.9	2	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC		
C2	14	17	04/13/05	1.5	5.9	5.4	5	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11	F	CS	METALS	Manganese	Mn	5.9	1.09	LANL Int BG LVL	2	3.0	2	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC		
C2	13	13	12/04/00	0.24	2.88	1.88	3	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-25	1192.4	06/15/11	F	CS	METALS	Chromium	Cr	2.88	1.53	LANL Int BG LVL	1	2.9	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC		
C2	26	31	09/16/02	15.3	153	48.1	8	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	CdV-R-15-3	1254.4	05/11/11	F	CS	METALS	Aluminum	Al	69.6	1.45	LANL Reg BG LVL	68	1.0	68	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC		
C2	26	31	09/16/02	1.13	1.13	1.13	1	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Regional	CdV-R-15-3	1254.4	05/11/11	F	CS	METALS	Antimony	Sb	1.13	1.00	LANL Reg BG LVL	1	1.1	1	ug/L	1	J	J	J_LAB	SW-846:6020	GELC		
C3	19	27	09/12/05	1.95	1.95	1.95	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-1	1031.1	06/03/11	UF	CS	VOA	Acrolein	107-02-8	1.95	1.00	EPA TAP SCRN LVL N	0.042	92.9	1.3	ug/L	1	HJ	J-	V9	SW-846:8260B	GELC	first detect of 27 samples, holding time exceeded	
C3	1	1	05/20/11	6.54	6.54	6.54	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	F	CS	GENINORG	Perchlorate	CIO4	6.54	1.00	NM GW CONS	4	3.3	0.5	ug/L	10				SW-846:6850	GELC	similar to R-15	
C3	1	1	05/20/11	113	113	113	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	F	CS	METALS	Manganese	Mn	113	1.00	NM GW STD	200	1.1	2	ug/L	1				SW-846:6010B	GELC		
C3	1	2	05/20/11	0.36	0.36	0.36	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	UF	CS	SVOA	Diben(a,h)anthracene	53-70-3	0.36	1.00	EPA TAP SCRN LVL C-5	0.029	24.8	0.2	ug/L	1	J	J	SV7c	SW-846:8270C	GELC	not found in field duplicate, calibration outside method limits	
C4	1	1	05/20/11	6.54	6.54	6.54	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-61	1125	05/20/11	F	CS	GENINORG	Perchlorate	CIO4	6.54	1.00	NM GW CONS	4	3.3	0.5	ug/L	10				SW-846:6850	GELC	similar to R-15	
C5	8	8	02/20/09	0.229	0.611	0.402	8	Sandia Canyon	Alluvial	SCA-1-DP	2.16	05/23/11	F	CS	GENINORG	Bromide	Br(-1)	0.335	0.83	LANL Avl BG LVL	0.07	2.4	0.066	mg/L	1				EPA:300.0	GELC		
C5	8	8	02/20/09	12.1	30.1	16.1	8	Sandia Canyon	Alluvial	SCA-1-DP	2.16	05/23/11	F	CS	GENINORG	Potassium	K	16.7	1.04	LANL Avl BG LVL	5.21	1.6	0.05	mg/L	1				SW-846:6010B	GELC		
C5	8	8	02/20/09	75.4	197	90.1	8	Sandia Canyon	Alluvial	SCA-1-DP	2.16	05/23/11	F	CS	GENINORG	Sodium	Na	75.4	0.84	LANL Avl BG LVL	15.54	2.4	0.1	mg/L	1				SW-846:6010B	GELC		
C5	6	6	02/20/09	0.674	3.95	3.12	6	Sandia Canyon	Alluvial	SCA-1-DP	2.16	05/23/11	F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P	3.24	1.04	LANL Avl BG LVL	0.05	32.4	0.15	mg/L	10				EPA:365.4	GELC		
C5	8	8	02/20/09	396	798	448	8	Sandia Canyon	Alluvial	SCA-1-DP	2.16	05/23/11	F	CS	GENINORG	Total Dissolved Solids	TDS	421	0.94	LANL Avl BG LVL	139	1.5	2.4	mg/L	1				EPA:160.1	GELC		
C5	8	10	02/20/09	2.69	18.5	8.22	9	Sandia Canyon	Alluvial	SCA-1-DP	2.16	05/23/11	F	CS	METALS	Chromium	Cr	12.7	1.55	LANL Avl BG LVL	1	6.4	2	ug/L	1				SW-846:6020	GELC		
C5	8	8	02/20/09	410	1010	697	8	Sandia Canyon	Alluvial	SCA-1-DP	2.16	05/23/11	F	CS	METALS	Manganese	Mn	472	0.68	LANL Avl BG LVL	2	118.0	2	ug/L	1				SW-846:6010B	GELC		
C5	19	20	01/11/07	0.917	1.53	1.175	20	Sandia Canyon	Intermediate	SCI-1	358.4	05/24/11	F	CS	GENINORG	Bromide	Br(-1)	0.926	0.79	LANL Int BG LVL	0.03	15.4	0.066	mg/L	1				EPA:300.0	GELC		
C5	19	22	01/11/07	66.4	87.6	76.1	21	Sandia Canyon	Intermediate	SCI-1	358.4	05/24/11	F	CS	GENINORG	Calcium	Ca	68.1	0.89	LANL Int BG LVL	17.31	2.0	0.05	mg/L	1				SW-846:6010B	GELC		
C5	19	20	01/11/07	80.5	98.7	88.7	20	Sandia Canyon	Intermediate	SCI-1	358.4	05/24/11	F	CS	GENINORG	Chloride	Cl(-1)	92.2	1.04	LANL Int BG LVL	7.78	5.9	0.66	mg/L	10				EPA:300.0	GELC		
C5	19	20	01/11/07	0.868	1.58	1.11	20	Sandia Canyon	Intermediate	SCI-1	358.4	05/24/11	F	CS	GENINORG	Perchlorate	CIO4	0.902	0.81	LANL Int BG LVL	0.05	9.0	0.05	ug/L	1				SW-846:6850	GELC		
C5	19	22	01/11/07	50.7	65.1	54.2	21	Sandia Canyon	Intermediate	SCI-1	358.4	05/24/11	F	CS	GENINORG	Sodium	Na	51.7	0.95	LANL Int BG LVL	12.19	2.1	0.1	mg/L	1				SW-846:6010B	GELC		
C5	19	20	01/11/07	0.404	1.45	0.842	19	Sandia Canyon	Intermediate	SCI-1	358.4	05/24/11	F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.735	0.87	LANL Int BG LVL	0.08	4.6	0.015	mg/L	1				EPA:365.4	GELC		
C5	19	20	01/11/07	84.7	112	102.5	20	Sandia Canyon	Intermediate	SCI-1	358.4	05/24/11	F	CS	GENINORG	Sulfate	SO4(-2)	84.9	0.83	LANL Int BG LVL	40.03	1.1	1									

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	Any 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	Any Meth Code	Lab Code	Comment
C5	51	60	02/24/00	0.78	2.13	1.31	59	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Alluvial	MCO-7	39	05/18/11	F	CS	GENINORG	Fluoride	F(-1)	0.78	0.60	LANL Avl BG LVL	0.27	1.4	0.033	mg/L	1			EPA:300.0	GELC			
C5	25	27	08/07/01	0.04	0.416	0.287	27	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Alluvial	MCO-7	39	05/18/11	F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.326	1.14	LANL Avl BG LVL	0.05	3.3	0.015	mg/L	1	J	I4a	EPA:365.4	GELC			
C5	47	62	10/30/00	220	366	307	62	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Alluvial	MCO-7	39	05/18/11	F	CS	GENINORG	Total Dissolved Solids	TDS	321	1.05	LANL Avl BG LVL	139	1.2	2.4	mg/L	1			EPA:160.1	GELC			
C5	23	25	06/09/05	0.083	0.157	0.13	19	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-5	689	05/26/11	F	CS	GENINORG	Bromide	Br(-1)	0.132	1.02	LANL Int BG LVL	0.03	2.2	0.066	mg/L	1	J	J_LAB	EPA:300.0	GELC			
C5	23	25	06/09/05	68.7	132	93.7	25	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-5	689	05/26/11	F	CS	GENINORG	Perchlorate	ClO4	87.9	0.94	LANL Int BG LVL	0.05	879.0	5	ug/L	100			SW-846:6850	GELC			
C5	23	31	06/09/05	1.1	6.65	3.5	25	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-5	689	05/26/11	F	CS	METALS	Chromium	Cr	4.03	1.15	LANL Int BG LVL	1	2.0	2	ug/L	1	J	J_LAB	SW-846:6020	GELC			
C5	23	35	06/15/05	0.212	0.674	0.477	33	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	GENINORG	Bromide	Br(-1)	0.674	1.41	LANL Int BG LVL	0.03	11.2	0.066	mg/L	1			EPA:300.0	GELC			
C5	23	35	06/15/05	42.8	75.5	59.9	35	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	GENINORG	Calcium	Ca	73	1.22	LANL Int BG LVL	17.31	2.1	0.05	mg/L	1			SW-846:6010B	GELC			
C5	23	35	06/15/05	21.2	62.9	34.8	35	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	GENINORG	Chloride	Cl(-1)	62.9	1.81	LANL Int BG LVL	7.78	4.0	0.33	mg/L	5	J+	I6b	EPA:300.0	GELC			
C5	23	35	06/15/05	71.7	246	131	35	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	GENINORG	Perchlorate	ClO4	72.2	0.55	LANL Int BG LVL	0.05	722.0	5	ug/L	100			SW-846:6850	GELC			
C5	23	35	06/15/05	0.412	0.635	0.536	32	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	GENINORG	Fluoride	F(-1)	0.562	1.05	LANL Int BG LVL	0.23	1.2	0.033	mg/L	1			EPA:300.0	GELC			
C5	23	35	06/15/05	8.49	15.7	12.3	35	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	GENINORG	Magnesium	Mg	14.6	1.19	LANL Int BG LVL	6.12	1.2	0.11	mg/L	1			SW-846:6010B	GELC			
C5	23	36	06/15/05	7.67	20.4	15.75	36	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	7.67	0.49	LANL Int BG LVL	2.41	1.6	0.1	mg/L	10			EPA:353.2	GELC			
C5	23	35	06/15/05	19.5	28.2	23	35	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	GENINORG	Sodium	Na	26.6	1.16	LANL Int BG LVL	12.19	1.1	0.1	mg/L	1			SW-846:6010B	GELC			
C5	23	43	06/15/05	298	497	374	43	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	GENINORG	Total Dissolved Solids	TDS	410	1.10	LANL Int BG LVL	127	1.6	2.4	mg/L	1			EPA:160.1	GELC			
C5	23	35	06/15/05	25.4	48.7	33.2	35	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	METALS	Boron	B	48.7	1.47	LANL Int BG LVL	15.12	1.6	15	ug/L	1	J	J_LAB	SW-846:6010B	GELC			
C5	23	38	06/15/05	29.4	65.5	44.6	38	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	METALS	Chromium	Cr	54.2	1.22	LANL Int BG LVL	1	27.1	2	ug/L	1			SW-846:6020	GELC			
C5	23	35	06/15/05	6.6	26.1	11.6	34	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	METALS	Copper	Cu	16.2	1.40	LANL Int BG LVL	5.32	1.5	3	ug/L	1			SW-846:6010B	GELC			
C5	23	35	06/15/05	2.9	34.4	7	35	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	METALS	Nickel	Ni	32.5	4.64	LANL Int BG LVL	1	16.3	0.5	ug/L	1			SW-846:6020	GELC			
C5	23	35	06/15/05	196	326	269	35	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	METALS	Strontium	Sr	318	1.18	LANL Int BG LVL	154.76	1.0	1	ug/L	1			SW-846:6010B	GELC			
C5	23	35	06/15/05	23.7	288	39.4	35	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-6	686	05/31/11	F	CS	METALS	Zinc	Zn	35.1	0.89	LANL Int BG LVL	2	8.8	3.3	ug/L	1			SW-846:6010B	GELC			
C5	11	12	03/11/09	1.09	7.67	2.2	12	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-46	1340	05/17/11	UF	CS	GENINORG	Total Organic Carbon	TOC	1.15	0.52	LANL Reg BG LVL	0.33	1.7	0.33	mg/L	1			SW-846:9060	GELC			
C5	9	10	03/11/09	2.41	5.29	3.78	6	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-46	1340	05/17/11	F	CS	METALS	Antimony	Sb	3.77	1.00	LANL Reg BG LVL	1	1.9	1	ug/L	1			SW-846:6020	GELC			
C5	24	30	05/19/05	0.64	12.9	3.25	28	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-1	1031.1	06/03/11	F	CS	METALS	Nickel	Ni	9.12	2.81	LANL Reg BG LVL	3.09	1.5	0.5	ug/L	1			SW-846:6020	GELC			
C5	23	28	05/25/05	5.34	8.06	6.61	28	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-15	958.6	05/31/11	F	CS	GENINORG	Perchlorate	ClO4	7.76	1.17	LANL Reg BG LVL	0.46	8.4	0.5	ug/L	10			SW-846:6850	GELC			
C5	27	32	02/24/00	1.89	3.31	2.24	32	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-15	958.6	05/31/11	F	CS	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.77	1.24	LANL Reg BG LVL	0.89	1.6	0.05	mg/L	5			EPA:353.2	GELC			
C5	27	35	02/24/00	2.599999905	18.2	8.755	34	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-15	958.6	05/31/11	F	CS	METALS	Chromium	Cr	11.6	1.32	LANL Reg BG LVL	5.75	1.0	2	ug/L	1</							

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	Anly 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	Comment
C5	26	29	05/20/05	0.113	0.265	0.203	26	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-28	934.3	06/01/11	F	CS	GENINORG	Bromide	Br(-1)	0.242	1.19	LANL Reg BG LVL	0.1	1.2	0.066	mg/L	1			EPA:300.0	GELC			
C5	26	29	05/20/05	21.1	34.3	28.7	29	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-28	934.3	06/01/11	F	CS	GENINORG	Chloride	Cl(-1)	34.3	1.20	LANL Reg BG LVL	3.57	4.8	0.33	mg/L	5			EPA:300.0	GELC			
C5	24	26	09/01/05	0.802	1.13	0.972	26	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-28	934.3	06/01/11	F	CS	GENINORG	Perchlorate	ClO4	0.996	1.02	LANL Reg BG LVL	0.46	1.1	0.05	ug/L	1			SW-846:6850	GELC			
C5	26	29	05/20/05	8.68	11.7	10.3	29	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-28	934.3	06/01/11	F	CS	GENINORG	Magnesium	Mg	11.2	1.09	LANL Reg BG LVL	4.15	1.4	0.11	mg/L	1			SW-846:6010B	GELC			
C5	24	26	05/20/05	3.1	5.39	4.25	26	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-28	934.3	06/01/11	F	CS	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.82	0.90	LANL Reg BG LVL	0.89	2.2	0.05	mg/L	5			EPA:353.2	GELC			
C5	26	29	05/20/05	38.1	50.7	42.9	29	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-28	934.3	06/01/11	F	CS	GENINORG	Sulfate	SO4(-2)	50.7	1.18	LANL Reg BG LVL	7.2	3.5	0.5	mg/L	5			EPA:300.0	GELC			
C5	23	24	05/20/05	0.372	1.07	0.598	24	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-28	934.3	06/01/11	UF	CS	GENINORG	Total Organic Carbon	TOC	0.705	1.18	LANL Reg BG LVL	0.33	1.1	0.33	mg/L	1	J	J	J_LAB	SW-846:9060	GELC		
C5	27	32	05/20/05	310	472	388	31	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-28	934.3	06/01/11	F	CS	METALS	Chromium	Cr	344	0.89	LANL Reg BG LVL	5.75	29.9	2	ug/L	1			SW-846:6020	GELC			
C5	26	29	05/20/05	6.1	34	11.9	27	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-28	934.3	06/01/11	F	CS	METALS	Nickel	Ni	17.9	1.50	LANL Reg BG LVL	3.09	2.9	0.5	ug/L	1			SW-846:6020	GELC			
C5	10	14	02/28/09	8.4	21.4	15	14	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-45	880	05/20/11	F	CS	METALS	Chromium	Cr	17.6	1.17	LANL Reg BG LVL	5.75	1.5	2	ug/L	1			SW-846:6020	GELC			
C5	6	8	03/06/10	0.479	2.46	0.972	7	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	05/25/11	UF	CS	GENINORG	Total Organic Carbon	TOC	2.46	2.53	LANL Reg BG LVL	0.33	3.7	0.33	mg/L	1	J	I4a	SW-846:9060	GELC			
C5	6	10	03/06/10	49.8	81	68.4	10	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	05/25/11	FD	F	CS	METALS	Chromium	Cr	79	1.15	LANL Reg BG LVL	5.75	6.9	2	ug/L	1			SW-846:6020	GELC		
C5	6	10	03/06/10	49.8	81	68.4	10	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	05/25/11	F	CS	METALS	Chromium	Cr	81	1.18	LANL Reg BG LVL	5.75	7.0	2	ug/L	1			SW-846:6020	GELC	highest of six sample events		
C5	6	8	03/06/10	7.96	200	39.8	8	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	05/25/11	FD	F	CS	METALS	Zinc	Zn	26.5	0.67	LANL Reg BG LVL	3.89	3.4	3.3	ug/L	1			SW-846:6010B	GELC		
C5	6	8	03/06/10	7.96	200	39.8	8	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	05/25/11	F	CS	METALS	Zinc	Zn	28.2	0.71	LANL Reg BG LVL	3.89	3.6	3.3	ug/L	1			SW-846:6010B	GELC			
C5	10	14	02/17/09	7.34	14.2	11.95	14	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-44	895	05/19/11	F	CS	METALS	Chromium	Cr	14.2	1.19	LANL Reg BG LVL	5.75	1.2	2	ug/L	1			SW-846:6020	GELC			
C5	11	16	05/12/04	2.14	154	16.05	16	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-16	863.4	05/27/11	F	CS	METALS	Manganese	Mn	11.1	0.69	LANL Reg BG LVL	2.94	1.9	2	ug/L	1			SW-846:6010B	GELC			
C5	11	16	05/12/04	2.14	154	16.05	16	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-16	863.4	05/27/11	FD	F	CS	METALS	Manganese	Mn	10.1	0.63	LANL Reg BG LVL	2.94	1.7	2	ug/L	1			SW-846:6010B	GELC		
C5	10	14	03/19/04	3.74	40.4	10.7	14	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-16	1237	05/27/11	F	CS	METALS	Manganese	Mn	40.4	3.78	LANL Reg BG LVL	2.94	6.9	2	ug/L	1			SW-846:6010B	GELC			
C5	11	11	07/21/05	0.317	0.381	0.344	11	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-19	909.3	05/12/11	F	CS	GENINORG	Perchlorate	ClO4	0.339	0.99	LANL Int BG LVL	0.05	3.4	0.05	ug/L	1			SW-846:6850	GELC			
C5	16	17	09/22/00	0.409	0.849	0.566	17	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-19	909.3	05/12/11	F	CS	GENINORG	Fluoride	F(-1)	0.567	1.00	LANL Int BG LVL	0.23	1.2	0.033	mg/L	1			EPA:300.0	GELC			
C5	14	21	12/14/07	27.2	103	42.3	21	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-32	867.5	01/25/11	F	RE	METALS	Zinc	Zn	40.9	0.97	LANL Reg BG LVL	3.89	5.3	3.3	ug/L	1			SW-846:6010B	GELC			
C5	10	13	02/01/07	0.204	0.262	0.23	13	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11	F	CS	GENINORG	Perchlorate	ClO4	0.262	1.14	LANL Int BG LVL	0.05	2.6	0.05	ug/L	1			SW-846:6850	GELC			
C5	10	13	02/01/07	0.204	0.262	0.23	13	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11	F	CS	GENINORG	Perchlorate	ClO4	0.24	1.04	LANL Int BG LVL	0.05	2.4	0.05	ug/L	1			SW-846:6850	GELC			
C5	10	13	02/01/07	0.204	0.262	0.23	13	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	R-26	659.3	06/01/11	F	CS	GENINORG	Perchlorate	ClO4	0.23	1.00	LANL Int BG LVL	0.05	2.3	0.05	ug/L	1			SW-846:6850	GELC			
C6	6	10	03/06/10	49.8	81	68.4	10	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	05/25/11	FD	F	CS	METALS	Chromium	Cr	79	1.15	NM GW STD	50	3.2	2	ug/L	1			SW-846:6020	GELC		
C6	6	10	03/06/10	49.8	81	68.4	10	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	05/25/11	F	CS	METALS	Chromium	Cr	81	1.18	NM GW STD	50	3.2										