



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

EMLA-23-BF-286-2-1

July 28, 2023

Mr. Rick Shean
Designated Agency Manager
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6313



Subject: Monthly Notification of Groundwater Data Reviewed in July 2023

Dear Mr. Shean:

This letter is the written submission of the U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) in accordance with Section XXVI.D of the 2016 Compliance Order on Consent modified February 2017 (Consent Order). Members of EM-LA and N3B met on July 13, 2023, to review groundwater data loaded or released in the Environmental Information Management System (EIMS) during the previous calendar month. The enclosed report was prepared by comparing the data against groundwater notification criteria as defined in Section IX of the 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." The EPA's tap water standard for carcinogenic risk values were adjusted to 1×10^{-5} , as specified in the Consent Order.

The enclosed report was prepared using the November 2022 EPA regional screening levels for tap water; the NMWQCC groundwater standards published December 21, 2018; and the June 2022 Table A-1 of "Risk Assessment Guidance for Site Investigations and Remediation" for NMED tap water screening levels.

1-Day Notification

One-day oral notification was not required during the calendar month, because no contaminants were detected in a well screen interval or spring at a concentration that exceeded either the NMWQCC groundwater standard or federal MCL, at locations where such contaminants have not previously been detected above the respective standards as defined in the Consent Order (based on samples collected since June 14, 2007).

15-Day Notification

The information required for constituents that meet the five reporting criteria requiring written notification within 15 days is provided in the enclosed report and tables.

If you have questions, please contact Amanda White at (505) 309-1366 (amanda.white@em-la.doe.gov) or Hai Shen at (505) 709-7600 (hai.shen@em.doe.gov).

Sincerely,

**ARTURO
DURAN**

Arturo Q. Duran
Compliance and Permitting Manager
U.S. Department of Energy
Environmental Management
Los Alamos Field Office

Digitally signed by ARTURO
DURAN
Date: 2023.07.27 13:13:21
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Enclosure(s):

1. Summary of Groundwater Data Reviewed in July 2023 that Meet Notification Requirements (EM2023-0551)

cc (letter with CD/DVD enclosure[s]):

Steven Lynne, Los Alamos County, Los Alamos, NM (2 copies)

cc (letter and enclosure[s] emailed):

Laurie King, EPA Region 6, Dallas, TX
Raymond Martinez, San Ildefonso Pueblo, NM
Dino Chavarria, Santa Clara Pueblo, NM
David Gomez, Los Alamos County, Los Alamos, NM
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SUMMARY OF GROUNDWATER DATA REVIEWED IN JULY 2023 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, Revision 1" (IFGMP) for the 2023 monitoring year (N3B 2022, 702346). The report contains results for contaminants and other chemical constituents that meet the five screening criteria described in Section XXVI.D of the 2016 Compliance Order on Consent, modified February 2017 (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 (LANL or the Laboratory), as indicated in the tables.

The report includes two tables. Table 1, NMED 6-23 Groundwater Report, presents categorical results since June 14, 2007, that meet the five reporting criteria as specified in the Consent Order. Table 2, NMED 6-23 Groundwater Report Addendum, presents results that exceed the 95th percentile of the results in the data set defined in the "Groundwater Background Investigation Report, Revision 5" (GBIR) (LANL 2016, 601920). 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 that identifies 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; and
- 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 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 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 GBIR. The EPA's tap water standard carcinogenic risk values were adjusted to 1×10^{-5} , as specified in the Consent Order. This report was prepared using the November 2022 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 June 2022 Table A-1 of "Risk Assessment Guidance for Site Investigations and Remediation" (Risk Assessment Guidance) (NMED 2022, 702141, Table A-1).

Background values applied in Table 1 notification criterion C4 are the background values for hydrogeological zones as set forth in the GBIR.

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 GBIR.

DESCRIPTION OF TABLES

1-Day Notification Requirement

The CA value is used in the Criteria Code column of Table 1. The CA value indicates detection of a contaminant in a well screen interval or spring at a concentration that exceeds either the NMWQCC water quality standard or the EPA MCL, if that contaminant has not previously exceeded such a water quality standard at that location. N3B, under the U.S. Department of Energy Environmental Management Los Alamos Field Office, notifies NMED orally within 1 business day after review of such analytical data and also includes the data in the 15-day notification table.

15-Day Notification Requirement

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

The criterion (C) codes 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, 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 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 GBIR

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 GBIR

Columns 2 through 8 in both tables provide summary statistics for metals or organic/inorganic compounds by field preparation code (e.g., filtered [F] 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)

Analytical Suite Code—analytical suite (such as volatile organic compounds) for analyzed compound

Analyte Description—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 qualifier indicating analytical quality of the sample data

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

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

Analytical Method Code—analytical method number

Lab Code—analytical laboratory name

Comment—N3B comment regarding the analytical result

Acronyms and Abbreviations

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

CFA—Cape Fear Analytical, LLC

DOECAP—Department of Energy Consolidated Audit Program

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

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

F—filtered

FD—field duplicate

GELC—GEL Laboratories, LLC, Division of the GEL Group, Charleston, SC

GENINORG—General inorganic

HEXP—high explosive

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

HRGC/HRMS—high-resolution gas chromatography/high-resolution mass spectrometry

ICP-AES—inductively coupled plasma atomic emission spectroscopy

ICP-MS—inductively coupled plasma mass spectrometry

IFGMP—Interim Facility-Wide Groundwater Monitoring Plan

INIT—primary sample

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

LCS—laboratory control sample

MDL—method detection limit

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

MS—matrix spike

MSD—matrix spike duplicate

n/a—not applicable

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

NMED A1 TAP SCRNLVL—New Mexico Environment Department Table A-1 screening level for tap water

NTU—nephelometric turbidity unit

PETN—pentaerythritol tetranitrate

PFAS—per- and polyfluoroalkyl substances

PQL—practical quantitation limit

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

RE—reanalysis

REG—regular sample

RL—reporting limit

RPD—relative percent difference

SIM—selected ion monitoring

SVOC—semivolatile organic compound

SwRI—Southwest Research Institute

RI—Reissue

TDS—total dissolved solids

TNX—2,4,6-trinitroxylyene

UAL—upper acceptance limit

UF—unfiltered

UOM—unit of measurement

VOC—volatile organic compound

Analytical Laboratory Codes and Qualifiers

I4a (validation reason code)—The detected sample result is greater than or equal to 5 times and less than 100 times the detected concentration of the same analyte in the method blank.

I6a (validation reason code)—The associated matrix spike percent recovery is less than the lower acceptance limit.

I6b (validation reason code)—The associated matrix spike percent recovery is greater than the upper acceptance limit.

I10er (validation reason code)—The associated matrix spike percent recovery is greater than the upper acceptance limit.

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

J_LAB (validation reason code)—The analytical laboratory qualified the detected result as estimated (J) because the result was less the practical quantitation limit but greater than the method detection limit.

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 any other standard qualifier. The analyte is detected in the sample.

PE10fr (validation reason code)—The sample and field duplicate results are greater than or equal to 5 times the reporting limit and the relative percent difference exceeds the limits.

REFERENCES

The following reference list includes documents cited in this report. Parenthetical information following each reference provides the author(s), publication date, and ERID, ESHID, or EMID. ERIDs were assigned by the Laboratory's Associate Directorate for Environmental Management (IDs through 599999); ESHIDs were assigned by the Laboratory's Associate Directorate for Environment, Safety, and Health (IDs 600000 through 699999); and EMIDs are assigned by N3B (IDs 700000 and above).

LANL (Los Alamos National Laboratory), October 27, 2016. "Groundwater Background Investigation Report, Revision 5," Los Alamos National Laboratory document LA-UR-16-27907, Los Alamos, New Mexico. (LANL 2016, 601920)

N3B (Newport News Nuclear BWXT-Los Alamos, LLC), September 2022. "Interim Facility-Wide Groundwater Monitoring Plan for the 2023 Monitoring Year, October 2022–September 2023, Revision 1," Newport News Nuclear BWXT-Los Alamos, LLC, document EM2022-0656, Los Alamos, New Mexico. (N3B 2022, 702346)

NMED (New Mexico Environment Department), June 2022. "Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Soil Screening Guidance for Human Health Risk Assessments," Hazardous Waste Bureau and Ground Water Quality Bureau, Santa Fe, New Mexico. (NMED 2022, 702141)

Table 1: NMED 6-23 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth (ft)	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 Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C1	49	59	12/15/2005	0.108	0.108	0.108	1	Water Canyon	Intermediate Perched	CdV-16-2(i)r	850.0	05/22/2023	REG	UF	INIT	HEXP	Dinitrotoluene[2,6-]	606-20-2	0.108	1	NMED A1 TAP SCRNLVL	0.485	0.2	0.0782	µg/L	2.00	J	J	J_LAB	SW-846:8330B	GELC	
C1	49	59	12/15/2005	0.116	0.116	0.116	1	Water Canyon	Intermediate Perched	CdV-16-2(i)r	850.0	05/22/2023	REG	UF	INIT	HEXP	Nitrotoluene[2-]	88-72-2	0.116	1	NMED A1 TAP SCRNLVL	3.14	0	0.0801	µg/L	2.00	J	J	J_LAB	SW-846:8330B	GELC	
C1	40	49	03/16/2012	0.123	0.123	0.123	1	Water Canyon	Intermediate Perched	CDV-16-4ip S1	815.6	05/22/2023	REG	UF	INIT	HEXP	Dinitrotoluene[2,6-]	606-20-2	0.123	1	NMED A1 TAP SCRNLVL	0.485	0.3	0.0750	µg/L	2.00	J	J	J_LAB	SW-846:8330B	GELC	
C2	46	56	05/19/2005	0.088	0.418	0.188	55	Mortandad Canyon	Regional Top	R-1	1031.1	05/04/2023	REG	F	INIT	GenInorg	Fluoride	F(-1)	0.418	2.2	LANL Reg BG LVL	0.377	1.1	0.0330	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C2	54	64	06/27/2005	2.08	2.79	2.29	64	Mortandad Canyon	Regional Top	R-33 S1	995.5	05/09/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	2.79	1.2	LANL Reg BG LVL	2.7	1	0.0670	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C3	5	6	01/23/2022	3.87	5.13	4.62	6	Sandia Canyon	Regional Deep	R-71 S2*	1349.7	05/15/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.13	1.1	EPA MCL	10	0.5	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	7	7	11/04/2021	6.02	9.73	6.84	7	Mortandad Canyon	Regional Top	CRPZ-1	1122.9	05/09/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	6.13	0.9	LANL Reg BG LVL	2.7	2.3	0.0670	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C4	7	7	11/04/2021	68.8	128	78.7	7	Mortandad Canyon	Regional Top	CRPZ-1	1122.9	05/09/2023	REG	F	INIT	Metals	Chromium	Cr	68.8	0.9	LANL Reg BG LVL	7.48	9.2	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	7	7	11/04/2021	2.49	3.15	2.87	7	Mortandad Canyon	Regional Top	CRPZ-1	1122.9	05/09/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.49	0.9	LANL Reg BG LVL	0.769	3.2	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	7	7	11/04/2021	10.5	16.2	13	7	Mortandad Canyon	Regional Top	CRPZ-1	1122.9	05/09/2023	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	12.9	1	LANL Reg BG LVL	0.414	31	0.0500	µg/L	1.00		NQ	NQ	SW-846:6850	GELC	
C4	7	7	11/04/2021	9.98	15.5	11.2	7	Mortandad Canyon	Regional Top	CRPZ-1	1122.9	05/09/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	9.98	0.9	LANL Reg BG LVL	4.59	2.2	0.133	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C4	7	8	11/10/2021	48.1	62.1	57.95	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	Metals	Calcium	Ca	49.1	0.8	LANL Reg BG LVL	17.03	2.9	0.0500	mg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	7	8	11/10/2021	41	54.7	46.8	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	43.5	0.9	LANL Reg BG LVL	2.7	16	0.670	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	7	8	11/10/2021	179	269	217	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	Metals	Chromium	Cr	233	1.1	LANL Reg BG LVL	7.48	31	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	7	8	11/10/2021	168	221	202	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	GenInorg	Hardness	Hardness	174	0.9	LANL Reg BG LVL	67.1	2.6	0.453	mg/L	1.00		NQ	NQ	SM:A2340B	GELC	
C4	7	8	11/10/2021	11.7	16.1	13.85	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	Metals	Magnesium	Mg	12.4	0.9	LANL Reg BG LVL	4.18	3	0.11	mg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	7	8	11/10/2021	5.98	8.24	6.87	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	Metals	Nickel	Ni	7.02	1	LANL Reg BG LVL	2.9	2.4	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	7	8	11/10/2021	3.8	5.2	4.64	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	4.94	1.1	LANL Reg BG LVL	0.769	6.4	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	7	8	11/10/2021	0.854	1.08	0.9765	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	0.959	1	LANL Reg BG LVL	0.414	2.3	0.0500	µg/L	1.00		NQ	NQ	SW-846:6850	GELC	
C4	7	8	11/10/2021	53.7	64.5	58.55	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	56.1	1	LANL Reg BG LVL	4.59	12	1.33	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	7	8	11/10/2021	2.68	3.9	3.62	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	Metals	Uranium	U	2.76	0.8	LANL Reg BG LVL	1.19	2.3	0.0670	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	7	7	11/09/2021	17.1	23	18.9	7	Mortandad Canyon	Regional Top	CRPZ-3	939.4	05/15/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	23.0	1.2	LANL Reg BG LVL	2.7	8.5	0.335	mg/L	5.00		J+	I6b	EPA:300.0	GELC	
C4	7	7	11/09/2021	297	468	351	7	Mortandad Canyon	Regional Top	CRPZ-3	939.4	05/15/2023	REG	F	INIT	Metals	Chromium	Cr	468	1.3	LANL Reg BG LVL	7.48	63	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	

Table 1: NMED 6-23 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth (ft)	Start Date	Fid QC Type Code	Fid Prep Code	Lab Sample Type Code	AnyI 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	AnyI Meth Code	Lab Code	Comment
C4	7	7	11/09/2021	5.2	5.65	5.27	7	Mortandad Canyon	Regional Top	CRPZ-3	939.4	05/15/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.65	1.1	LANL Reg BG LVL	0.769	7.3	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	7	7	11/09/2021	0.958	1.18	1.13	7	Mortandad Canyon	Regional Top	CRPZ-3	939.4	05/15/2023	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	1.02	0.9	LANL Reg BG LVL	0.414	2.5	0.0500	µg/L	1.00		NQ	NQ	SW-846:6850	GELC	
C4	7	7	11/09/2021	27.9	38.5	31.1	7	Mortandad Canyon	Regional Top	CRPZ-3	939.4	05/15/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	38.5	1.2	LANL Reg BG LVL	4.59	8.4	0.665	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	7	8	11/10/2021	6.31	10.6	6.78	8	Mortandad Canyon	Regional Deep	CRPZ-4	957	05/16/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	10.6	1.6	LANL Reg BG LVL	2.7	3.9	0.134	mg/L	2.00		J+	I6b	EPA:300.0	GELC	
C4	7	8	11/10/2021	88.4	164	92.45	8	Mortandad Canyon	Regional Deep	CRPZ-4	957	05/16/2023	REG	F	INIT	Metals	Chromium	Cr	164	1.8	LANL Reg BG LVL	7.48	22	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	7	7	11/10/2021	4.77	5.3	5	7	Mortandad Canyon	Regional Deep	CRPZ-4	957	05/16/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	4.84	1	LANL Reg BG LVL	0.769	6.3	0.850	mg/L	50.0		J+	I6b	EPA:353.2	GELC	
C4	7	8	11/10/2021	2.78	8.29	3.255	8	Mortandad Canyon	Regional Deep	CRPZ-4	957	05/16/2023	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	7.32	2.2	LANL Reg BG LVL	0.414	18	0.0500	µg/L	1.00		NQ	NQ	SW-846:6850	GELC	
C4	7	8	11/10/2021	12.3	17.8	12.65	8	Mortandad Canyon	Regional Deep	CRPZ-4	957	05/16/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	17.8	1.4	LANL Reg BG LVL	4.59	3.9	0.133	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C4	7	7	11/22/2021	14.9	16.9	16.4	7	Mortandad Canyon	Regional Deep	CRPZ-5	976	05/08/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	16.9	1	LANL Reg BG LVL	2.7	6.3	0.335	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	7	7	11/22/2021	411	479	463	7	Mortandad Canyon	Regional Deep	CRPZ-5	976	05/08/2023	REG	F	INIT	Metals	Chromium	Cr	443	1	LANL Reg BG LVL	7.48	59	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	7	7	11/22/2021	2.88	3.62	3.13	7	Mortandad Canyon	Regional Deep	CRPZ-5	976	05/08/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.62	1.2	LANL Reg BG LVL	0.769	4.7	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	7	7	11/22/2021	25.8	30	28.3	7	Mortandad Canyon	Regional Deep	CRPZ-5	976	05/08/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	30.0	1.1	LANL Reg BG LVL	4.59	6.5	0.665	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	69	91	06/15/2005	30.1	48.2	39.3	91	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	Metals	Barium	Ba	34.9	0.9	LANL Int BG LVL	13.5	2.6	1.00	µg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	69	89	06/15/2005	42.8	75.5	61.3	89	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	Metals	Calcium	Ca	51.1	0.8	LANL Int BG LVL	10.7	4.8	0.0500	mg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	71	91	06/15/2005	21.2	64.8	52.1	91	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	46.8	0.9	LANL Int BG LVL	3.11	15	0.670	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	71	91	06/15/2005	0.412	0.672	0.5265	88	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	GenInorg	Fluoride	F(-1)	0.588	1.1	LANL Int BG LVL	0.234	2.5	0.0330	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C4	69	89	06/15/2005	142	253	204	89	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	GenInorg	Hardness	Hardness	173	0.8	LANL Int BG LVL	37.8	4.6	0.453	mg/L	1.00		NQ	NQ	SM:A2340B	GELC	
C4	69	89	06/15/2005	8.49	15.7	12.6	89	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	Metals	Magnesium	Mg	10.9	0.9	LANL Int BG LVL	3.14	3.5	0.11	mg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	69	91	06/15/2005	2.9	41.8	21.5	91	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	Metals	Nickel	Ni	13.3	0.6	LANL Int BG LVL	3.65	3.6	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	71	91	06/15/2005	7.62	27.7	11.2	91	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	14.0	1.3	LANL Int BG LVL	0.459	31	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	65	81	02/26/2007	56.3	190	81.9	81	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	108	1.3	LANL Int BG LVL	0.27	400	1.00	µg/L	20.0		NQ	NQ	SW-846:6850	GELC	
C4	69	89	06/15/2005	196	339	273	89	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	Metals	Strontium	Sr	249	0.9	LANL Int BG LVL	59.6	4.2	1.00	µg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	69	91	06/15/2005	34.7	77.6	56.7	91	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	45.1	0.8	LANL Int BG LVL	7.1	6.4	1.33	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	

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Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth (ft)	Start Date	Fid QC Type Code	Fid Prep Code	Lab Sample Type Code	AnyI 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	AnyI Meth Code	Lab Code	Comment
C4	107	129	05/17/2005	2.27	9.25	5.61	129	Sandia Canyon	Regional Top	R-11	855.0	05/09/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	7.94	1.4	LANL Reg BG LVL	0.769	10	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	107	129	05/17/2005	5.95	20.2	9.75	129	Sandia Canyon	Regional Top	R-11	855.0	05/09/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	10.9	1.1	LANL Reg BG LVL	4.59	2.4	0.133	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C4	95	111	08/30/2007	68	408	348	111	Sandia Canyon	Regional Deep	R-35a	1013.1	05/19/2023	REG	F	INIT	Metals	Barium	Ba	337	1	LANL Reg BG LVL	38.1	8.8	1.00	µg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	94	111	08/30/2007	5.97	7.31	6.58	111	Sandia Canyon	Regional Deep	R-35a	1013.1	05/19/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	6.65	1	LANL Reg BG LVL	2.7	2.5	0.0670	mg/L	1.00		J+	I6b	EPA:300.0	GELC	
C4	95	111	08/30/2007	1.2	28.4	8.695	110	Sandia Canyon	Regional Deep	R-35a	1013.1	05/19/2023	REG	F	INIT	Metals	Nickel	Ni	9.29	1.1	LANL Reg BG LVL	2.9	3.2	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	56	64	03/12/2008	4.05	6.83	6.12	64	Sandia Canyon	Regional Top	R-36	766.9	05/11/2023	FD	F	INIT	GenInorg	Chloride	Cl(-1)	6.51	1.1	LANL Reg BG LVL	2.7	2.4	0.0670	mg/L	1.00		J+	I6b	EPA:300.0	GELC	
C4	56	64	03/12/2008	4.05	6.83	6.12	64	Sandia Canyon	Regional Top	R-36	766.9	05/11/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	6.49	1.1	LANL Reg BG LVL	2.7	2.4	0.0670	mg/L	1.00		J+	I6b	EPA:300.0	GELC	
C4	56	65	03/12/2008	1.25	6.8	2.45	65	Sandia Canyon	Regional Top	R-36	766.9	05/11/2023	FD	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.70	1.1	LANL Reg BG LVL	0.769	3.5	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	56	65	03/12/2008	1.25	6.8	2.45	65	Sandia Canyon	Regional Top	R-36	766.9	05/11/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.67	1.1	LANL Reg BG LVL	0.769	3.5	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	55	63	03/12/2008	0.845	1.74	1.46	63	Sandia Canyon	Regional Top	R-36	766.9	05/11/2023	FD	F	INIT	LCMS/MS	Perchlorate	ClO4	1.17	0.8	LANL Reg BG LVL	0.414	2.8	0.0500	µg/L	1.00		J	PE10fr	SW-846:6850	GELC	
C4	55	63	03/12/2008	0.845	1.74	1.46	63	Sandia Canyon	Regional Top	R-36	766.9	05/11/2023	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	1.19	0.8	LANL Reg BG LVL	0.414	2.9	0.0500	µg/L	1.00		J	PE10fr	SW-846:6850	GELC	
C4	92	97	02/17/2009	1.99	21.6	14.9	97	Mortandad Canyon	Regional Top	R-44 S1	895.0	05/02/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	21.2	1.4	LANL Reg BG LVL	2.7	7.9	0.335	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	92	97	02/17/2009	0.536	109	32.45	70	Mortandad Canyon	Regional Top	R-44 S1	895.0	05/02/2023	REG	F	INIT	Metals	Nickel	Ni	25.9	0.8	LANL Reg BG LVL	2.9	8.9	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	92	97	02/17/2009	0.123	3.86	2.23	96	Mortandad Canyon	Regional Top	R-44 S1	895.0	05/02/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.06	1.4	LANL Reg BG LVL	0.769	4	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	92	97	02/17/2009	2.76	21.4	14.4	97	Mortandad Canyon	Regional Top	R-44 S1	895.0	05/02/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	19.7	1.4	LANL Reg BG LVL	4.59	4.3	0.665	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	95	102	02/28/2009	3	21.5	5.86	102	Mortandad Canyon	Regional Top	R-45 S1	880.0	05/03/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	20.5	3.5	LANL Reg BG LVL	2.7	7.6	0.670	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	95	102	02/28/2009	0.535	13.8	1.54	87	Mortandad Canyon	Regional Top	R-45 S1	880.0	05/03/2023	REG	F	INIT	Metals	Nickel	Ni	7.59	4.9	LANL Reg BG LVL	2.9	2.6	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	95	102	02/28/2009	0.256	4.1	2.875	102	Mortandad Canyon	Regional Top	R-45 S1	880.0	05/03/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.22	1.1	LANL Reg BG LVL	0.769	4.2	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	95	102	02/28/2009	4.1	21.4	8.87	102	Mortandad Canyon	Regional Top	R-45 S1	880.0	05/03/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	20.0	2.3	LANL Reg BG LVL	4.59	4.4	1.33	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	94	102	03/05/2009	2.74	8.15	5.08	102	Mortandad Canyon	Regional Deep	R-45 S2	974.9	05/03/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	6.65	1.3	LANL Reg BG LVL	2.7	2.5	0.0670	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C4	94	107	03/05/2009	6.1	69.1	32.35	106	Mortandad Canyon	Regional Deep	R-45 S2	974.9	05/03/2023	REG	F	INIT	Metals	Chromium	Cr	46.2	1.4	LANL Reg BG LVL	7.48	6.2	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	96	105	03/06/2010	4.68	22.4	15.7	105	Mortandad Canyon	Regional Top	R-50 S1	1077.0	05/10/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	21.7	1.4	LANL Reg BG LVL	2.7	8	0.335	mg/L	5.00		J+	I6b	EPA:300.0	GELC	
C4	97	106	03/06/2010	1.51	25.6	6.68	106	Mortandad Canyon	Regional Top	R-50 S1	1077.0	05/10/2023	REG	F	INIT	Metals	Nickel	Ni	19.5	2.9	LANL Reg BG LVL	2.9	6.7	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	

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C4	97	107	03/06/2010	0.398	3.21	2.34	107	Mortandad Canyon	Regional Top	R-50 S1	1077.0	05/10/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.08	1.3	LANL Reg BG LVL	0.769	4	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	96	105	03/06/2010	7.22	21.5	17.4	105	Mortandad Canyon	Regional Top	R-50 S1	1077.0	05/10/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	20.4	1.2	LANL Reg BG LVL	4.59	4.4	0.665	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	81	93	05/20/2011	2.03	66.1	28.8	92	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	FD	F	INIT	Metals	Chromium	Cr	66.1	2.3	LANL Reg BG LVL	7.48	8.8	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	81	93	05/20/2011	2.03	66.1	28.8	92	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	REG	F	INIT	Metals	Chromium	Cr	64.1	2.2	LANL Reg BG LVL	7.48	8.6	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	81	93	05/20/2011	0.427	3.3	2.34	93	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	FD	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.71	1.2	LANL Reg BG LVL	0.769	3.5	0.170	mg/L	10.0		J+	I6b	EPA:353.2	GELC	
C4	81	93	05/20/2011	0.427	3.3	2.34	93	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.94	1.3	LANL Reg BG LVL	0.769	3.8	0.170	mg/L	10.0		J+	I6b	EPA:353.2	GELC	
C4	80	92	05/20/2011	2.96	17	12.05	92	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	FD	F	INIT	LCMS/MS	Perchlorate	ClO4	10.8	0.9	LANL Reg BG LVL	0.414	26	0.100	µg/L	2.00		NQ	NQ	SW-846:6850	GELC	
C4	80	92	05/20/2011	2.96	17	12.05	92	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	10.7	0.9	LANL Reg BG LVL	0.414	26	0.100	µg/L	2.00		NQ	NQ	SW-846:6850	GELC	
C4	41	48	03/26/2012	1.64	21.3	11.45	48	Sandia Canyon	Regional Top	R-62	1158.4	05/04/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	16.5	1.4	LANL Reg BG LVL	2.7	6.1	0.134	mg/L	2.00		NQ	NQ	EPA:300.0	GELC	
C4	41	48	03/26/2012	104	351	222.5	48	Sandia Canyon	Regional Top	R-62	1158.4	05/04/2023	REG	F	INIT	Metals	Chromium	Cr	254	1.1	LANL Reg BG LVL	7.48	34	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	41	48	03/26/2012	0.0685	2.37	1.495	48	Sandia Canyon	Regional Top	R-62	1158.4	05/04/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.10	1.4	LANL Reg BG LVL	0.769	2.7	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	41	48	03/26/2012	2.56	37.4	20.15	48	Sandia Canyon	Regional Top	R-62	1158.4	05/04/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	27.9	1.4	LANL Reg BG LVL	4.59	6.1	0.266	mg/L	2.00		NQ	NQ	EPA:300.0	GELC	
C4	34	37	08/04/2020	1.99	2.92	2.43	37	Mortandad Canyon	Regional Top	R-70 S1*	963.0	05/08/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.27	0.9	LANL Reg BG LVL	0.769	3	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	33	35	08/04/2020	10.7	19.3	14.4	35	Mortandad Canyon	Regional Deep	R-70 S2*	1048.0	05/08/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	12.1	0.8	LANL Reg BG LVL	2.7	4.5	0.335	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	33	35	08/04/2020	131	272	183	35	Mortandad Canyon	Regional Deep	R-70 S2*	1048.0	05/08/2023	REG	F	INIT	Metals	Chromium	Cr	151	0.8	LANL Reg BG LVL	7.48	20	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	33	35	08/04/2020	2.59	4.06	3.42	35	Mortandad Canyon	Regional Deep	R-70 S2*	1048.0	05/08/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.00	0.9	LANL Reg BG LVL	0.769	3.9	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	33	35	08/04/2020	17.5	32.6	22.8	35	Mortandad Canyon	Regional Deep	R-70 S2*	1048.0	05/08/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	19.0	0.8	LANL Reg BG LVL	4.59	4.1	0.665	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	4	5	01/30/2022	5.24	5.76	5.5	5	Sandia Canyon	Regional Top	R-71 S1*	1285.0	05/15/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.76	1	LANL Reg BG LVL	0.769	7.5	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	5	6	01/30/2022	7.88	11.3	10.085	6	Sandia Canyon	Regional Top	R-71 S1*	1285.0	05/15/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	11.3	1.1	LANL Reg BG LVL	4.59	2.5	0.133	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C4	5	6	01/23/2022	3.87	5.13	4.62	6	Sandia Canyon	Regional Deep	R-71 S2*	1349.7	05/15/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.13	1.1	LANL Reg BG LVL	0.769	6.7	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	41	42	01/11/2007	26.9	51.3	36.35	42	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Metals	Barium	Ba	27.6	0.8	LANL Int BG LVL	13.5	2	1.00	µg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	41	42	01/11/2007	47.1	87.6	67.7	42	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Metals	Calcium	Ca	47.5	0.7	LANL Int BG LVL	10.7	4.4	0.0500	mg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	43	46	01/11/2007	2.62	124	94.3	46	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	96.4	1	LANL Int BG LVL	3.11	31	1.34	mg/L	20.0		NQ	NQ	EPA:300.0	GELC	

Table 1: NMED 6-23 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth (ft)	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 Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C4	41	42	01/11/2007	148	270	211	42	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	GenInorg	Hardness	Hardness	149	0.7	LANL Int BG LVL	37.8	3.9	0.453	mg/L	1.00		NQ	NQ	SM:A2340B	GELC	
C4	41	42	01/11/2007	7.34	13	10.05	42	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Metals	Magnesium	Mg	7.34	0.7	LANL Int BG LVL	3.14	2.3	0.11	mg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	41	42	01/11/2007	44.9	97	70.55	42	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Metals	Molybdenum	Mo	58.2	0.8	LANL Int BG LVL	2.9	20	0.200	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	43	46	01/11/2007	0.247	4.99	2.06	46	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.45	0.7	LANL Int BG LVL	0.459	3.2	0.0170	mg/L	1.00		NQ	NQ	EPA:353.2	GELC	
C4	41	42	01/11/2007	50.7	71.1	58.1	42	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Metals	Sodium	Na	66.8	1.1	LANL Int BG LVL	18.2	3.7	0.1	mg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	41	42	01/11/2007	211	383	301	42	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Metals	Strontium	Sr	219	0.7	LANL Int BG LVL	59.6	3.7	1.00	µg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	43	45	01/11/2007	13.8	112	75.5	45	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	51.1	0.7	LANL Int BG LVL	7.1	7.2	2.66	mg/L	20.0		NQ	NQ	EPA:300.0	GELC	
C4	57	72	10/21/2008	56.1	84.1	69.45	72	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	Metals	Barium	Ba	71.9	1	LANL Int BG LVL	13.5	5.3	1.00	µg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	57	72	10/21/2008	59.5	76.3	68.75	72	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	Metals	Calcium	Ca	72	1	LANL Int BG LVL	10.7	6.7	0.0500	mg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	57	70	10/21/2008	53.4	93	69.35	70	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	GenInorg	Chloride	Cl(-1)	85.4	1.2	LANL Int BG LVL	3.11	28	1.34	mg/L	20.0		NQ	NQ	EPA:300.0	GELC	
C4	57	72	10/21/2008	204	263	237	71	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	GenInorg	Hardness	Hardness	247	1	LANL Int BG LVL	37.8	6.5	0.453	mg/L	1.00		NQ	NQ	SM:A2340B	GELC	
C4	56	70	10/21/2008	13.1	17.9	15.95	70	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	Metals	Magnesium	Mg	16.4	1	LANL Int BG LVL	3.14	5.2	0.11	mg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	57	72	10/21/2008	13.1	19.6	16.25	72	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	Metals	Nickel	Ni	13.2	0.8	LANL Int BG LVL	3.65	3.6	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	57	70	10/21/2008	2.89	5.1	4.06	70	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	GenInorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.06	0.8	LANL Int BG LVL	0.459	6.7	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	57	70	10/21/2008	0.725	1.12	0.942	70	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	0.797	0.8	LANL Int BG LVL	0.27	3	0.0500	µg/L	1.00		NQ	NQ	SW-846:6850	GELC	
C4	57	72	10/21/2008	264	378	330.5	72	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	Metals	Strontium	Sr	353	1.1	LANL Int BG LVL	59.6	5.9	1.00	µg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
C4	57	70	10/21/2008	77.9	103	88.35	70	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	GenInorg	Sulfate	SO4(-2)	82.7	0.9	LANL Int BG LVL	7.1	12	2.66	mg/L	20.0		NQ	NQ	EPA:300.0	GELC	
C4	57	72	10/21/2008	1.2	2.77	1.91	72	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	Metals	Uranium	U	2.66	1.4	LANL Int BG LVL	0.992	2.7	0.0670	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C5	81	93	05/20/2011	2.03	66.1	28.8	92	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	FD	F	INIT	Metals	Chromium	Cr	66.1	2.3	NM GW STD	50	1.3	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	

Note *: Data pertaining to a well drilled at a target angle from the vertical. Depth value represents linear feet along (down) the borehole.

Table 2: NMED 6-23 Groundwater Report Addendum

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen 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 Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
XC2scr	7	7	11/09/2021	12.8	15.6	13.4	7	Mortandad Canyon	Regional Top	CRPZ-3	939.4	05/15/2023	REG	F	INIT	Metals	Sodium	Na	15.6	1.2	Reg-Scr_95	15.3	1	0.1	mg/L	1.00	J+	I4a	SW-846:6010D	GELC		
XC2scr	7	8	11/10/2021	0.00415	0.00415	0.00415	1	Mortandad Canyon	Regional Deep	CRPZ-4	957	05/16/2023	REG	UF	INIT	Inorganic	Cyanide (Total)	CN (Total)	0.00415	1	Reg-Scr_95	0.0017	2.4	0.00167	mg/L	1.00	J	J-	I6a	EPA:335.4	GELC	
XC2scr	7	8	11/10/2021	0.862	1.15	0.8795	8	Mortandad Canyon	Regional Deep	CRPZ-4	957	05/16/2023	REG	F	INIT	Metals	Uranium	U	1.15	1.3	Reg-Scr_95	1.06	1.1	0.0670	µg/L	1.00	NQ	NQ	SW-846:6020B	GELC		
XC2scr	7	7	11/22/2021	0.00681	0.00681	0.00681	1	Mortandad Canyon	Regional Deep	CRPZ-5	976	05/08/2023	REG	UF	INIT	Inorganic	Cyanide (Total)	CN (Total)	0.00681	1	Reg-Scr_95	0.0017	4	0.00167	mg/L	1.00	NQ	NQ	EPA:335.4	GELC		
XC2scr	75	87	11/21/2011	0.00259	0.00279	0.00269	2	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	FD	UF	INIT	Inorganic	Cyanide (Total)	CN (Total)	0.00259	1	Reg-Scr_95	0.0017	1.5	0.00167	mg/L	1.00	J	J-	I6a	EPA:335.4	GELC	
XC2scr	75	87	11/21/2011	0.00259	0.00279	0.00269	2	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	REG	UF	INIT	Inorganic	Cyanide (Total)	CN (Total)	0.00279	1	Reg-Scr_95	0.0017	1.6	0.00167	mg/L	1.00	J	J-	I6a	EPA:335.4	GELC	
XC2scr	8	9	01/09/2022	20.4	20.4	20.4	1	Mortandad Canyon	Regional Top	R-72 S1	1220.0	05/10/2023	REG	F	INIT	Metals	Boron	B	20.4	1	Reg-Scr_95	18.7	1.1	15.0	µg/L	1.00	J	J	J_LAB	SW-846:6010D	GELC	
XC4scr	7	8	11/10/2021	0.372	0.57	0.46	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.394	0.9	Reg-Scr_95	0.067	5.9	0.0670	mg/L	1.00	J+	I6b	EPA:300.0	GELC		
XC4scr	7	8	11/10/2021	204	256	224	8	Mortandad Canyon	Regional Top	CrPZ-2a	909.8	05/04/2023	REG	F	INIT	Metals	Strontium	Sr	215	1	Reg-Scr_95	74.4	2.9	1.00	µg/L	1.00	NQ	NQ	SW-846:6010D	GELC		
XC4scr	7	7	11/09/2021	0.0998	0.159	0.138	7	Mortandad Canyon	Regional Top	CRPZ-3	939.4	05/15/2023	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.159	1.2	Reg-Scr_95	0.067	2.4	0.0670	mg/L	1.00	J	J	J_LAB	EPA:300.0	GELC	
XC4scr	7	7	11/09/2021	28.5	35.6	31.2	7	Mortandad Canyon	Regional Top	CRPZ-3	939.4	05/15/2023	REG	F	INIT	Metals	Calcium	Ca	35.6	1.1	Reg-Scr_95	14.5	2.5	0.0500	mg/L	1.00	NQ	NQ	SW-846:6010D	GELC		
XC4scr	7	7	11/09/2021	101	128	112	7	Mortandad Canyon	Regional Top	CRPZ-3	939.4	05/15/2023	REG	F	INIT	Geninorg	Hardness	Hardness	128	1.1	Reg-Scr_95	51	2.5	0.453	mg/L	1.00	NQ	NQ	SM:A2340B	GELC		
XC4scr	69	91	06/15/2005	25.4	64.6	48.6	90	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	Metals	Boron	B	50.4	1	Int-Scr_95	16.2	3.1	15.0	µg/L	1.00	NQ	NQ	SW-846:6010D	GELC		
XC4scr	69	89	06/15/2005	0.212	0.73	0.55	86	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.441	0.8	Int-Scr_95	0.0716	6.2	0.0670	mg/L	1.00	NQ	NQ	EPA:300.0	GELC		
XC4scr	69	94	06/15/2005	29.4	86.6	58.3	94	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	Metals	Chromium	Cr	51.9	0.9	Int-Scr_95	2.72	19.1	3.00	µg/L	1.00	NQ	NQ	SW-846:6020B	GELC		
XC4scr	71	91	06/15/2005	298	527	397	91	Mortandad Canyon	Intermediate Perched	MCOI-6	686.0	05/03/2023	REG	F	INIT	Geninorg	Total Dissolved Solids	TDS	369	0.9	Int-Scr_95	135	2.7	2.38	mg/L	1.00	J	I10er	EPA:160.1	GELC		
XC4scr	95	111	08/30/2007	20.6	54.5	40.5	105	Sandia Canyon	Regional Deep	R-35a	1013.1	05/19/2023	REG	F	INIT	Metals	Boron	B	42.6	1.1	Reg-Scr_95	18.7	2.3	15.0	µg/L	1.00	J	J	J_LAB	SW-846:6010D	GELC	
XC4scr	95	111	08/30/2007	137	199	169	111	Sandia Canyon	Regional Deep	R-35a	1013.1	05/19/2023	REG	F	INIT	Metals	Strontium	Sr	159	0.9	Reg-Scr_95	74.4	2.1	1.00	µg/L	1.00	NQ	NQ	SW-846:6010D	GELC		
XC4scr	92	97	02/17/2009	0.0757	0.181	0.147	52	Mortandad Canyon	Regional Top	R-44 S1	895.0	05/02/2023	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.153	1	Reg-Scr_95	0.067	2.3	0.0670	mg/L	1.00	J	J	J_LAB	EPA:300.0	GELC	
XC4scr	95	102	02/28/2009	0.0667	0.637	0.128	61	Mortandad Canyon	Regional Top	R-45 S1	880.0	05/03/2023	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.161	1.3	Reg-Scr_95	0.067	2.4	0.0670	mg/L	1.00	J	J	J_LAB	EPA:300.0	GELC	
XC4scr	96	105	03/06/2010	0.0691	0.545	0.136	83	Mortandad Canyon	Regional Top	R-50 S1	1077.0	05/10/2023	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.148	1.1	Reg-Scr_95	0.067	2.2	0.0670	mg/L	1.00	J	J	J_LAB	EPA:300.0	GELC	
XC4scr	81	93	05/20/2011	0.0531	11.8	0.373	87	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	FD	F	INIT	Geninorg	Total Phosphate as Phosphorus	PO4-P	0.234	0.6	Reg-Scr_95	0.0822	2.8	0.0200	mg/L	1.00	NQ	NQ	EPA:365.4	GELC		
XC4scr	81	93	05/20/2011	0.0531	11.8	0.373	87	Mortandad Canyon	Regional Top	R-61 S1	1125.0	05/16/2023	REG	F	INIT	Geninorg	Total Phosphate as Phosphorus	PO4-P	0.223	0.6	Reg-Scr_95	0.0822	2.7	0.0200	mg/L	1.00	NQ	NQ	EPA:365.4	GELC		
XC4scr	41	48	03/26/2012	0.0706	0.248	0.128	43	Sandia Canyon	Regional Top	R-62	1158.4	05/04/2023	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.136	1.1	Reg-Scr_95	0.067	2	0.0670	mg/L	1.00	J	J+	I6b	EPA:300.0	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	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 Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
XC4scr	41	42	01/11/2007	40.8	99.4	82.4	41	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Metals	Boron	B	79.8	1	Int-Scr_95	16.2	4.9	15.0	µg/L	1.00		NQ	NQ	SW-846:6010D	GELC	
XC4scr	41	42	01/11/2007	0.514	1.53	0.8995	40	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.872	1	Int-Scr_95	0.0716	12.2	0.0670	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
XC4scr	41	44	01/11/2007	6.99	22.1	11.3	43	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Metals	Chromium	Cr	7.42	0.7	Int-Scr_95	2.72	2.7	3.00	µg/L	1.00	J	J	J_LAB	SW-846:6020B	GELC	
XC4scr	42	45	01/11/2007	357	536	471	45	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Geninorg	Total Dissolved Solids	TDS	396	0.8	Int-Scr_95	135	2.9	2.38	mg/L	1.00		J	I10er	EPA:160.1	GELC	
XC4scr	41	42	01/11/2007	1.14	3.09	2.015	42	Sandia Canyon	Intermediate Perched	SCI-1	358.4	05/12/2023	REG	F	INIT	Metals	Uranium	U	1.61	0.8	Int-Scr_95	0.614	2.6	0.0670	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
XC4scr	57	70	10/21/2008	0.194	0.956	0.654	69	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.886	1.4	Int-Scr_95	0.0716	12.4	0.0670	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
XC4scr	57	77	10/21/2008	189	658	418	77	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	Metals	Chromium	Cr	192	0.5	Int-Scr_95	2.72	70.6	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
XC4scr	57	71	10/21/2008	354	796	429	71	Sandia Canyon	Intermediate Perched	SCI-2	548.0	05/12/2023	REG	F	INIT	Geninorg	Total Dissolved Solids	TDS	419	1	Int-Scr_95	135	3.1	2.38	mg/L	1.00		J	I10er	EPA:160.1	GELC	