

## SUMMARY OF NEW LOS ALAMOS NATIONAL LABORATORY GROUNDWATER DATA LOADED IN AUGUST 2008

### 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 tables) that provide surveillance of the groundwater zones indicated in the tables. Because of problems with the database, only part of the data is available; the remainder will be included in a subsequent report.

The report includes two tables.

*Table 1: NMED 8-08 Groundwater Report.* This table contains numerous values, often because new data are reported when they are detected for the first time since June 14, 2007 (as specified in the Consent Order) or are greater than some previous reference data, which have a reference period that began only recently (June 14, 2007). These data are often very similar to corresponding data gathered before June 14, 2007. Over time, the data that exceed the reference data are expected to be reduced substantially.

*Table 2: NMED 8-08 Groundwater Report Summary.* This table focuses on results that are first-time occurrences of results based on considering monitoring data acquired before June 14, 2007 (using statistics described below). This table includes additional comments on the significance of the results.

Both tables contain supplemental information summarizing monitoring results obtained before June 14, 2007.

The tables include 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, and analytical and secondary validation qualifiers. Additional information describing the locations and analytical data is also included. Generally, all data have been through secondary validation, as indicated in the tables by a preliminary flag of N. The definitions for abbreviations in the tables may be found at <http://wqdbworld.lanl.gov/> under "Lookup Tables" under the menu on the left side of the page.

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 Region 6 tap water screening levels (for compounds having no other regulatory standard). In the tables, the EPA Region 6 tap water screening levels 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.

Criteria 5 and 6 involve conclusions based on three consecutive samples. No results are included for these criteria in the tables because no location has been sampled a sufficient number of times since June 14, 2007, to meet the criteria.

## DESCRIPTION OF TABLES

The tables are 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 tables 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, 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 tables 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 number of sampling events and the 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://wqdbworld.lanl.gov/>)

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

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 8-08 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 OC Type Code	Fld Prep Code	Lab Sample Type Code	Analy Suite Code	Analyte Desc	Analyte	Symbol	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Concal Flag Code	Concal Reason Code	Anyl Meth Code	Lab Code
C1	4	5	08/08/06	1.69	1.69	1.69	1	Guaje Canyon (includes Barrancas and Rendija Canyons)	Alluvial Spring	GU-0.01 Spring	0	01/25/08		UF	CS	VOA	Dichloroethane[1,2-]	107-06-2		1.69	1.00	EPA PRIM DW STD	5	0.3	0.25	ug/L	1				SW-846:8260B	GELC
C1	4	5	08/08/06	3.68	3.68	3.68	1	Guaje Canyon (includes Barrancas and Rendija Canyons)	Alluvial Spring	GU-0.01 Spring	0	01/25/08		UF	CS	VOA	Methyl-2-pentanone[4-]	108-10-1		3.68	1.00	EPA TAP SCR N LVL N	1990.9	0.0	1.3	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC
C1	10	18	09/09/04	0.00631	0.00631	0.00631	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Homestead Spring	0	06/24/08	FD	UF	CS	PEST/PCB	DDD[4,4'-]	72-54-8		0.00631	1.00	EPA TAP SCR N LVL C-5	2.8013	0.0	0.0054	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	10	18	09/09/04	0.0139	0.0139	0.0139	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Homestead Spring	0	06/24/08	FD	UF	CS	PEST/PCB	DDE[4,4'-]	72-55-9		0.0139	1.00	EPA TAP SCR N LVL C-5	1.9774	0.0	0.0054	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	8	8	08/22/06	0.876	0.876	0.876	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Anderson Spring	0	06/10/08		UF	CS	VOA	Toluene	108-88-3		0.876	1.00	NM GW STD	750	0.0	0.25	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC
C1	8	8	08/31/06	1.42	1.42	1.42	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Charlie's Spring	0	06/19/08		UF	CS	VOA	Butanone[2-]	78-93-3		1.42	1.00	EPA TAP SCR N LVL N	7064.5	0.0	1.3	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC
C1	10	10	09/09/04	0.00737	0.00737	0.00737	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	Endosulfan II	33213-65-9		0.00737	1.00				0.0056	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	10	10	09/09/04	0.0173	0.0173	0.0173	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	DDT[4,4'-]	50-29-3		0.0173	1.00	EPA TAP SCR N LVL C-5	1.9774	0.0	0.011	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	10	10	09/09/04	0.00564	0.00564	0.00564	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	Chlordane[gamma-]	5103-74-2		0.00564	1.00				0.0056	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	10	10	09/09/04	0.00767	0.00767	0.00767	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	Dieldrin	60-57-1		0.00767	1.00	EPA TAP SCR N LVL C-5	0.04202	0.2	0.0056	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	10	10	09/09/04	0.00688	0.00688	0.00688	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	Endrin	72-20-8		0.00688	1.00	EPA PRIM DW STD	2	0.0	0.0056	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	10	10	09/09/04	0.0233	0.0233	0.0233	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	DDD[4,4'-]	72-54-8		0.0233	1.00	EPA TAP SCR N LVL C-5	2.8013	0.0	0.0056	ug/L	1	J	J	P7c	SW-846:8081A	GELC
C1	10	10	09/09/04	0.022	0.022	0.022	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	DDE[4,4'-]	72-55-9		0.022	1.00	EPA TAP SCR N LVL C-5	1.9774	0.0	0.0056	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	5	7	08/23/06	1.44	1.44	1.44	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-10	20.6	06/12/08		UF	DL	VOA	Diethyl Ether	60-29-7		1.44	1.00	EPA TAP SCR N LVL N	1216.7	0.0	0.6	ug/L	2	BJ	J	V88	SW-846:8260B	GELC
C1	2	3	09/06/07	0.564	0.564	0.564	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		UF	CS	VOA	Toluene	108-88-3		0.564	1.00	NM GW STD	750	0.0	0.25	ug/L	1	J	J	J_LAB	SW-846:8260B	GELC
C1	12	12	04/06/01	2.56	2.9	2.73	2	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-19	1412.9	06/11/08		UF	CS	SVOA	Bis(2-ethylhexyl)phthalate	117-81-7		2.56	0.94	EPA PRIM DW STD	6	0.4	2.2	ug/L	1	J	J	J_LAB	SW-846:8270C	GELC
C1	7	13	03/15/04	54.8	209	135	6	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	907	06/21/08		UF	CS	VOA	Acetone	67-64-1		85.7	0.63	EPA TAP SCR N LVL N	5475	0.0	1.3	ug/L	1	B	J	V4a	SW-846:8260B	GELC
C1	14	23	10/17/02	1.35	6420	4.59	8	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-23	816	06/09/08		UF	CS	VOA	Acetone	67-64-1		1.48	0.32	EPA TAP SCR N LVL N	5475	0.0	1.3	ug/L	1	J	J	V7c	SW-846:8260B	GELC
C1	14	23	10/17/02	4.27	4.27	4.27	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-23	816	06/09/08		UF	CS	VOA	Methylene Chloride	75-09-2		4.27	1.00	EPA PRIM DW STD	5	0.9	2	ug/L	1	J	J	V7c	SW-846:8260B	GELC
C1	12	15	03/01/04	2.38	2.76	2.57	2	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-32	870.9	06/09/08		UF	CS	VOA	Acetone	67-64-1		2.38	0.93	EPA TAP SCR N LVL N	5475	0.0	1.3	ug/L	1	J	J	V7c	SW-846:8260B	GELC
C1	12	15	03/01/04	2.38	2.76	2.57	2	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-32	870.9	06/09/08	FD	UF	CS	VOA	Acetone	67-64-1		2.76	1.07	EPA TAP SCR N LVL N	5475	0.0	1.3	ug/L	1	J	J	V7c	SW-846:8260B	GELC
C1	1	1	06/23/08	0.0119	0.0119	0.0119	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	3MAO-2	14.7	06/23/08		UF	CS	PEST/PCB	Dieldrin	60-57-1		0.0119	1.00	EPA TAP SCR N LVL C-5	0.04202	0.3	0.0074	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	1	1	06/23/08	0.00982	0.00982	0.00982	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	3MAO-2	14.7	06/23/08		UF	CS	PEST/PCB	DDD[4,4'-]	72-54-8		0.00982	1.00	EPA TAP SCR N LVL C-5	2.8013	0.0	0.0074	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	1	1	06/23/08	0.014	0.014	0.014	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	3MAO-2	14.7	06/23/08		UF	CS	PEST/PCB	DDE[4,4'-]	72-55-9		0.014	1.00	EPA TAP SCR N LVL C-5	1.9774	0.0	0.0074	ug/L	1	J	J	J_LAB	SW-846:8081A	GELC
C1	1	2	06/09/08	1.61	2.08	1.845	2	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-5	14.7	06/09/08		UF	CS	VOA	Acetone	67-64-1		2.08	1.13	EPA TAP SCR N LVL N	5475	0.0	1.3	ug/L	1	J	J	V7c	SW-846:8260B	GELC
C1	1	2	06/09/08	1.61	2.08	1.845	2	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-5	14.7	06/09/08	FD	UF	CS	VOA	Acetone	67-64-1		1.61	0.87	EPA TAP SCR N LVL N	5475	0.0	1.3	ug/L	1	J	J	V7c	SW-846:8260B	GELC
C1	1	2	06/09/08	96.9	96.9	96.9	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-5	14.7	06/09/08		UF	CS	VOA	Butanol[1-]	71-36-3		96.9	1.00	EPA TAP SCR N LVL N	3650	0.0	13	ug/L	1		J	V7c	SW-846:8260B	GELC
C2	6	8	09/14/04	0.032	0.069	0.0505	2	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial Spring	TA-18 Spring	0	06/23/08		F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P		0.069	1.37	LANL Avl BG LVL	0.05	1.4	0.024	mg/L	1				EPA:365.4	GELC
C2	8	10	08/30/06	1.7	3.8	3	4	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	18-MW-8	8	06/16/08		F	CS	METALS	Chromium	Cr		3.8	1.27	LANL Avl BG LVL	1	3.8	2.5	ug/L	1	J	J	J_LAB	SW-846:6020	GELC
C2	1	1	06/25/08	0.204	0.204	0.204	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	GENINORG	Perchlorate	ClO4		0.204	1.00	LANL Avl BG LVL	0.05	4.1	0.05	ug/L	1				SW-846:6850	GELC
C2	1	1	06/25/08	46	46	46	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	GENINORG	Sodium	Na		46	1.00	LANL Avl BG LVL	15.54	3.0	0.045	mg/L	1				SW-846:6010B	GELC
C2	1	1	06/25/08	240	240	240	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	GENINORG	Total Dissolved Solids	TDS		240	1.00	LANL Avl BG LVL	139	1.7	2.4	mg/L	1				EPA:160.1	GELC
C2	1	1	06/25/08	140	140	140	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Barium	Ba		140	1.00	LANL Avl BG LVL	68.57	2.0	1	ug/L	1				SW-846:6010B	GELC
C2	1	1	06/25/08	1.1	1.1	1.1	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Cobalt	Co		1.1	1.00	LANL Avl BG LVL	0.5	2.2	1	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC
C2	1	1	06/25/08	609	609	609	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Manganese	Mn		609	1.00	LANL Avl BG LVL	2	304.5	2	ug/L	1				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 OC Type Code	Fid Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Symbol	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Concal Flag Code	Concal Reason Code	Anyl Meth Code	Lab Code
C2	1	1	06/25/08	9.5	9.5	9.5	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Molybdenum	Mo		9.5	1.00	LANL Avl BG LVL	2	4.8	0.1	ug/L	1				SW-846:6020	GELC
C2	1	1	06/25/08	1.9	1.9	1.9	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Nickel	Ni		1.9	1.00	LANL Avl BG LVL	1	1.9	0.5	ug/L	1	J	J	J_LAB	SW-846:6020	GELC
C2	1	1	06/25/08	145	145	145	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Strontium	Sr		145	1.00	LANL Avl BG LVL	120	1.2	1	ug/L	1				SW-846:6010B	GELC
C2	1	1	06/25/08	1.4	1.4	1.4	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Vanadium	V		1.4	1.00	LANL Avl BG LVL	1	1.4	1	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC
C2	1	1	06/25/08	872	872	872	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Zinc	Zn		872	1.00	LANL Avl BG LVL	2	436.0	2	ug/L	1				SW-846:6010B	GELC
C2	10	19	09/09/04	10.8	16.7	12.4	9	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate Spring	Homestead Spring	0	06/24/08		F	CS	METALS	Boron	B		16.7	1.35	LANL Int BG LVL	15.12	1.1	10	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC
C2	9	12	06/23/06	3.3	14.3	5	9	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	03-B-13	21.5	06/12/08	FD	F	CS	METALS	Copper	Cu		5.5	1.10	LANL Int BG LVL	5.32	1.0	3	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC
C2	2	3	09/06/07	6.93	31.8	6.97	3	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		F	CS	GENINORG	Chloride	Cl(-1)		31.8	4.56	LANL Int BG LVL	7.78	4.1	0.33	mg/L	5				EPA:300.0	GELC
C2	2	3	09/06/07	5.8	13.7	5.83	3	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		F	CS	GENINORG	Magnesium	Mg		13.7	2.35	LANL Int BG LVL	6.12	2.2	0.085	mg/L	1				SW-846:6010B	GELC
C2	2	3	09/06/07	0.434	0.434	0.434	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P		0.434	1.00	LANL Int BG LVL	0.08	5.4	0.024	mg/L	1				EPA:365.4	GELC
C2	2	3	09/06/07	8.2	77.6	9.2	3	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		F	CS	METALS	Barium	Ba		77.6	8.43	LANL Int BG LVL	71.83	1.1	1	ug/L	1				SW-846:6010B	GELC
C2	2	3	09/06/07	0.096	0.096	0.096	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		UF	CS	METALS	Mercury	Hg		0.096	1.00	LANL Int BG LVL	0.06	1.6	0.03	ug/L	1	J	J	J_LAB	EPA:245.2	GELC
C2	2	3	09/06/07	23.4	23.4	23.4	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		F	CS	METALS	Molybdenum	Mo		23.4	1.00	LANL Int BG LVL	2	11.7	0.1	ug/L	1				SW-846:6020	GELC
C2	2	3	09/06/07	95.5	254	97.3	3	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		F	CS	METALS	Strontium	Sr		254	2.61	LANL Int BG LVL	154.76	1.6	1	ug/L	1				SW-846:6010B	GELC
C2	6	9	03/11/04	2.79	3.95	3.59	9	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	907	06/21/08		F	CS	GENINORG	Potassium	K		2.79	0.78	LANL Reg BG LVL	2.63	1.1	0.05	mg/L	1				SW-846:6010B	GELC
C2	5	10	03/15/04	1.94	32.4	15.5	10	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	907	06/21/08		UF	CS	GENINORG	Total Organic Carbon	TOC		1.94	0.13	LANL Reg BG LVL	0.33	5.9	0.33	mg/L	1				SW-846:9060	GELC
C2	6	9	03/11/04	23.3	58.1	24.9	9	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	907	06/21/08		F	CS	METALS	Barium	Ba		58.1	2.33	LANL Reg BG LVL	56.83	1.0	1	ug/L	1				SW-846:6010B	GELC
C2	6	9	03/11/04	14.3	28.5	16.1	9	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	907	06/21/08		F	CS	METALS	Manganese	Mn		16.8	1.04	LANL Reg BG LVL	2.94	5.7	2	ug/L	1				SW-846:6010B	GELC
C2	6	9	03/11/04	4.14	7.87	5.1	3	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	907	06/21/08		F	CS	METALS	Zinc	Zn		5.1	1.00	LANL Reg BG LVL	3.89	1.3	2	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC
C2	6	8	03/10/04	2.7	4.17	4.02	8	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	1149.7	06/23/08		F	CS	GENINORG	Potassium	K		2.7	0.67	LANL Reg BG LVL	2.63	1.0	0.05	mg/L	1	E			SW-846:6010B	GELC
C2	5	10	03/10/04	1.53	51.7	38.85	10	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	1149.7	06/23/08		UF	CS	GENINORG	Total Organic Carbon	TOC		1.53	0.04	LANL Reg BG LVL	0.33	4.6	0.33	mg/L	1				SW-846:9060	GELC
C2	6	8	03/10/04	113	253	227	8	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	1149.7	06/23/08		F	CS	METALS	Barium	Ba		113	0.50	LANL Reg BG LVL	56.83	2.0	1	ug/L	1				SW-846:6010B	GELC
C2	6	8	03/10/04	103	495	180.5	8	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	1149.7	06/23/08		F	CS	METALS	Iron	Fe		103	0.57	LANL Reg BG LVL	21	4.9	25	ug/L	1				SW-846:6010B	GELC
C2	6	9	03/10/04	0.29	0.29	0.29	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	1149.7	06/23/08		UF	CS	METALS	Mercury	Hg		0.29	1.00	LANL Reg BG LVL	0.2	1.5	0.03	ug/L	1				EPA:245.2	GELC
C2	6	9	03/10/04	58	392	346	9	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-20	1149.7	06/23/08		F	CS	METALS	Manganese	Mn		58	0.17	LANL Reg BG LVL	2.94	19.7	2	ug/L	1				SW-846:6010B	GELC
C2	13	13	03/12/01	0.58	0.895	0.714	13	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-22	962.8	06/20/08		F	CS	GENINORG	Nitrate-Nitrite as Nitrogen	NO3#N		0.895	1.25	LANL Reg BG LVL	0.89	1.0	0.05	mg/L	5		J	I4a	EPA:353.2	GELC
C2	13	13	03/12/01	0.079	0.079	0.079	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-22	962.8	06/20/08		F	CS	METALS	Mercury	Hg		0.079	1.00	LANL Reg BG LVL	0.07	1.1	0.03	ug/L	1	J	J	J_LAB	EPA:245.2	GELC
C2	7	8	09/24/01	1.4	2.6	2	2	White Rock Canyon and Rio Grande	Regional Spring	Spring 2	0	04/29/08		F	CS	METALS	Cobalt	Co		2.6	1.30	LANL Reg BG LVL	0.5	5.2	1	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC
C2	7	8	09/24/01	3.1	6.1	4.6	2	White Rock Canyon and Rio Grande	Regional Spring	Spring 2	0	04/29/08		F	CS	METALS	Chromium	Cr		6.1	1.33	LANL Reg BG LVL	5.75	1.1	2.5	ug/L	1	J	J	J_LAB	SW-846:6020	GELC
C2	7	8	09/24/01	0.78	42.9	6.9	6	White Rock Canyon and Rio Grande	Regional Spring	Spring 2	0	04/29/08		F	CS	METALS	Manganese	Mn		6.6	0.96	LANL Reg BG LVL	2.94	2.2	2	ug/L	1	J	J	J_LAB	SW-846:6010B	GELC
C2	7	8	09/24/01	2.5	3.6	3.25	4	White Rock Canyon and Rio Grande	Regional Spring	Spring 2	0	04/29/08		F	CS	METALS	Molybdenum	Mo		3.1	0.95	LANL Reg BG LVL	2	1.6	0.1	ug/L	1				SW-846:6020	GELC
C2	7	8	09/24/01	3.1	22.2	16	8	White Rock Canyon and Rio Grande	Regional Spring	Spring 2	0	04/29/08		F	CS	METALS	Vanadium	V		20.3	1.27	LANL Reg BG LVL	13.41	1.5	1	ug/L	1				SW-846:6010B	GELC
C3	1	1	06/25/08	609	609	609	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Manganese	Mn		609	1.00	NM GW STD	200	6.1	2	ug/L	1				SW-846:6010B	GELC
C3	2	3	09/06/07	0.434	0.434	0.434	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P		0.434	1.00	EPA TAP SCR N LVL N	0.73	1.2	0.024	mg/L	1				EPA:365.4	GELC
C3	2	3	09/06/07	1.3	22.7	1.4	3	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		UF	CS	METALS	Uranium	U		22.7	16.21	EPA PRIM DW STD	30	1.5	0.05	ug/L	1				SW-846:6020	GELC
C3	2	3	09/06/07	1.3	18.9	1.4	3	Pajarito Canyon (includes Twomile and Threemile Canyons)	Intermediate	R-23i	400.3	06/16/08		F	CS	METALS	Uranium	U		18.9	13.50	EPA PRIM DW STD	30	1.3	0.05	ug/L	1				SW-846:6020	GELC
C3	14	23	10/17/02	4.27	4.27	4.27	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-23	816	06/09/08		UF	CS	VOA	Methylene Chloride	75-09-2		4.27	1.00	EPA PRIM DW STD	5	1.7	2	ug/L	1	J	J	V7c	SW-846:8260B	GELC
C3	1	1	06/24/08	129	129	129	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-8	9.7	06/24/08		F	CS	GENINORG	Chloride	Cl(-1)		129	1.00	NM GW STD	250	1.0	0.66	mg/L	10				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 CC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Symbol	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std Mdl	Std Uom	Dilution Factor	Lab Qual Code	Concal Flag Code	Concal Reason Code	Anyl Meth Code	Lab Code
C3	1	1	06/09/08	0.932	0.932	0.932	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-5	14.7	06/09/08		F	CS	GENINORG	Ammonia as Nitrogen	NH3-N		0.932	1.00	EPA TAP SCRNLVL	0.20857	8.9	0.03	mg/L	1		J-	I6a	EPA:350.1	GELC
C3	1	1	06/09/08	8600	8600	8600	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-5	14.7	06/09/08		F	CS	METALS	Iron	Fe		8600	1.00	NM GW STD	1000	17.2	25	ug/L	1				SW-846:6010B	GELC
C3	1	1	06/24/08	402	402	402	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-8	9.7	06/24/08		F	CS	METALS	Manganese	Mn		402	1.00	NM GW STD	200	4.0	2	ug/L	1				SW-846:6010B	GELC
C3	1	1	06/09/08	6040	6040	6040	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-5	14.7	06/09/08		F	CS	METALS	Manganese	Mn		6040	1.00	NM GW STD	200	60.4	2	ug/L	1				SW-846:6010B	GELC
CA	1	1	06/25/08	609	609	609	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Manganese	Mn		609	1.00	NM GW STD	200	3.1	2	ug/L	1				SW-846:6010B	GELC
CA	12	15	03/01/04	3.92	6	4.6	6	Pajarito Canyon (includes Twomile and Threemile Canyons)	Regional	R-32	870.9	06/09/08		UF	CS	SVOA	Bis(2-ethylhexyl)phthalate	117-81-7		6	1.30	EPA PRIM DW STD	6	1.0	2.2	ug/L	1	J	J	SV7c	SW-846:8270C	GELC
CA	1	1	06/09/08	0.932	0.932	0.932	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-5	14.7	06/09/08		F	CS	GENINORG	Ammonia as Nitrogen	NH3-N		0.932	1.00	EPA TAP SCRNLVL	0.20857	4.5	0.03	mg/L	1		J-	I6a	EPA:350.1	GELC
CA	1	1	06/09/08	8600	8600	8600	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-5	14.7	06/09/08		F	CS	METALS	Iron	Fe		8600	1.00	NM GW STD	1000	8.6	25	ug/L	1				SW-846:6010B	GELC
CA	1	1	06/09/08	6040	6040	6040	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-5	14.7	06/09/08		F	CS	METALS	Manganese	Mn		6040	1.00	NM GW STD	200	30.2	2	ug/L	1				SW-846:6010B	GELC
CA	1	1	06/24/08	402	402	402	1	Pajarito Canyon (includes Twomile and Threemile Canyons)	Alluvial	PCAO-8	9.7	06/24/08		F	CS	METALS	Manganese	Mn		402	1.00	NM GW STD	200	2.0	2	ug/L	1				SW-846:6010B	GELC

**Table 2: NMED 8-08 Groundwater Report Summary**

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	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 Uom	Dilution Factor	Lab Qual Code	Concat Flag Code	Concat Reason Code	Comment
C1	10	18	09/09/04	0.00631	0.00631	0.00631	1	Intermediate Spring	Homestead Spring	0	06/24/08	FD	UF	CS	PEST/PCB	DDD[4,4'-]	72-54-8	0.00631	1.00	EPA TAP SCR N LVL C-5	2.8013	0.0	0.0054	ug/L	1	J	J	J_LAB	Not found in field duplicate
C1	10	18	09/09/04	0.0139	0.0139	0.0139	1	Intermediate Spring	Homestead Spring	0	06/24/08	FD	UF	CS	PEST/PCB	DDE[4,4'-]	72-55-9	0.0139	1.00	EPA TAP SCR N LVL C-5	1.9774	0.0	0.0054	ug/L	1	J	J	J_LAB	Not found in field duplicate
C1	10	10	09/09/04	0.00737	0.00737	0.00737	1	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	Endosulfan II	33213-65-9	0.00737	1.00				0.0056	ug/L	1	J	J	J_LAB	First detect of ten sample events
C1	10	10	09/09/04	0.0173	0.0173	0.0173	1	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	DDT[4,4'-]	50-29-3	0.0173	1.00	EPA TAP SCR N LVL C-5	1.9774	0.0	0.011	ug/L	1	J	J	J_LAB	First detect of ten sample events
C1	10	10	09/09/04	0.00564	0.00564	0.00564	1	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	Chlordane[gamma-]	5103-74-2	0.00564	1.00				0.0056	ug/L	1	J	J	J_LAB	First detect of ten sample events
C1	10	10	09/09/04	0.00767	0.00767	0.00767	1	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	Dieldrin	60-57-1	0.00767	1.00	EPA TAP SCR N LVL C-5	0.04202	0.2	0.0056	ug/L	1	J	J	J_LAB	First detect of ten sample events
C1	10	10	09/09/04	0.00688	0.00688	0.00688	1	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	Endrin	72-20-8	0.00688	1.00	EPA PRIM DW STD	2	0.0	0.0056	ug/L	1	J	J	J_LAB	First detect of ten sample events
C1	10	10	09/09/04	0.0233	0.0233	0.0233	1	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	DDD[4,4'-]	72-54-8	0.0233	1.00	EPA TAP SCR N LVL C-5	2.8013	0.0	0.0056	ug/L	1	J	J	P7c	First detect of ten sample events
C1	10	10	09/09/04	0.022	0.022	0.022	1	Intermediate Spring	Bulldog Spring	0	06/10/08		UF	CS	PEST/PCB	DDE[4,4'-]	72-55-9	0.022	1.00	EPA TAP SCR N LVL C-5	1.9774	0.0	0.0056	ug/L	1	J	J	J_LAB	First detect of ten sample events
C1	14	23	10/17/02	4.27	4.27	4.27	1	Regional	R-23	816	06/09/08		UF	CS	VOA	Methylene Chloride	75-09-2	4.27	1.00	EPA PRIM DW STD	5	0.9	2	ug/L	1	J	J	V7c	1 st detect out of 23 samples, compound found often in field trip blank
C1	1	1	06/23/08	0.0119	0.0119	0.0119	1	Alluvial	3MAO-2	14.7	06/23/08		UF	CS	PEST/PCB	Dieldrin	60-57-1	0.0119	1.00	EPA TAP SCR N LVL C-5	0.04202	0.3	0.0074	ug/L	1	J	J	J_LAB	first sample
C1	1	1	06/23/08	0.00982	0.00982	0.00982	1	Alluvial	3MAO-2	14.7	06/23/08		UF	CS	PEST/PCB	DDD[4,4'-]	72-54-8	0.00982	1.00	EPA TAP SCR N LVL C-5	2.8013	0.0	0.0074	ug/L	1	J	J	J_LAB	first sample
C1	1	1	06/23/08	0.014	0.014	0.014	1	Alluvial	3MAO-2	14.7	06/23/08		UF	CS	PEST/PCB	DDE[4,4'-]	72-55-9	0.014	1.00	EPA TAP SCR N LVL C-5	1.9774	0.0	0.0074	ug/L	1	J	J	J_LAB	first sample
C2	1	1	06/25/08	609	609	609	1	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Manganese	Mn	609	1.00	LANL Avl BG LVL	2	304.5	2	ug/L	1				unusual high value
C2	1	1	06/25/08	872	872	872	1	Alluvial	PCAO-7b2	0	06/25/08		F	CS	METALS	Zinc	Zn	872	1.00	LANL Avl BG LVL	2	436.0	2	ug/L	1				unusual high value
C2	2	3	09/06/07	6.93	31.8	6.97	3	Intermediate	R-23i	400.3	06/16/08		F	CS	GENINORG	Chloride	Cl(-1)	31.8	4.56	LANL Int BG LVL	7.78	4.1	0.33	mg/L	5				Sample had higher TDS(271 mg/L) and turbidity (4.9 NTU) than prior sample
C2	2	3	09/06/07	5.8	13.7	5.83	3	Intermediate	R-23i	400.3	06/16/08		F	CS	GENINORG	Magnesium	Mg	13.7	2.35	LANL Int BG LVL	6.12	2.2	0.085	mg/L	1				Sample had higher TDS(271 mg/L) and turbidity (4.9 NTU) than prior sample
C2	2	3	09/06/07	0.434	0.434	0.434	1	Intermediate	R-23i	400.3	06/16/08		F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.434	1.00	LANL Int BG LVL	0.08	5.4	0.024	mg/L	1				First detect of two sample visits, source unknown
C2	2	3	09/06/07	8.2	77.6	9.2	3	Intermediate	R-23i	400.3	06/16/08		F	CS	METALS	Barium	Ba	77.6	8.43	LANL Int BG LVL	71.83	1.1	1	ug/L	1				Sample had higher TDS(271 mg/L) and turbidity (4.9 NTU) than prior sample
C2	2	3	09/06/07	0.096	0.096	0.096	1	Intermediate	R-23i	400.3	06/16/08		UF	CS	METALS	Mercury	Hg	0.096	1.00	LANL Int BG LVL	0.06	1.6	0.03	ug/L	1	J	J	J_LAB	Sample had higher TDS(271 mg/L) and turbidity (4.9 NTU) than prior sample
C2	2	3	09/06/07	23.4	23.4	23.4	1	Intermediate	R-23i	400.3	06/16/08		F	CS	METALS	Molybdenum	Mo	23.4	1.00	LANL Int BG LVL	2	11.7	0.1	ug/L	1				Sample had higher TDS(271 mg/L) and turbidity (4.9 NTU) than prior sample
C2	2	3	09/06/07	95.5	254	97.3	3	Intermediate	R-23i	400.3	06/16/08		F	CS	METALS	Strontium	Sr	254	2.61	LANL Int BG LVL	154.76	1.6	1	ug/L	1				Sample had higher TDS(271 mg/L) and turbidity (4.9 NTU) than prior sample
C3	2	3	09/06/07	0.434	0.434	0.434	1	Intermediate	R-23i	400.3	06/16/08		F	CS	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.434	1.00	EPA TAP SCR N LVL N	0.73	1.2	0.024	mg/L	1				First detect of two sample visits, source unknown
C3	2	3	09/06/07	1.3	22.7	1.4	3	Intermediate	R-23i	400.3	06/16/08		UF	CS	METALS	Uranium	U	22.7	16.21	EPA PRIM DW STD	30	1.5	0.05	ug/L	1				Sample had higher TDS(271 mg/L) and turbidity (4.9 NTU) than prior sample
C3	2	3	09/06/07	1.3	18.9	1.4	3	Intermediate	R-23i	400.3	06/16/08		F	CS	METALS	Uranium	U	18.9	13.50	EPA PRIM DW STD	30	1.3	0.05	ug/L	1				Sample had higher TDS(271 mg/L) and turbidity (4.9 NTU) than prior sample
C3	14	23	10/17/02	4.27	4.27	4.27	1	Regional	R-23	816	06/09/08		UF	CS	VOA	Methylene Chloride	75-09-2	4.27	1.00	EPA PRIM DW STD	5	1.7	2	ug/L	1	J	J	V7c	1 st detect out of 23 samples, compound found often in field trip blank
CA	12	15	03/01/04	3.92	6	4.6	6	Regional	R-32	870.9	06/09/08		UF	CS	SVOA	Bis(2-ethylhexyl)phthalate	117-81-7	6	1.30	EPA PRIM DW STD	6	1.0	2.2	ug/L	1	J	J	SV7c	Found near this concentration in three consecutive sample events