SUMMARY OF NEW LOS ALAMOS NATIONAL LABORATORY GROUNDWATER DATA LOADED IN APRIL 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 4-11 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 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 4-11 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Hdr 1	Zone	Location	Port Depth	Start Date	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	9	10	11/10/08	152	604	169	10	Sandia Canyon	Regional	R-43	969.1	02/22/11		F	CS	GENINORG	Total Dissolved Solids	TDS	604	3.57	LANL Reg BG LVL	191.68	3.2	9.5	mg/L	1				EPA:160.1	GELC	Previously all about 170 mg/L, usual EC of 190 uS/cm
C2	11	12	10/09/08	1.22	1.22	1.22	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		F	CS	METALS	Cobalt	Co	1.22	1.00	LANL Reg BG LVL	0.5	2.4	1	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C2	11	12	10/09/08	5.19	5.19	5.19	1	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		F	CS	METALS	Copper	Cu	5.19	1.00	LANL Reg BG LVL	3	1.7	3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C2	5	6	03/06/10	1.51	3.3	2.61	6	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	02/23/11	FD	F	CS	METALS	Nickel	Ni	3.15	1.21	LANL Reg BG LVL	3.09	1.0	0.5	ug/L	1				SW-846:6020	GELC	
C2	5	6	03/06/10	1.51	3.3	2.61	6	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	02/23/11		F	CS	METALS	Nickel	Ni	3.3	1.26	LANL Reg BG LVL	3.09	1.1	0.5	ug/L	1				SW-846:6020	GELC	
C2	19	26	07/03/06	0.026	0.104	0.027	4	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-13	958.3	02/18/11		F	CS	GENINORG	Ammonia as Nitrogen	NH3-N	0.104	3.85	LANL Reg BG LVL	0.05	2.1	0.016	mg/L	1		J-	I6a	EPA:350.1	GELC	
C2	2	2	08/31/10	0.803	1.03	0.917	2	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-16-4ip	815.6	03/07/11		F	CS	METALS	Nickel	Ni	1.03	1.12	LANL Int BG LVL	1	1.0	0.5	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C2	2	2	08/31/10	5.3	5.3	5.3	1	Water Canyon (includes Canyon del Valle, Potrillo, and Fence Canyons)	Intermediate	CDV-16-4ip	815.6	03/07/11		F	CS	METALS	Zinc	Zn	5.3	1.00	LANL Int BG LVL	2	2.7	3.3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C3	9	10	11/10/08	152	604	169	10	Sandia Canyon	Regional	R-43	969.1	02/22/11		F	CS	GENINORG	Total Dissolved Solids	TDS	604	3.57	NM GW STD	1000	1.2	9.5	mg/L	1				EPA:160.1	GELC	Previously all about 170 mg/L, usual EC of 190 uS/cm
C5	18	19	01/11/07	0.917	1.53	1.18	19	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	GENINORG	Bromide	Br(-1)	0.943	0.80	LANL Int BG LVL	0.03	15.7	0.066	mg/L	1				EPA:300.0	GELC	
C5	18	21	01/11/07	66.4	87.6	76.4	20	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	GENINORG	Calcium	Ca	66.4	0.87	LANL Int BG LVL	17.31	1.9	0.05	mg/L	1				SW-846:6010B	GELC	
C5	18	19	01/11/07	80.5	98.7	88.5	19	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	GENINORG	Chloride	Cl(-1)	91.9	1.04	LANL Int BG LVL	7.78	5.9	0.66	mg/L	10				EPA:300.0	GELC	
C5	18	19	01/11/07	0.868	1.58	1.17	19	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	GENINORG	Perchlorate	ClO4	0.936	0.80	LANL Int BG LVL	0.05	9.4	0.05	ug/L	1				SW-846:6850	GELC	
C5	18	21	01/11/07	50.7	65.1	54.2	20	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	GENINORG	Sodium	Na	52.4	0.97	LANL Int BG LVL	12.19	2.2	0.1	mg/L	1				SW-846:6010B	GELC	
C5	18	19	01/11/07	0.404	1.45	0.85	18	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.895	1.05	LANL Int BG LVL	0.08	5.6	0.015	mg/L	1				EPA:365.4	GELC	
C5	18	19	01/11/07	84.7	112	103	19	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	GENINORG	Sulfate	SO4(-2)	84.7	0.82	LANL Int BG LVL	40.03	1.1	1	mg/L	10				EPA:300.0	GELC	
C5	18	19	01/11/07	455	536	488	19	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	GENINORG	Total Dissolved Solids	TDS	456	0.93	LANL Int BG LVL	127	1.8	2.4	mg/L	1				EPA:160.1	GELC	
C5	18	21	01/11/07	79.8	98	88.3	19	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	METALS	Boron	B	88.3	1.00	LANL Int BG LVL	15.12	2.9	15	ug/L	1				SW-846:6010B	GELC	
C5	18	22	01/11/07	11	22.1	13.7	22	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	METALS	Chromium	Cr	12.7	0.93	LANL Int BG LVL	1	6.4	2	ug/L	1				SW-846:6020	GELC	
C5	18	20	01/11/07	43.9	97	71.7	20	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	METALS	Molybdenum	Mo	85.1	1.19	LANL Int BG LVL	2	21.3	0.17	ug/L	1				SW-846:6020	GELC	
C5	18	19	01/11/07	4.3	8.1	5.7	19	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	METALS	Nickel	Ni	5.61	0.98	LANL Int BG LVL	1	2.8	0.5	ug/L	1				SW-846:6020	GELC	
C5	18	19	01/11/07	1.7	3.05	2.5	19	Sandia Canyon	Intermediate	SCI-1	358.4	02/18/11		F	CS	METALS	Uranium	U	1.7	0.68	LANL Int BG LVL	0.72	1.2	0.067	ug/L	1				SW-846:6020	GELC	
C5	11	14	10/21/08	0.194	0.516	0.462	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11		F	CS	GENINORG	Bromide	Br(-1)	0.506	1.10	LANL Int BG LVL	0.03	8.4	0.066	mg/L	1				EPA:300.0	GELC	
C5	11	14	10/21/08	0.194	0.516	0.462	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11	FD	F	CS	GENINORG	Bromide	Br(-1)	0.516	1.12	LANL Int BG LVL	0.03	8.6	0.066	mg/L	1				EPA:300.0	GELC	
C5	11	16	10/21/08	59.5	67.5	63.8	16	Sandia Canyon	Intermediate	SCI-2	548	02/17/11	FD	F	CS	GENINORG	Calcium	Ca	65.9	1.03	LANL Int BG LVL	17.31	1.9	0.05	mg/L	1				SW-846:6010B	GELC	
C5	11	16	10/21/08	59.5	67.5	63.8	16	Sandia Canyon	Intermediate	SCI-2	548	02/17/11		F	CS	GENINORG	Calcium	Ca	66.6	1.04	LANL Int BG LVL	17.31	1.9	0.05	mg/L	1				SW-846:6010B	GELC	
C5	11	14	10/21/08	53.4	63.5	56.4	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11		F	CS	GENINORG	Chloride	Cl(-1)	63.5	1.13	LANL Int BG LVL	7.78	4.1	0.33	mg/L	5		J+	I6b	EPA:300.0	GELC	
C5	11	14	10/21/08	53.4	63.5	56.4	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11	FD	F	CS	GENINORG	Chloride	Cl(-1)	63.2	1.12	LANL Int BG LVL	7.78	4.1	0.33	mg/L	5		J+	I6b	EPA:300.0	GELC	
C5	11	14	10/21/08	0.936	1.12	1.001	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11	FD	F	CS	GENINORG	Perchlorate	ClO4	1.06	1.06	LANL Int BG LVL	0.05	10.6	0.1	ug/L	2				SW-846:6850	GELC	
C5	11	14	10/21/08	0.936	1.12	1.001	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11		F	CS	GENINORG	Perchlorate	ClO4	1.05	1.05	LANL Int BG LVL	0.05	10.5	0.1	ug/L	2				SW-846:6850	GELC	
C5	11	16	10/21/08	13.1	15.5	14.7	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11		F	CS	GENINORG	Magnesium	Mg	15	1.02	LANL Int BG LVL	6.12	1.2	0.11	mg/L	1	N	J-	I6a	SW-846:6010B	GELC	
C5	11	16	10/21/08	13.1	15.5	14.7	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11	FD	F	CS	GENINORG	Magnesium	Mg	14.7	1.00	LANL Int BG LVL	6.12	1.2	0.11	mg/L	1	N	J-	I6a	SW-846:6010B	GELC	
C5	11	14	10/21/08	83.3	101	87.3	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11		F	CS	GENINORG	Sulfate	SO4(-2)	91.6	1.05	LANL Int BG LVL	40.03	1.1	0.5	mg/L	5				EPA:300.0	GELC	
C5	11	14	10/21/08	83.3	101	87.3	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11	FD	F	CS	GENINORG	Sulfate	SO4(-2)	91	1.04	LANL Int BG LVL	40.03	1.1	0.5	mg/L	5				EPA:300.0	GELC	
C5	11	14	10/21/08	354	451	413	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11	FD	F	CS	GENINORG	Total Dissolved Solids	TDS	412	1.00	LANL Int BG LVL	127	1.6	2.4	mg/L	1				EPA:160.1	GELC	
C5	11	14	10/21/08	354	451	413	14	Sandia Canyon	Intermediate	SCI-2	548	02/17/11		F	CS	GENINORG	Total Dissolved Solids	TDS	414	1.00	LANL Int BG LVL	127	1.6	2.4	mg/L	1				EPA:160.1	GELC	
C5	11	22	10/21/08	441	658	558	22	Sandia Canyon	Intermediate	SCI-2	548	02/17/11	FD	F	CS	METALS	Chromium	Cr	448	0.80	LANL Int BG LVL	1	224.0	2	ug/L	1	E			SW-846:6020	GELC	
C5	11	22	10/21/08	441	658	558	22	Sandia Canyon	Intermediate	SCI-2	548	02/17/11		F	CS	METALS	Chromium	Cr	441	0.79	LANL Int BG LVL	1	220.5	2	ug/L	1	E			SW-846:6020	GELC	
C5	11	16	10/21/08	14.5	19.3	16.6	16	Sandia Canyon	Intermediate	SCI-2	548	02/17/11		F	CS	METALS	Nickel	Ni	16.5	0.99	LANL Int BG LVL	1	8.3	0.5	ug/L	1				SW-846:6020	GELC	
C5	11	16	10/21/08	14.5	19.3	16.6	16	Sandia Canyon	Intermediate	SCI-2	548	02/17/11	FD	F	CS	METALS	Nickel	Ni	16.9	1.02	LANL Int BG LVL	1	8.5	0.5	ug/L	1				SW-846:6020	GELC	
C5	9	10	11/05/08	0.678	0.964	0.88	10	Sandia Canyon	Regional	R-43	903.9	02/23/11		F	CS	GENINORG	Perchlorate	ClO4	0.964	1.10	LANL Reg BG LVL	0.46	1.1	0.1	ug/L	2				SW-846:6850	GELC	
C5	9	9	11/05/08	5.21	6.03	5.51	8	Sandia Canyon	Regional	R-43	903.9	02/23/11		F	CS	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.42	0.98	LANL Reg BG LVL	0.89	3.0	0.1	mg/L	10				EPA:353.2	GELC	
C5	23	29	05/17/05	3.41	7.43	4.98	29	Sandia Canyon	Regional	R-11	855	02/25/11		F	CS	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	4.6	0.92	LANL Reg BG LVL	0.89	2.6	0.1	mg/L	10				EPA:353.2	GELC	
C5	24	33	05/17/05	13.5	34.9	20.7	33	Sandia Canyon	Regional	R-11	855	02/25/11		F	CS	METALS	Chromium	Cr	16.8	0.81	LANL Reg BG LVL	5.75	1.5	2	ug/L	1				SW-846:6020	GELC	
C5	23	29	05/17/05	7.87	37	11.6	23	Sandia Canyon	Regional	R-11	855	02/25/11		F	CS	METALS	Zinc	Zn	7.87	0.68	LANL Reg BG LVL	3.89	1.0	3.3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC	
C5	15	23	08/29/07	26.2	62.3	34.3	23	Sandia Canyon	Regional	R-35b	825.4	02/28/11		F	CS	METALS	Zinc	Zn	28	0.82	LANL Reg BG LVL	3.89	3.6	3.3	ug/L	1		J	I4a	SW-846:6010B	GELC	
C5	15	16	08/30/07	68	347	326	16	Sandia Canyon	Regional	R-35a	1013.1	02/24/11		F	CS	METALS	Barium	Ba	347	1.06	LANL Reg BG LVL	56.83	3.1	1	ug/L	1				SW-846:6010B	GELC	
C5	15	16	08/30/07	1.2	22.2	9.6	15	Sandia Canyon	Regional	R-35a	1013.1	02/24/11		F	CS	METALS	Nickel	Ni	19.6	2.04	LANL Reg BG LVL	3.09	3.2	0.5	ug/L	1				SW-846:6020	GELC	
C5	12	14	05/12/08	1.43	1.74	1.65	14	Sandia Canyon	Regional	R-36	766.9	02/25/11		F	CS	GENINORG	Perchlorate	ClO4	1.68	1.02	LANL Reg BG LVL	0.46	1.8	0.2	ug/L	4				SW-846:6850	GELC	
C5	12	14	05/12/08	2.06	2.49	2.27	14	Sandia Canyon	Regional	R-36	766.9	02/25/11		F	CS	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.07	0.91	LANL Reg BG LVL	0.89	1.2	0.1	mg/L	10				EPA:353.2	GELC	
C5	12	14	05/12/08	49.9	75.3	66.7	14	Sandia Canyon	Regional	R-36	766.9	02/25/11		F	CS	METALS	Zinc	Zn	55.5	0.83	LANL Reg BG LVL	3.89	7.1	3.3	ug/L	1				SW-846:6010B	GELC	
C5	20	20	06/23/05	0.291	0.606	0.405	20	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-4	499	02/16/11		F	CS	GENINORG	Bromide	Br(-1)	0.389	0.96	LANL Int BG LVL	0.03	6.5	0.066	mg/L	1				EPA:300.0	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	20	20	06/23/05	17.8	21.5	19.5	20	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-4	499	02/16/11		F	CS	GENINORG	Chloride	Cl(-1)	21.5	1.10	LANL Int BG LVL	7.78	1.4	0.13	mg/L	2		J+	I6b	EPA:300.0	GELC	
C5	20	20	06/23/05	50.2	166	89.6	20	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-4	499	02/16/11		F	CS	GENINORG	Perchlorate	ClO4	73	0.81	LANL Int BG LVL	0.05	730.0	5	ug/L	100				SW-846:6850	GELC	
C5	20	22	06/23/05	3.94	29.4	10.1	19	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-4	499	02/16/11		F	CS	METALS	Chromium	Cr	16.9	1.67	LANL Int BG LVL	1	8.5	2	ug/L	1				SW-846:6020	GELC	
C5	20	20	06/23/05	2.14	21.4	3	20	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-4	499	02/16/11		F	CS	METALS	Nickel	Ni	21.4	7.13	LANL Int BG LVL	1	10.7	0.5	ug/L	1				SW-846:6020	GELC	
C5	20	20	06/23/05	1.19	4.04	2.86	4	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-4	499	02/16/11		F	CS	METALS	Lead	Pb	2.05	0.72	LANL Int BG LVL	0.5	2.1	0.5	ug/L	1				SW-846:6020	GELC	
C5	20	20	06/23/05	5.3	369	26.5	20	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-4	499	02/16/11		F	CS	METALS	Zinc	Zn	12.3	0.46	LANL Int BG LVL	2	3.1	3.3	ug/L	1				SW-846:6010B	GELC	
C5	22	24	06/09/05	0.083	0.157	0.128	18	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-5	689	02/28/11		F	CS	GENINORG	Bromide	Br(-1)	0.134	1.05	LANL Int BG LVL	0.03	2.2	0.066	mg/L	1	J	J-	I6a	EPA:300.0	GELC	
C5	22	24	06/09/05	68.7	132	94.3	24	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-5	689	02/28/11		F	CS	GENINORG	Perchlorate	ClO4	84.9	0.90	LANL Int BG LVL	0.05	849.0	5	ug/L	100				SW-846:6850	GELC	
C5	22	30	06/09/05	1.1	6.65	3.4	24	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-5	689	02/28/11		F	CS	METALS	Chromium	Cr	4.32	1.27	LANL Int BG LVL	1	2.2	2	ug/L	1	J	J	J_LAB	SW-846:6020	GELC	
C5	10	11	03/11/09	1.09	7.67	2.23	11	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-46	1340	02/17/11		UF	CS	GENINORG	Total Organic Carbon	TOC	1.37	0.61	LANL Reg BG LVL	0.33	2.1	0.33	mg/L	1				SW-846:9060	GELC	
C5	23	29	05/19/05	0.64	12.9	3.2	27	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-1	1031.1	02/14/11		F	CS	METALS	Nickel	Ni	8.41	2.63	LANL Reg BG LVL	3.09	1.4	0.5	ug/L	1				SW-846:6020	GELC	
C5	22	27	05/25/05	5.34	8.06	6.6	27	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-15	958.6	02/28/11		F	CS	GENINORG	Perchlorate	ClO4	7.51	1.14	LANL Reg BG LVL	0.46	8.2	0.5	ug/L	10				SW-846:6850	GELC	
C5	26	31	02/24/00	1.89	3.31	2.23	31	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-15	958.6	02/28/11		F	CS	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.91	0.86	LANL Reg BG LVL	0.89	1.1	0.1	mg/L	10				EPA:353.2	GELC	
C5	26	34	02/24/00	2.599999905	18.2	8.69	33	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-15	958.6	02/28/11		F	CS	METALS	Chromium	Cr	13.5	1.55	LANL Reg BG LVL	5.75	1.2	2	ug/L	1				SW-846:6020	GELC	
C5	11	12	10/09/08	0.102	0.226	0.19	11	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		F	CS	GENINORG	Bromide	Br(-1)	0.202	1.06	LANL Reg BG LVL	0.1	1.0	0.066	mg/L	1				EPA:300.0	GELC	
C5	11	12	10/09/08	28.7	37.5	32.9	12	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		F	CS	GENINORG	Chloride	Cl(-1)	37.5	1.14	LANL Reg BG LVL	3.57	5.3	0.33	mg/L	5				EPA:300.0	GELC	
C5	11	12	10/09/08	1.18	1.46	1.31	12	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		F	CS	GENINORG	Perchlorate	ClO4	1.37	1.05	LANL Reg BG LVL	0.46	1.5	0.1	ug/L	2				SW-846:6850	GELC	
C5	11	12	10/09/08	11.1	14.6	12.9	12	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		F	CS	GENINORG	Magnesium	Mg	13.8	1.07	LANL Reg BG LVL	4.15	1.7	0.11	mg/L	1				SW-846:6010B	GELC	
C5	11	12	10/09/08	5.83	7.03	6.02	12	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		F	CS	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.98	0.99	LANL Reg BG LVL	0.89	3.4	0.1	mg/L	10				EPA:353.2	GELC	
C5	11	12	10/09/08	60.6	80.6	63.6	12	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		F	CS	GENINORG	Sulfate	SO4(-2)	74.5	1.17	LANL Reg BG LVL	7.2	5.2	0.5	mg/L	5				EPA:300.0	GELC	
C5	11	12	10/09/08	1.06	2.84	1.49	12	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		UF	CS	GENINORG	Total Organic Carbon	TOC	1.35	0.91	LANL Reg BG LVL	0.33	2.1	0.33	mg/L	1				SW-846:9060	GELC	
C5	11	12	10/09/08	8.8	29.6	14.3	12	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		F	CS	METALS	Nickel	Ni	29.6	2.07	LANL Reg BG LVL	3.09	4.8	0.5	ug/L	1				SW-846:6020	GELC	
C5	11	12	10/09/08	7.7	28.1	20.5	12	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-42	931.8	02/18/11		F	CS	METALS	Zinc	Zn	19.5	0.95	LANL Reg BG LVL	3.89	2.5	3.3	ug/L	1				SW-846:6010B	GELC	
C5	5	8	03/06/10	49.8	78.8	61.1	8	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	02/23/11		F	CS	METALS	Chromium	Cr	78.8	1.29	LANL Reg BG LVL	5.75	6.9	2	ug/L	1				SW-846:6020	GELC	
C5	5	8	03/06/10	49.8	78.8	61.1	8	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	02/23/11	FD	F	CS	METALS	Chromium	Cr	77.7	1.27	LANL Reg BG LVL	5.75	6.8	2	ug/L	1				SW-846:6020	GELC	
C5	5	6	03/06/10	7.96	200	79	6	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	02/23/11	FD	F	CS	METALS	Zinc	Zn	40	0.51	LANL Reg BG LVL	3.89	5.1	3.3	ug/L	1				SW-846:6010B	GELC	
C5	5	6	03/06/10	7.96	200	79	6	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	02/23/11		F	CS	METALS	Zinc	Zn	39.6	0.50	LANL Reg BG LVL	3.89	5.1	3.3	ug/L	1				SW-846:6010B	GELC	
C5	9	13	02/17/09	7.34	14.1	11.6	13	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-44	895	02/25/11		F	CS	METALS	Chromium	Cr	13.2	1.14	LANL Reg BG LVL	5.75	1.2	2	ug/L	1				SW-846:6020	GELC	
C5	10	15	05/12/04	2.14	154	18.1	15	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-16	863.4	02/16/11		F	CS	METALS	Manganese	Mn	10.2	0.56	LANL Reg BG LVL	2.94	1.7	2	ug/L	1				SW-846:6010B	GELC	
C5	9	13	03/19/04	3.74	28.4	10.7	13	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-16	1237	02/16/11		F	CS	METALS	Manganese	Mn	28.4	2.65	LANL Reg BG LVL	2.94	4.8	2	ug/L	1				SW-846:6010B	GELC	
C6	9	10	11/10/08	152	604	169	10	Sandia Canyon	Regional	R-43	969.1	02/22/11		F	CS	GENINORG	Total Dissolved Solids	TDS	604	3.57	NM GW STD	1000	1.2	9.5	mg/L	1				EPA:160.1	GELC	Previously all about 170 mg/L, usual EC of 190 uS/cm
C6	20	20	06/23/05	50.2	166	89.6	20	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Intermediate	MCOI-4	499	02/16/11		F	CS	GENINORG	Perchlorate	ClO4	73	0.81	NM GW CONS	4	36.5	5	ug/L	100				SW-846:6850	GELC	
C6	5	8	03/06/10	49.8	78.8	61.1	8	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	02/23/11		F	CS	METALS	Chromium	Cr	78.8	1.29	NM GW STD	50	3.2	2	ug/L	1				SW-846:6020	GELC	
C6	5	8	03/06/10	49.8	78.8	61.1	8	Mortandad Canyon (includes Ten Site Canyon and Canada del Buey)	Regional	R-50	1077	02/23/11	FD	F	CS	METALS	Chromium	Cr	77.7	1.27	NM GW STD	50	3.1	2	ug/L	1				SW-846:6020	GELC	