EMID-700511

DEPARTMENT OF ENERGY
Environmental Management Los Alamos Field Office (EM-LA)
Los Alamos, New Mexico 87544

JUL 2 3 2019

Mr. John E. Kieling
Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Dear Mr. Kieling:

Subject: Monthly Notification of Groundwater Data Reviewed in July 2019

This letter is the U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) written submission in accordance with Section XXVI.D of the 2016 Compliance Order on Consent (Consent Order). Members of EM-LA and N3B met on July 11, 2019, to review groundwater data received in June 2019 in accordance with Section XXVI.C of the 2016 Consent Order. The enclosed report was prepared by comparing the data against groundwater notification criteria as defined in Section IX of the 2016 Consent Order. These criteria consider New Mexico Water Quality Control Commission (NMWQCC) groundwater standards, U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs), New Mexico Environment Department (NMED) screening levels for tap water, EPA regional screening levels for tap water, and NMED-approved background values for hydrogeological zones as set forth in the "Groundwater Background Investigation Report, Revision 5." For comparison with EPA tap water standards, the standard's carcinogenic risk value was adjusted to 1×10^{-5}, as specified in the Consent Order.

The enclosed report was prepared using the May 2019 EPA regional screening levels for tap water; the NMWQCC groundwater standards, published December 21, 2018; and the February 2019 Table A-1 of "Risk Assessment Guidance for Site Investigations and Remediation" for NMED tap water screening levels.

The first samples were collected from new well R-70. These results were collected at the end of aquifer testing and are considered screening-level data and therefore are not included in this month's report. However, for completeness in reporting, note that the results for chromium meet the "CA" criteria for first detection above the applicable screening level.

1-Day Notification

There were no instances of a contaminant detected at a concentration that exceeded the NMWQCC groundwater standard or federal MCL at locations where contaminants have not previously been detected above the respective standard as defined in the Consent Order (based on samples collected since June 14, 2007).

One-day notification was not required because there were no cases of a contaminant detected in a well screen interval or spring at a concentration that exceeded a water quality standard for the first time.

15-Day Notification

The required information for the contaminants and other chemical parameters that meet the five reporting criteria requiring written notification within 15 days is given in the accompanying report and tables.

If you have questions, please contact Steve Veenis at (505) 309-1362 (steve.veenis@em-la.doe.gov) or Hai Shen at (505) 665-5046 (hai.shen@em.doe.gov).

Sincerely,

Arturo Q. Duran
Compliance and Permitting Manager
Environmental Management
Los Alamos Field Office

Enclosure:

1. Two hard copies with electronic files - Summary of Groundwater Data Reviewed in July 2019 That Meet Notification Requirements (EM2019-0275)

cc (letter with CD/DVD enclosure[s]):
H. Burgess, Los Alamos County, Los Alamos, NM (2 copies)

cc (letter and enclosure[s] emailed):
L. King, EPA Region 6, Dallas, TX
R. Martinez, San Ildefonso Pueblo, NM
D. Chavarria, Santa Clara Pueblo, NM
D. Gomez, Los Alamos County, Los Alamos, NM
M. Hunter, NMED
S. Pullen, NMED
A.C. Romero, NMED
M. Sandoval, NMED
S. Yanicak, NMED
J. Buckley, LANL
L. Dale, LANL
B. Iacona, LANL
W. Mairson, LANL

SUMMARY OF GROUNDWATER DATA REVIEWED IN JULY 2019
THAT MEET NOTIFICATION REQUIREMENTS

INTRODUCTION

This report provides information to the New Mexico Environment Department (NMED) concerning recent groundwater monitoring data obtained by Newport News Nuclear BWXT-Los Alamos, LLC (N3B) under the annual "Interim Facility-Wide Groundwater Monitoring Plan" for the 2019 monitoring year and contains results for contaminants and other chemical constituents that meet the five screening criteria described in Section XXVI of the 2016 Compliance Order on Consent modified February 2017 (2016 Consent Order). The report covers groundwater samples collected from wells or springs (listed in the accompanying tables) that provide surveillance of the hydrogeological zones at Los Alamos National Laboratory as indicated in the tables.

The report includes two tables. Table 1, NMED 06-19 Groundwater Report, presents results since June 14, 2007, that met the five reporting criteria as specified in the 2016 Consent Order. Table 2, NMED 06-19 Groundwater Report Addendum, presents results that exceed the 95th percentile of those results in the data set defined in the "Groundwater Background Investigation Report, Revision 5." Only the contaminants and other chemical constituents that lack a calculated groundwater background value (i.e., the frequency of detections was too low to calculate a background value at the 95% upper tolerance level) are listed in this table. Table 2 is a voluntary submission by N3B to NMED to identify the potential risk resulting from contaminants and other chemical constituents that are without defined background values.

These tables include the following:

- Comments on results that appear to be exceptional based on consideration of monitoring data acquired from previous analyses (using statistics described below)
- Supplemental information summarizing monitoring results obtained from previous analyses
- Sampling date, name of the well or spring, location of the well or spring, depth of the screened interval, 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.

This report was prepared by comparing the data against groundwater notification criteria as defined in Section IX of the 2016 Consent Order. These criteria consider New Mexico Water Quality Control Commission (NMWQCC) groundwater standards, U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs), NMED screening levels for tap water, EPA regional screening levels for tap water, and NMED-approved background values for hydrogeological zones as set forth in the "Groundwater Background Investigation Report, Revision 5." For comparison with EPA tap water standards, the standard's carcinogenic risk value was adjusted to 1×10^{-5}, as specified in the 2016 Consent Order. This report was prepared using the May 2019 EPA regional screening levels for tap water, the NMWQCC groundwater standards published December 21, 2018, and the NMED tap water screening levels specified in the February 2019 Table A-1 of "Risk Assessment Guidance for Site Investigations and Remediation."

Background values applied in Table 1 notification criteria C2 and C4 are the background values for hydrogeological zones as set forth in the NMED-approved "Groundwater Background Investigation Report, Revision 5."

Screening values applied in Table 2 criteria XC2scr and XC4scr are the 95th percentile of the data set used to establish background as defined in the “Groundwater Background Investigation Report, Revision 5.”

DESCRIPTION OF TABLES

15-Day Notification Requirement

Table 1 is divided into separate categories that correspond to the five screening criteria in Section XXVI of the 2016 Consent Order. In several cases, data met more than one of the notification criteria and therefore appear in the table multiple times.

The criteria codes (the “C” stands for criterion) and their definitions are as follows:

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 (1) exceeds the lower of either one-half the NMWQCC water quality standard or one-half the federal MCL, or, if there is no such standard for the contaminant, (2) exceeds one-half the tap water screening levels in Table A-1 of NMED' s “Risk Assessment Guidance for Site Investigations and Remediation” (February 2019), or, if there is no NMED tap water screening level available for a contaminant, (3) exceeds one-half the EPA regional 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 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.

C5. Detection of a contaminant in a spring or screened interval of a well at a concentration that exceeds either one-half the NMWQCC water quality standard or one-half the federal MCL, and which has increased for the third consecutive sampling of that spring or screened interval.

Table 2 is divided into two categories that correspond to two screening criteria. They mirror criteria C2 and C4 in Table 1, respectively.

The two criteria are as follows:

XC2scr Detection of a contaminant that is a metal or other inorganic compound at a concentration above the 95th percentile in a spring or screened interval of a well if that contaminant has not previously exceeded the 95th percentile of the data set used to establish background in the spring or screened interval as defined in the “Groundwater Background Investigation Report, Revision 5.”

XC4scr 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 for the third consecutive sampling exceeds 2 times the 95th percentile of the data set used to establish background as defined in the “Groundwater Background Investigation Report, Revision 5.”

Columns 2 through 8 in both tables provide summary statistics for metals or organic/inorganic compounds by field preparation code (e.g., filtered aluminum) for samples collected since January 1, 2000, including the currently reported data. The statistics include the date of the first sampling event; the number 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 as follows:

Canyon—canyon where monitoring location is found

Zone—hydrogeological zone from which the groundwater sample was collected (e.g., alluvial spring)

Location—monitoring location name

Screen Depth—depth of top of well screen in feet (0 for springs, –1 if unknown)

Start Date—date the sample was collected

Fld QC Type Code—identifies regular samples (REG) or field duplicates (FD)

Fld Prep Code—identifies whether samples are filtered (F) or unfiltered (UF)

Lab Sample Type Code—indicates whether result is a primary sample (INIT) or reanalysis (RE)

Anyl Suite Code—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—analytical result in standard measurement units

Result/Median—ratio of the Std Result to the median of all detections since 2000

LVL Type/Risk Code—type of regulatory standard, screening level, or background value (indicating groundwater zone) used for comparison

Screen Level—value of the LVL Type/Risk Code

Exceedance Ratio—ratio of Std Result to LVL Type/Risk Code. In earlier versions of this report, the ratio was divided by the basis for comparison in the criterion, but that is no longer the case. For example, for a

criterion (such as C3) that compares the value with one-half the standard, a value equal to a standard previously had an exceedance ratio of 2. The current report shows this ratio as 1.

Std MDL—method detection limit in standard measurement units

Std UOM—standard units of measurement

Dilution Factor—amount by which the sample was diluted to measure the concentration

Lab Qualifier—analytical laboratory qualifiers indicating analytical quality of the sample data

Validation Qualifier—the qualifier that indicates the effects of all processes associated with the sample (i.e., sample collection, additional quality control samples such as field duplicates, etc.) on the quality of the sample data

Validation Reason Code—an explanation of the reason for validation of the qualifiers

Anyl Meth Code—analytical method number

Lab Code—analytical laboratory name

Comment—N3B comment regarding the analytical result

The tables may include the following acronyms, abbreviations, and analytical laboratory codes and qualifiers.

Acronyms and Abbreviations

DNX—hexahydro-1,3-dinitro-5-nitro-1,3,5-triazine

EPA MCL—U.S. Environmental Protection Agency maximum contaminant level

GENINORG- General Inorganic

HMX-octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine

HEXP-high explosive

LANL Int BG LV—Los Alamos National Laboratory intermediate background level

LANL Reg BG LV—Los Alamos National Laboratory regional background level

LCMS/MS—liquid chromatography mass spectrometry/mass spectrometry

MDL—Method detection limit

MNX-hexahydro-1-nitroso-3,5-dinitro-1,3,5-triazine

NM GW STD—New Mexico Water Quality Control Commission groundwater standard

NMED A1 TAP SCRN LVL—New Mexico Environment Department screen level for tap water

NTU—nephelometric turbidity unit

PQL—Practical quantitation limit

RDX—Royal Demolition Explosive (hexahydro-1,3,5-trinitro-1,3,5-triazine)

SVOC—semivolatile organic compound

TDS—total dissolved solids

TNX—2,4,6-trinitroxylene

UOM—units of measurement

VOC—Volatile organic compound

Analytical Laboratory Codes and Qualifiers

∗ (lab qualifier) – (inorganic)- Duplicate analysis (relative percent difference) is not within control limits.

I4a (Validation reason code)—The affected analyte is considered estimated and biased high because this analyte was identified in the method blank but was greater than 5 times the concentration of the affected analyte in the sample.

BJ (Lab qualifier)—Analyte is present in the blank, and the associated numerical value is an estimated quantity.

F—filtered

FD—field duplicate

GELC—General Engineering Laboratories, Inc., Charleston, SC.

GENINORG—general inorganic

H (lab qualifier) – The required extraction or analysis holding time for this result was exceeded.

INIT—primary sample

J (lab qualifier)—The associated numerical value is an estimated quantity.

J (validation qualifier)—The analyte is classified as detected, but the reported concentration value is expected to be more uncertain than usual.

J- (validation qualifier)—The analyte is classified as detected, but the reported concentration value is expected to be more uncertain than usual with a potential positive bias.

J_LAB (validation reason code)—The analytical laboratory qualified the detected result as estimated (J) because the result was less than the PQL but greater than the MDL.

N (lab qualifier)-Spiked sample recovery is not within control limits.

NQ (validation qualifier)—No validation qualifier flag is associated with this result, and the analyte is classified as detected.

NQ (validation reason code)—The analytical laboratory did not qualify the analyte as not detected and/or with any other standard qualifier. The analyte is detected in the sample.

RE—reanalysis

REG—regular sample

UF—Unfiltered

V9b (validation reason code)—The preserved sample was analyzed outside the 14-day holding time or the unpreserved sample was analyzed outside the 7-day holding time.

Table 1: NMED 6-19 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen 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 Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C1	35	50	6/15/2005	0.34	0.34	0.34	1	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	UF	INIT	VOC	Naphthalene	91-20-3	0.34	1	NMED A1 TAP SCRN LVL	1.65	0	0.3	µg/L	1	J	J	J_LAB	SW-846:8260B	GELC	
C4	49	54	6/9/2005	14	35.1	17.85	54	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	METALS	Barium	Ba	30.9	1.7	LANL Int BG LVL	13.5	2.3	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	49	54	6/9/2005	16.7	40.6	20.6	54	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	GENINORG	Calcium	Ca	30.7	1.5	LANL Int BG LVL	10.7	2.9	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	49	54	6/9/2005	4.89	18.1	7.41	54	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	18	2.4	LANL Int BG LVL	3.11	5.8	0.134	mg/L	2		NQ	NQ	EPA:300.0	GELC	
C4	49	54	6/9/2005	54.40	131	67.75	54	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	GENINORG	Hardness	HARDNESS	105.00	1.5	LANL Int BG LVL	37.8	2.8	0.453	mg/L	1		NQ	NQ	SM:A2340B	GELC	
C4	49	54	6/9/2005	2.99	7.61	3.945	54	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	GENINORG	Magnesium	Mg	6.90	1.7	LANL Int BG LVL	3.14	2.2	0.11	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	49	54	6/9/2005	3.17	16.8	5.09	54	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	12.50	2.5	LANL Int BG LVL	0.459	27.2	0.425	mg/L	25		NQ	NQ	EPA:353.2	GELC	
C4	49	54	6/9/2005	68.70	239	97.9	54	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	GENINORG	Perchlorate	ClO4	170.00	1.7	LANL Int BG LVL	0.27	629.6	10	µg/L	200		NQ	NQ	SW-846:6850	GELC	
C4	49	54	6/9/2005	68.60	189	94.3	54	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	METALS	Strontium	Sr	173.00	1.8	LANL Int BG LVL	59.6	2.9	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	49	54	6/9/2005	10.10	35.1	14.35	54	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	31.90	2.2	LANL Int BG LVL	7.1	4.5	0.266	mg/L	2		NQ	NQ	EPA:300.0	GELC	
C4	55	75	6/15/2005	30.10	48.2	40.1	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	METALS	Barium	Ba	35.30	0.9	LANL Int BG LVL	13.5	2.6	1	µg/L	1	*	NQ	NQ	SW-846:6010C	GELC	
C4	55	75	6/15/2005	42.80	75.5	63.3	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Calcium	Ca	60.10	0.9	LANL Int BG LVL	10.7	5.6	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	55	75	6/15/2005	21.20	64.8	54.8	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	50.80	0.9	LANL Int BG LVL	3.11	16.3	0.67	mg/L	10	H	NQ	NQ	EPA:300.0	GELC	
C4	55	75	6/15/2005	142.00	253	212	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Hardness	HARDNESS	200.00	0.9	LANL Int BG LVL	37.8	5.3	0.453	mg/L	1		NQ	NQ	SM:A2340B	GELC	
C4	55	75	6/15/2005	8.49	15.7	12.9	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Magnesium	Mg	12.20	0.9	LANL Int BG LVL	3.14	3.9	0.11	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	55	75	6/15/2005	2.90	41.8	21.7	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	METALS	Nickel	Ni	18.20	0.8	LANL Int BG LVL	3.65	5	0.6	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	55	75	6/15/2005	7.62	20.4	10	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	11.10	1.1	LANL Int BG LVL	0.459	24.2	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	55	75	6/15/2005	56.30	246	81.4	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Perchlorate	ClO4	93.60	1.1	LANL Int BG LVL	0.27	346.7	5	µg/L	100	H	NQ	NQ	SW-846:6850	GELC	
C4	55	75	6/15/2005	196.00	339	278	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	METALS	Strontium	Sr	270.00	1	LANL Int BG LVL	59.6	4.5	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	

Table 1: NMED 6-19 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen 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 Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C4	55	75	6/15/2005	34.70	77.6	59.6	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	50.00	0.8	LANL Int BG LVL	7.1	7	1.33	mg/L	10	H	NQ	NQ	EPA:300.0	GELC	
C4	33	34	1/11/2007	29.90	51.3	37.25	34	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	METALS	Barium	Ba	29.90	0.8	LANL Int BG LVL	13.5	2.2	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	33	34	1/11/2007	47.10	87.6	69.3	34	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	GENINORG	Calcium	Ca	47.10	0.7	LANL Int BG LVL	10.7	4.4	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	34	36	1/11/2007	80.50	124	92.35	36	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	102.00	1.1	LANL Int BG LVL	3.11	32.8	1.34	mg/L	20	H	NQ	NQ	EPA:300.0	GELC	
C4	33	34	1/11/2007	148.00	270	214.5	34	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	GENINORG	Hardness	HARDNESS	148.00	0.7	LANL Int BG LVL	37.8	3.9	0.453	mg/L	1		NQ	NQ	SM:A2340B	GELC	
C4	33	34	1/11/2007	7.47	13	10.3	34	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	GENINORG	Magnesium	Mg	7.47	0.7	LANL Int BG LVL	3.14	2.4	0.11	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	33	34	1/11/2007	44.90	97	74.2	34	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	METALS	Molybdenum	Mo	60.80	0.8	LANL Int BG LVL	2.9	21	0.2	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	34	36	1/11/2007	0.25	4.99	2.14	36	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.49	0.7	LANL Int BG LVL	0.459	3.2	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	34	36	1/11/2007	0.61	1.58	0.933	36	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.70	0.7	LANL Int BG LVL	0.27	2.6	0.05	µg/L	1		NQ	NQ	SW-846:6850	GELC	
C4	33	34	1/11/2007	50.70	65.1	56.4	34	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	GENINORG	Sodium	Na	58.50	1	LANL Int BG LVL	18.2	3.2	0.1	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	33	34	1/11/2007	214.00	383	308	34	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	METALS	Strontium	Sr	214.00	0.7	LANL Int BG LVL	59.6	3.6	1	ug/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	34	36	1/11/2007	42.00	112	85.2	36	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	43.70	0.5	LANL Int BG LVL	7.1	6.2	2.66	mg/L	20	H	NQ	NQ	EPA:300.0	GELC	
C4	42	56	10/21/2008	56.10	76.7	67.8	56	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	METALS	Barium	Ba	69.50	1	LANL Int BG LVL	13.5	5.1	1	µg/L	1	*	NQ	NQ	SW-846:6010C	GELC	
C4	42	56	10/21/2008	59.50	76.3	68	56	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	GENINORG	Calcium	Ca	65.20	1	LANL Int BG LVL	10.7	6.1	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	42	54	10/21/2008	53.4	93	66.65	54	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	76.4	1.1	LANL Int BG LVL	3.11	24.6	0.67	mg/L	10	H	J-	l9b	EPA:300.0	GELC	
C4	42	56	10/21/2008	204	263	235	56	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	GENINORG	Hardness	HARDNESS	227	1	LANL Int BG LVL	37.8	6	0.453	mg/L	1		NQ	NQ	SM:A2340B	GELC	
C4	41	54	10/21/2008	13.10	17.5	15.75	54	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	GENINORG	Magnesium	Mg	15.70	1	LANL Int BG LVL	3.14	5	0.11	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	42	56	10/21/2008	14.00	19.6	16.8	56	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	METALS	Nickel	Ni	14.00	0.8	LANL Int BG LVL	3.65	3.8	0.6	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	42	54	10/21/2008	2.89	5.1	4.165	54	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.62	0.9	LANL Int BG LVL	0.459	7.9	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	

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Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen 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 Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C4	42	54	10/21/2008	0.83	1.12	0.9615	54	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.90	0.9	LANL Int BG LVL	0.27	3.3	0.05	µg/L	1	H	NQ	NQ	SW-846:6850	GELC	
C4	42	56	10/21/2008	264.00	360	326	56	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	METALS	Strontium	Sr	316.00	1	LANL Int BG LVL	59.6	5.3	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	42	54	10/21/2008	77.90	103	88.7	54	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	88.70	1	LANL Int BG LVL	7.1	12.5	1.33	mg/L	10	H	J-	I9b	EPA:300.0	GELC	
C4	42	56	10/21/2008	1.20	2.27	1.83	56	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	GENINORG	Uranium	U	2.04	1.1	LANL Int BG LVL	0.992	2.1	0.067	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	49	52	8/30/2007	68.00	389	346	52	Sandia Canyon	Regional Deep	R-35a	1013	5/7/2019	FD	F	INIT	METALS	Barium	Ba	312.00	0.9	LANL Reg BG LVL	38.1	8.2	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	49	52	8/30/2007	68.00	389	346	52	Sandia Canyon	Regional Deep	R-35a	1013	5/7/2019	REG	F	INIT	METALS	Barium	Ba	285.00	0.8	LANL Reg BG LVL	38.1	7.5	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	48	51	8/30/2007	5.97	7.31	6.42	51	Sandia Canyon	Regional Deep	R-35a	1013	5/7/2019	FD	F	INIT	GENINORG	Chloride	Cl(-1)	6.41	1	LANL Reg BG LVL	2.7	2.4	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	48	51	8/30/2007	5.97	7.31	6.42	51	Sandia Canyon	Regional Deep	R-35a	1013	5/7/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	6.38	1	LANL Reg BG LVL	2.7	2.4	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	41	44	11/10/2008	3.37	6.59	4.55	44	Sandia Canyon	Regional Deep	R-43 S2	969	5/16/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	6.47	1.4	LANL Reg BG LVL	2.7	2.4	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	41	49	11/10/2008	1.80	29.6	5.79	39	Sandia Canyon	Regional Deep	R-43 S2	969	5/16/2019	REG	F	INIT	METALS	Chromium	Cr	29.60	5.1	LANL Reg BG LVL	7.48	4	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	41	43	11/10/2008	0.39	5.4	2.28	43	Sandia Canyon	Regional Deep	R-43 S2	969	5/16/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.90	1.7	LANL Reg BG LVL	0.769	5.1	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	41	44	11/10/2008	0.41	0.953	0.6405	44	Sandia Canyon	Regional Deep	R-43 S2	969	5/16/2019	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.95	1.5	LANL Reg BG LVL	0.414	2.3	0.05	µg/L	1		NQ	NQ	SW-846:6850	GELC	
C4	41	44	11/10/2008	3.96	10.1	6.29	44	Sandia Canyon	Regional Deep	R-43 S2	969	5/16/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	9.53	1.5	LANL Reg BG LVL	4.59	2.1	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	47	54	3/5/2009	6.1	47.4	18.3	53	Mortandad Canyon	Regional Deep	R-45 S2	974.9	5/15/2019	REG	F	INIT	METALS	Chromium	Cr	29	1.6	LANL Reg BG LVL	7.48	3.9	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	61	72	5/17/2005	2.27	7.43	5.305	72	Sandia Canyon	Regional Top	R-11	855	5/17/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.6	1.1	LANL Reg BG LVL	0.769	7.3	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	61	72	5/17/2005	5.95	15.4	10.2	72	Sandia Canyon	Regional Top	R-11	855	5/17/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	10.1	1	LANL Reg BG LVL	4.59	2.2	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	53	62	2/24/2000	1.35	3.31	2.19	62	Mortandad Canyon	Regional Top	R-15	958.6	5/9/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.98	0.9	LANL Reg BG LVL	0.769	2.6	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	49	57	5/25/2005	5.34	12.3	7.51	57	Mortandad Canyon	Regional Top	R-15	958.6	5/9/2019	REG	F	INIT	GENINORG	Perchlorate	ClO4	9.72	1.3	LANL Reg BG LVL	0.414	23.5	0.5	µg/L	10		NQ	NQ	SW-846:6850	GELC	
C4	41	47	3/12/2008	4.05	6.83	6.04	47	Sandia Canyon	Regional Top	R-36	766.9	5/8/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	6.26	1	LANL Reg BG LVL	2.7	2.3	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	41	48	3/12/2008	1.25	6.8	2.4	48	Sandia Canyon	Regional Top	R-36	766.9	5/8/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.39	1	LANL Reg BG LVL	0.769	3.1	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	40	46	3/12/2008	0.845	1.74	1.545	46	Sandia Canyon	Regional Top	R-36	766.9	5/8/2019	REG	F	INIT	GENINORG	Perchlorate	ClO4	1.32	0.9	LANL Reg BG LVL	0.414	3.2	0.05	µg/L	1		NQ	NQ	SW-846:6850	GELC	
C4	42	48	11/5/2008	3.6	9.39	7.165	48	Sandia Canyon	Regional Top	R-43 S1	903.9	5/10/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	9.03	1.3	LANL Reg BG LVL	2.7	3.3	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	42	53	11/5/2008	2.35	200	73.35	50	Sandia Canyon	Regional Top	R-43 S1	903.9	5/10/2019	REG	F	INIT	METALS	Chromium	Cr	197	2.7	LANL Reg BG LVL	7.48	26.3	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	

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C4	42	47	11/5/2008	4.9	6.15	5.41	46	Sandia Canyon	Regional Top	R-43 S1	903.9	5/10/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.09	0.9	LANL Reg BG LVL	0.769	6.6	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	42	48	11/5/2008	8.77	21	14.65	48	Sandia Canyon	Regional Top	R-43 S1	903.9	5/10/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	18.5	1.3	LANL Reg BG LVL	4.59	4	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	50	52	2/17/2009	1.99	18.2	2.37	52	Mortandad Canyon	Regional Top	R-44 S1	895	4/30/2019	FD	F	INIT	GENINORG	Chloride	Cl(-1)	18.1	7.6	LANL Reg BG LVL	2.7	6.7	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	50	52	2/17/2009	1.99	18.2	2.37	52	Mortandad Canyon	Regional Top	R-44 S1	895	5/15/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	16.3	6.9	LANL Reg BG LVL	2.7	6	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	50	52	2/17/2009	1.99	18.2	2.37	52	Mortandad Canyon	Regional Top	R-44 S1	895	4/30/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	18.2	7.7	LANL Reg BG LVL	2.7	6.7	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	50	52	2/17/2009	0.536	20	1.73	25	Mortandad Canyon	Regional Top	R-44 S1	895	4/30/2019	FD	F	INIT	METALS	Nickel	Ni	19.4	11.2	LANL Reg BG LVL	2.9	6.7	0.6	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	50	52	2/17/2009	0.536	20	1.73	25	Mortandad Canyon	Regional Top	R-44 S1	895	5/15/2019	REG	F	INIT	METALS	Nickel	Ni	20.2	11.7	LANL Reg BG LVL	2.9	7	0.6	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	50	52	2/17/2009	0.536	20	1.73	25	Mortandad Canyon	Regional Top	R-44 S1	895	4/30/2019	REG	F	INIT	METALS	Nickel	Ni	20	11.6	LANL Reg BG LVL	2.9	6.9	0.6	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	50	52	2/17/2009	0.123	2.53	1.15	51	Mortandad Canyon	Regional Top	R-44 S1	895	4/30/2019	FD	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.32	2	LANL Reg BG LVL	0.769	3	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	50	52	2/17/2009	0.123	2.53	1.15	51	Mortandad Canyon	Regional Top	R-44 S1	895	5/15/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.46	2.1	LANL Reg BG LVL	0.769	3.2	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	50	52	2/17/2009	0.123	2.53	1.15	51	Mortandad Canyon	Regional Top	R-44 S1	895	4/30/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.32	2	LANL Reg BG LVL	0.769	3	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	50	52	2/17/2009	2.76	18.9	3.425	52	Mortandad Canyon	Regional Top	R-44 S1	895	4/30/2019	FD	F	INIT	GENINORG	Sulfate	SO4(-2)	18.9	5.5	LANL Reg BG LVL	4.59	4.1	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	50	52	2/17/2009	2.76	18.9	3.425	52	Mortandad Canyon	Regional Top	R-44 S1	895	5/15/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	17	5	LANL Reg BG LVL	4.59	3.7	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	50	52	2/17/2009	2.76	18.9	3.425	52	Mortandad Canyon	Regional Top	R-44 S1	895	4/30/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	18.9	5.5	LANL Reg BG LVL	4.59	4.1	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	48	54	2/28/2009	8.4	50.7	35.6	54	Mortandad Canyon	Regional Top	R-45 S1	880	5/15/2019	REG	F	INIT	METALS	Chromium	Cr	30	0.8	LANL Reg BG LVL	7.48	4	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	48	50	2/28/2009	0.256	3.47	2.865	50	Mortandad Canyon	Regional Top	R-45 S1	880	5/15/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.62	0.9	LANL Reg BG LVL	0.769	3.4	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	50	56	3/6/2010	4.68	18.3	8.655	56	Mortandad Canyon	Regional Top	R-50 S1	1077	5/9/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	17.2	2	LANL Reg BG LVL	2.7	6.4	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	50	56	3/6/2010	4.68	18.3	8.655	56	Mortandad Canyon	Regional Top	R-50 S1	1077	4/29/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	18.3	2.1	LANL Reg BG LVL	2.7	6.8	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	50	58	3/6/2010	49.8	150	99.05	58	Mortandad Canyon	Regional Top	R-50 S1	1077	5/9/2019	REG	F	INIT	METALS	Chromium	Cr	51.2	0.5	LANL Reg BG LVL	7.48	6.8	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	50	58	3/6/2010	49.8	150	99.05	58	Mortandad Canyon	Regional Top	R-50 S1	1077	4/29/2019	REG	F	INIT	METALS	Chromium	Cr	52.6	0.5	LANL Reg BG LVL	7.48	7	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	50	57	3/6/2010	0.398	2.77	1.89	57	Mortandad Canyon	Regional Top	R-50 S1	1077	5/9/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.49	1.3	LANL Reg BG LVL	0.769	3.2	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	50	57	3/6/2010	0.398	2.77	1.89	57	Mortandad Canyon	Regional Top	R-50 S1	1077	4/29/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.46	1.3	LANL Reg BG LVL	0.769	3.2	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	50	56	3/6/2010	7.22	19.6	13.15	56	Mortandad Canyon	Regional Top	R-50 S1	1077	5/9/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	18.4	1.4	LANL Reg BG LVL	4.59	4	0.665	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	50	56	3/6/2010	7.22	19.6	13.15	56	Mortandad Canyon	Regional Top	R-50 S1	1077	4/29/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	19.60	1.5	LANL Reg BG LVL	4.59	4.3	0.665	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	35	41	5/20/2011	2.03	23.3	19.75	40	Mortandad Canyon	Regional Top	R-61 S1	1125	5/16/2019	REG	F	INIT	METALS	Chromium	Cr	21.30	1.1	LANL Reg BG LVL	7.48	2.8	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	35	41	5/20/2011	0.43	2.64	1.97	41	Mortandad Canyon	Regional Top	R-61 S1	1125	5/16/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.17	1.1	LANL Reg BG LVL	0.769	2.8	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	34	40	5/20/2011	2.96	16.2	10.85	40	Mortandad Canyon	Regional Top	R-61 S1	1125	5/16/2019	REG	F	INIT	GENINORG	Perchlorate	ClO4	12.80	1.2	LANL Reg BG LVL	0.414	30.9	0.5	µg/L	10		NQ	NQ	SW-846:6850	GELC	
C4	27	33	3/26/2012	1.64	18.8	9.19	33	Sandia Canyon	Regional Top	R-62	1158	5/14/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	18.80	2	LANL Reg BG LVL	2.7	7	0.335	mg/L	5	H	J-	I9b	EPA:300.0	GELC	
C4	27	33	3/26/2012	104.00	311	161	33	Sandia Canyon	Regional Top	R-62	1158	5/14/2019	REG	F	INIT	METALS	Chromium	Cr	284.00	1.8	LANL Reg BG LVL	7.48	38	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	27	33	3/26/2012	0.07	2.25	1.33	33	Sandia Canyon	Regional Top	R-62	1158	5/14/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.25	1.7	LANL Reg BG LVL	0.769	2.9	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	

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C4	27	33	3/26/2012	0.72	0.89	0.799	33	Sandia Canyon	Regional Top	R-62	1158	5/14/2019	REG	F	INIT	GENINORG	Perchlorate	ClO4	0.87	1.1	LANL Reg BG LVL	0.414	2.1	0.05	µg/L	1	H	NQ	NQ	SW-846:6850	GELC	
C4	27	33	3/26/2012	2.56	33	16	33	Sandia Canyon	Regional Top	R-62	1158	5/14/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	33.00	2.1	LANL Reg BG LVL	4.59	7.2	0.665	mg/L	5	H	J-	I9b	EPA:300.0	GELC	
C5	33	34	1/11/2007	1.50	8.56	2.605	18	Sandia Canyon	Intermediate Perched	SCI-1	358	5/20/2019	REG	F	INIT	METALS	Arsenic	As	5.48	2.1	EPA MCL	10	0.5	2	µg/L	1		NQ	NQ	SW-846:6020	GELC	

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Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen 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 Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
XC2scr	49	54	6/9/2005	2.5	14	3.275	10	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	METALS	Tin	Sn	14	4.3	Int-Scr_95	13	1.1	2.5	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
XC2scr	55	75	6/15/2005	3	33	4.9	13	Mortandad Canyon	Intermediate Perched	MCOI-6	686.000	5/13/2019	REG	F	INIT	METALS	Tin	Sn	33	6.8	Int-Scr_95	13.0	2.6	2.50	µg/L	1.00		J+	I4a	SW-846:6010C	GELC	
XC2scr	33	34	1/11/2007	2.8	26.5	5.37	4	Sandia Canyon	Intermediate Perched	SCI-1	358.400	5/20/2019	REG	F	INIT	METALS	Tin	Sn	26.5	4.9	Int-Scr_95	13.00	2.0	2.50	µg/L	1.0		NQ	NQ	SW-846:6010C	GELC	
XC2scr	42	56	10/21/2008	3	35	5	13	Sandia Canyon	Intermediate Perched	SCI-2	548.000	5/14/2019	REG	F	INIT	METALS	Tin	Sn	35	7.1	Int-Scr_95	13	2.7	2.50	µg/L	1.00		J+	I4a	SW-846:6010C	GELC	
XC2scr	41	45	11/10/2008	0.646	0.646	0.646	1	Sandia Canyon	Regional Deep	R-43 S2	969.1	5/16/2019	REG	F	INIT	METALS	Lead	Pb	0.646	1	Reg-Scr_95	0.5	1.3	0.5	µg/L	1	J	J	J_LAB	SW-846:6020	GELC	
XC2scr	47	49	3/5/2009	6.71	13.8	10.255	2	Mortandad Canyon	Regional Deep	R-45 S2	974.9	5/15/2019	REG	F	INIT	METALS	Tin	Sn	13.8	1.3	Reg-Scr_95	13	1.1	2.5	µg/L	1		J+	I4a	SW-846:6010C	GELC	
XC2scr	58	67	2/3/2006	2.73	19.5	3.49	8	Sandia Canyon	Regional Top	R-11	855	5/17/2019	REG	F	INIT	METALS	Tin	Sn	19.5	5.6	Reg-Scr_95	13	1.5	2.5	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
XC2scr	51	53	2/17/2009	35.5	66	39.25	4	Mortandad Canyon	Regional Top	R-44 S1	895	5/15/2019	REG	F	INIT	METALS	Iron	Fe	66	1.7	Reg-Scr_95	53.8	1.2	30	µg/L	1	J	J	J_LAB	SW-846:6010C	GELC	
XC2scr	51	53	2/17/2009	4.2	16.8	7.52	3	Mortandad Canyon	Regional Top	R-44 S1	895	5/15/2019	REG	F	INIT	METALS	Tin	Sn	16.8	2.2	Reg-Scr_95	13	1.3	2.5	µg/L	1		J+	I4a	SW-846:6010C	GELC	
XC2scr	48	50	2/28/2009	2.8	17.1	7.44	4	Mortandad Canyon	Regional Top	R-45 S1	880	5/15/2019	REG	F	INIT	METALS	Tin	Sn	17.1	2.3	Reg-Scr_95	13	1.3	2.5	µg/L	1		J+	I4a	SW-846:6010C	GELC	
XC4scr	49	54	6/9/2005	0.083	0.254	0.14	48	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.254	1.8	Int-Scr_95	0.0716	3.5	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
XC4scr	55	75	6/15/2005	25.4	56	46.8	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	METALS	Boron	B	55.3	1.2	Int-Scr_95	16.2	3.4	15	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	55	75	6/15/2005	0.212	0.703	0.5725	72	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.47	0.8	Int-Scr_95	0.0716	6.6	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
XC4scr	55	78	6/15/2005	29.4	86.6	60.25	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	METALS	Chromium	Cr	64.6	1.1	Int-Scr_95	2.72	24	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	

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Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen 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 Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
XC4scr	55	75	6/15/2005	298	527	404	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	483	1.2	Int-Scr_95	135	3.6	3.4	mg/L	1	H	NQ	NQ	EPA:160.1	GELC	
XC4scr	33	34	1/11/2007	40.8	99.4	82.8	33	Sandia Canyon	Intermediate Perched	SCI-1	358.4	5/20/2019	REG	F	INIT	METALS	Boron	B	72.8	0.9	Int-Scr_95	16.2	4.5	15	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	33	34	1/11/2007	0.585	1.53	0.943	33	Sandia Canyon	Intermediate Perched	SCI-1	358.4	5/20/2019	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.59	0.6	Int-Scr_95	0.0716	8.2	0.067	mg/L	1		J-	I9b	EPA:300.0	GELC	
XC4scr	33	36	1/11/2007	7.99	22.1	12.6	35	Sandia Canyon	Intermediate Perched	SCI-1	358.4	5/20/2019	REG	F	INIT	METALS	Chromium	Cr	7.99	0.6	Int-Scr_95	2.72	2.9	3	µg/L	1	J	J	J_LAB	SW-846:6020	GELC	
XC4scr	34	36	1/11/2007	357	536	483	36	Sandia Canyon	Intermediate Perched	SCI-1	358.4	5/20/2019	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	481	1	Int-Scr_95	135	3.6	3.4	mg/L	1	H	NQ	NQ	EPA:160.1	GELC	
XC2scr	49	54	6/9/2005	2.5	14	3.275	10	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	METALS	Tin	Sn	14	4.3	Int-Scr_95	13	1.1	2.5	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
XC2scr	55	75	6/15/2005	3	33	4.9	13	Mortandad Canyon	Intermediate Perched	MCOI-6	686.000	5/13/2019	REG	F	INIT	METALS	Tin	Sn	33	6.8	Int-Scr_95	13.0	2.6	2.50	µg/L	1.00		J+	I4a	SW-846:6010C	GELC	
XC2scr	33	34	1/11/2007	2.8	26.5	5.37	4	Sandia Canyon	Intermediate Perched	SCI-1	358.400	5/20/2019	REG	F	INIT	METALS	Tin	Sn	26.5	4.9	Int-Scr_95	13.00	2.0	2.50	µg/L	1.0		NQ	NQ	SW-846:6010C	GELC	
XC2scr	42	56	10/21/2008	3	35	5	13	Sandia Canyon	Intermediate Perched	SCI-2	548.000	5/14/2019	REG	F	INIT	METALS	Tin	Sn	35	7.1	Int-Scr_95	13	2.7	2.50	µg/L	1.00		J+	I4a	SW-846:6010C	GELC	
XC2scr	41	45	11/10/2008	0.646	0.646	0.646	1	Sandia Canyon	Regional Deep	R-43 S2	969.1	5/16/2019	REG	F	INIT	METALS	Lead	Pb	0.646	1	Reg-Scr_95	0.5	1.3	0.5	µg/L	1	J	J	J_LAB	SW-846:6020	GELC	
XC2scr	47	49	3/5/2009	6.71	13.8	10.255	2	Mortandad Canyon	Regional Deep	R-45 S2	974.9	5/15/2019	REG	F	INIT	METALS	Tin	Sn	13.8	1.3	Reg-Scr_95	13	1.1	2.5	µg/L	1		J+	I4a	SW-846:6010C	GELC	
XC2scr	58	67	2/3/2006	2.73	19.5	3.49	8	Sandia Canyon	Regional Top	R-11	855	5/17/2019	REG	F	INIT	METALS	Tin	Sn	19.5	5.6	Reg-Scr_95	13	1.5	2.5	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
XC2scr	51	53	2/17/2009	35.5	66	39.25	4	Mortandad Canyon	Regional Top	R-44 S1	895	5/15/2019	REG	F	INIT	METALS	Iron	Fe	66	1.7	Reg-Scr_95	53.8	1.2	30	µg/L	1	J	J	J_LAB	SW-846:6010C	GELC	
XC2scr	51	53	2/17/2009	4.2	16.8	7.52	3	Mortandad Canyon	Regional Top	R-44 S1	895	5/15/2019	REG	F	INIT	METALS	Tin	Sn	16.8	2.2	Reg-Scr_95	13	1.3	2.5	µg/L	1		J+	I4a	SW-846:6010C	GELC	
XC2scr	48	50	2/28/2009	2.8	17.1	7.44	4	Mortandad Canyon	Regional Top	R-45 S1	880	5/15/2019	REG	F	INIT	METALS	Tin	Sn	17.1	2.3	Reg-Scr_95	13	1.3	2.5	µg/L	1		J+	I4a	SW-846:6010C	GELC	
XC4scr	49	54	6/9/2005	0.083	0.254	0.14	48	Mortandad Canyon	Intermediate Perched	MCOI-5	689	5/8/2019	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.254	1.8	Int-Scr_95	0.0716	3.5	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
XC4scr	55	75	6/15/2005	25.4	56	46.8	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	METALS	Boron	B	55.3	1.2	Int-Scr_95	16.2	3.4	15	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	55	75	6/15/2005	0.212	0.703	0.5725	72	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.47	0.8	Int-Scr_95	0.0716	6.6	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
XC4scr	55	78	6/15/2005	29.4	86.6	60.25	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	METALS	Chromium	Cr	64.6	1.1	Int-Scr_95	2.72	24	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
XC4scr	55	75	6/15/2005	298	527	404	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	5/13/2019	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	483	1.2	Int-Scr_95	135	3.6	3.4	mg/L	1	H	NQ	NQ	EPA:160.1	GELC	

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XC4scr	33	34	1/11/2007	40.8	99.4	82.8	33	Sandia Canyon	Intermediate Perched	SCI-1	358.4	5/20/2019	REG	F	INIT	METALS	Boron	B	72.8	0.9	Int-Scr_95	16.2	4.5	15	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	33	34	1/11/2007	0.585	1.53	0.943	33	Sandia Canyon	Intermediate Perched	SCI-1	358.4	5/20/2019	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.59	0.6	Int-Scr_95	0.0716	8.2	0.067	mg/L	1		J-	I9b	EPA:300.0	GELC	
XC4scr	33	36	1/11/2007	7.99	22.1	12.6	35	Sandia Canyon	Intermediate Perched	SCI-1	358.4	5/20/2019	REG	F	INIT	METALS	Chromium	Cr	7.99	0.6	Int-Scr_95	2.72	2.9	3	µg/L	1	J	J	J_LAB	SW-846:6020	GELC	
XC4scr	34	36	1/11/2007	357	536	483	36	Sandia Canyon	Intermediate Perched	SCI-1	358.4	5/20/2019	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	481	1	Int-Scr_95	135	3.6	3.4	mg/L	1	H	NQ	NQ	EPA:160.1	GELC	
XC4scr	33	34	1/11/2007	0.404	1.45	0.895	33	Sandia Canyon	Intermediate Perched	SCI-1	358.4	5/20/2019	REG	F	INIT	GENINORG	Total Phosphate as Phosphorus	PO4-P	1.43	1.6	Int-Scr_95	0.178	8	0.02	mg/L	1		NQ	NQ	EPA:365.4	GELC	
XC4scr	42	54	10/21/2008	0.194	0.846	0.607	53	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.702	1.2	Int-Scr_95	0.0716	9.8	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
XC4scr	42	61	10/21/2008	265	658	441	61	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	METALS	Chromium	Cr	265	0.6	Int-Scr_95	2.72	97	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
XC4scr	27	33	8/4/2009	0.0041	0.00983	0.00672	33	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	UF	INIT	INORGANIC	Cyanide (Total)	CN(TOTAL)	0.00405	0.6	Int-Scr_95	0.0017	2.4	0.002	mg/L	1	J	J	J_LAB	EPA:335.4	GELC	
XC4scr	42	55	10/21/2008	354	796	425	55	Sandia Canyon	Intermediate Perched	SCI-2	548	5/14/2019	REG	F	INIT	GENINORG	Total Dissolved Solids	TDS	443	1	Int-Scr_95	135	3.3	3.4	mg/L	1	H	NQ	NQ	EPA:160.1	GELC	
XC4scr	35	41	5/20/2011	0.0531	11.8	0.696	38	Mortandad Canyon	Regional Top	R-61 S1	1125	5/16/2019	REG	F	INIT	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.41	0.6	Reg-Scr_95	0.0822	5	0.02	mg/L	1		NQ	NQ	EPA:365.4	GELC	
XC4scr	27	33	3/26/2012	0.0706	0.202	0.1045	28	Sandia Canyon	Regional Top	R-62	1158.4	5/14/2019	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.156	1.5	Reg-Scr_95	0.067	2.3	0.067	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	