

DEPARTMENT OF ENERGY

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

EMLA-24-BF062-2-1

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

DEC 01 2023

NMED Hazardous Waste Bureau

November 30, 2023

Subject:

Monthly Notification of Groundwater Data Reviewed in November 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 November 14, 2023, to review groundwater data loaded or released in the EIM (Environmental Information Management) system 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.

This report does not include analytical data from samples collected at a location within the Pueblo de San Ildefonso, which are subject to reporting at this time. Data would have been reviewed by the Pueblo, as required under the 2014 Memorandum of Agreement (as amended in 2015) between the DOE National Nuclear Security Administration Los Alamos Field Office, EM-LA, and the Pueblo de San Ildefonso.

1-Day Notification

Two constituents were detected at a concentration that exceeded an NMWQCC groundwater standard or EPA MCL, at a location where the constituent had not previously been detected above the respective standard as defined in the 2016 Consent Order (based on samples collected since June 14, 2007).

Analysis of a filtered water sample collected from LAOI-7 on September 12, 2023, resulted in the measurement of one constituent at a value exceeding its screening level value. Manganese was measured at 221 μ g/L, exceeding the NMWQCC groundwater standard of 200 μ g/L. These elevated manganese concentrations, along with elevated nickel, chromium, and iron concentrations, may indicate corrosion of the stainless-steel casing. These concentrations will continue to be monitored to identify any sustained concentration trends that may confirm or refute this hypothesis.

Analysis of a filtered water sample collected from R-70 screen 1 on September 21, 2023, resulted in a measurement of one constituent at a value exceeding its screening level value. Based on historical chromium results for R-70 screen 1, these results appear to be anomalously elevated and the result of a sampling system malfunction. This well has been prioritized for maintenance and repairs.

EM-LA notified NMED orally within one business day of the review of the analytical data that showed detection of this contaminant, on November 15, 2023 (per Section XXVI.C of the Consent Order).

15-Day Notification

The information required for constituents that meet at least one of 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 Digitally signed by ARTURO DURAN Date: 2023.11.29 16:37:38 -07'00'

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

Enclosure(s):

1. Summary of Groundwater Data Reviewed in November 2023 that Meet Notification Requirements (EM2023-0837)

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 NOVEMBER 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 at least one of 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 10-23 Groundwater Report, presents categorical results since June 14, 2007, that meet one or more of the five reporting criteria as specified in the Consent Order. Table 2, NMED 10-23 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 and 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 uses 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

One-day notification is required upon the 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 either of these standards at that location. N3B, under the direction of the U.S. Department of Energy Environmental Management Los Alamos Field Office, notifies NMED of any such data orally within 1 business day following the review of monthly analytical data. Data in the 1-day notification is also included in the 15-day notification table. Such exceedance data are identified under the Criterion Code A (CA) in notifications.

15-Day Notification Requirement

The data in Table 1 is sorted by 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. Some criteria may not appear in Table 1, if no samples in the current reporting period exceed the requirements of those criteria.

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, at a concentration above the background level, 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

The data in Table 2 is sorted by two screening criteria that 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 in a spring or screened interval of a well, 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:

CA—Criterion Code A

CFA—Cape Fear Analytical, LLC

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

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

MDL—method detection limit

n/a—not applicable

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

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

REG—regular sample

UF-unfiltered

UOM—unit of measurement

Analytical Laboratory Codes and Qualifiers

I4a (validation reason code)—The detected sample result is >=5 times and <100 times the detected concentration of the same analyte in the method blank.

I4g (validation reason code) —The detected sample result is >=5 times and <100 times the detected concentration of the same analyte in the associated blank.

16a (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.

I9a (validation reason code)—The holding time was >2 times the applicable holding time requirement.

I10er (validation reason code) —The sample and laboratory duplicate results are >=5 times the reporting limit and the relative percent difference exceeds the limits.

I10fa (validation reason code)—The sample or field duplicate result is <5 times the reporting limit and the absolute difference between sample and duplicate result exceeds the limits.

I10fr (validation reason code)— The sample and field duplicate results are >=5 times the reporting limit and the relative percent difference exceeds the limits.

- 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.

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 10-23 Groundwater Report

Та	ble 1:	: NM	ED 10-23	Grou	ndwat	er Rep	port																								
Criteria Code		Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth	Start Date	Fid QC Type Code	Lab Sample Type Code	Analy 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	Analy Meth Code	Lab Code	Comment
			5/9/2006	2		5.2	25	Upper Los Alamos Canyon	Intermediate			9/12/2023	REG F	INIT	Metals	Manganese	Mn	221	42.5		200		2.00	μg/L	1.00				W-846:6010D		These elevated manganese concentrations, along with elevated nickel chromium, and iron concentrations, may indicate corrosion of the stainless-steel casing. These concentrations will continue to be monitored to identify any sustained concentration trends that may confirm or refute this hypothesis.
			8/4/2020					Mortandad Canyon	Regional	R-70 S1 ^{a,b}	963.0	9/21/2023	REG F	INIT	Metals	Chromium	Cr	137	9	NM GW STD	50	2.7	3.00	μg/L	1.00	c N	IQ I	NQ S	W-846:6020B	GELC	Based on historical chromium results for R-70 screen 1, these results appear to be anomalously elevated and the result of a sampling system malfunction. This well has been prioritized for maintenance and repairs.
							33	Mortandad Canyon	Regional	R-42	931.8	7/24/2023	REG F	INIT	Metals	Uranium	U	1.57	1.9	LANL Reg BG LVL	1.19	1.3	0.0670				IQ I	NQ E	PA:200.8	GELC	
C2	32	34	10/9/2008	1.95	20	5.1	31	Mortandad Canyon	Regional	R-42	931.8	7/24/2023	REG F	INIT	Metals	Vanadium	V	20.0	3.9	LANL Reg BG LVL	11.4	1.8	1.00	μg/L	1.00	_ N	IQ I	NQ E	PA:200.7	GELC	
C2	9	10	1/23/2022	0.193	0.551	0.292	9	Sandia Canyon	Regional	R-71 S2 ^{b,d}	1349.7	9/21/2023	REG F	INIT	Geninorg	Fluoride	F(-1)	0.551	1.9	LANL Reg BG LVL	0.377	1.5	0.0330	mg/L	1.00	_ J	I	10fa E	PA:300.0	GELC	
C3	23	23	7/26/2006	2.14	33.2	3.31	15	Upper Los Alamos Canyon	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG F	INIT	Metals	Chromium	Cr	33.2	10	NM GW STD	50	0.7	3.00	μg/L	1.00	_ N	IQ I	VQ S'	W-846:6020B	GELC	
								Sandia Canyon	Regional	R-35b		9/22/2023			Geninorg	Fluoride	F(-1)	0.840		NM GW STD			0.0330					10fr E	PA:300.0	GELC	
C4	32	38	6/1/2005	5.78	9	7.335	38	Water Canyon	Intermediate	CdV-16-1(i)	624.0	9/1/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	8.82	1.2	LANL Int BG LVL	3.11	2.8	0.0670	mg/L	1.00	_ J	+	6b E	PA:300.0	GELC	
C4	23	24	11/15/2005	34.7	49.3	39.95	24	Upper Los Alamos Canyon	Intermediate	LAOI-3.2	153.3	9/18/2023	REG F	INIT	Metals	Barium	Ва	37.3	0.9	LANL Int BG LVL	13.5	2.8	1.00	μg/L	1.00	_ N	IQ I	VQ S'	W-846:6010D	GELC	
C4	23	24	11/15/2005	17.8	28.6	23.7	24	Upper Los Alamos Canyon	Intermediate	LAOI-3.2	153.3	9/18/2023	REG F	INIT	Metals	Calcium	Са	28.4	1.2	LANL Int BG	10.7	2.7	0.0500	mg/L	1.00	_ N	IQ I	NQ S'	W-846:6010D	GELC	
C4	25	26	11/15/2005	5.15	35.2	21.95	26	Upper Los Alamos Canyon	Intermediate	LAOI-3.2	153.3	9/18/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	35.2	1.6	LANL Int BG	3.11	11.3	0.670	mg/L	10.0	_ N	IQ I	NQ E	PA:300.0	GELC	
C4	23	24	11/15/2005	64	112	86.9	24	Upper Los Alamos	Intermediate	LAOI-3.2	153.3	9/18/2023	REG F	INIT	Geninorg	Hardness	Hardness	112	1.3	LANL Int BG	37.8	3	0.453	mg/L	1.00	_ N	IQ I	NQ S	M:A2340B	GELC	
C4	23	24	11/15/2005	3.81	9.9	6.68	24	Canyon Upper Los Alamos	Intermediate	LAOI-3.2	153.3	9/18/2023	REG F	INIT	Metals	Magnesium	Mg	9.9	1.5	LANL Int BG	3.14	3.2	0.11	mg/L	1.00	_ J	- I	6a S'	W-846:6010D	GELC	
C4	25	26	11/15/2005	1.12	4.48	2.135	26	Upper Los Alamos	Intermediate	LAOI-3.2	153.3	9/18/2023	REG F	INIT	Geninorg	Nitrate-Nitrite	NO3+NO2-N	1.12	0.5	LANL Int BG	0.459	2.4	0.0170	mg/L	1.00	_ N	IQ I	NQ E	PA:353.2	GELC	
C4	21	22	4/19/2007	1.12	7.63	4.625	22	Canyon Upper Los Alamos	Intermediate	LAOI-3.2	153.3	9/18/2023	REG F	INIT	LCMS/MS	as Nitrogen Perchlorate	CIO4	1.12	0.2	LVL LANL Int BG	0.27	4.1	0.250	μg/L	1.00	_ N	IQ I	VQ S'	W-846:6850	GELC	
C4	23	24	11/15/2005	5.36	8.89	7.475	24	Upper Los Alamos	Intermediate	LAOI-3.2	153.3	9/18/2023	REG F	INIT	Metals	Potassium	К	8.89	1.2		2.35	3.8	0.0500	mg/L	1.00	_ N	IQ I	VQ S'	W-846:6010D	GELC	
C4	23	24	11/15/2005	98.1	247	128	24	Upper Los Alamos	Intermediate	LAOI-3.2	153.3	9/18/2023	REG F	INIT	Metals	Strontium	Sr	157	1.2	LVL LANL Int BG	59.6	2.6	1.00	μg/L	1.00	_ N	IQ I	VQ S'	W-846:6010D	GELC	
C4	25	26	11/15/2005	3.66	33.9	9.21	26	Canyon Upper Los Alamos	Intermediate	LAOI-3.2	153.3	9/18/2023	REG F	INIT	Geninorg	Sulfate	SO4(-2)	18.6	2	LVL LANL Int BG	7.1	2.6	1.33	mg/L	10.0	_ N	IQ I	NQ E	PA:300.0	GELC	
C4	23	23	7/26/2006	21.2	29	24.5	23	Canyon Upper Los Alamos	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG F	INIT	Metals	Calcium	Са	29	1.2	LANL Int BG	10.7	2.7	0.0500	mg/L	1.00	<u> </u>	IQ I	NQ S'	W-846:6010D	GELC	
C4	24	24	7/26/2006	19.1	28.1	21.75	24	Upper Los Alamos	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	27.8	1.3	LANL Int BG	3.11	8.9	0.670	mg/L	10.0	<u> </u>	IQ I	NQ E	PA:300.0	GELC	
C4	23	23	7/26/2006	72.5	98	82.7	23	Upper Los Alamos	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG F	INIT	Geninorg	Hardness	Hardness	98.0	1.2	LANL Int BG	37.8	2.6	0.453	mg/L	1.00	<u> </u>	IQ I	NQ S	M:A2340B	GELC	
C4	23	23	7/26/2006	0.406	26.2	4.655	14	Upper Los Alamos	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG F	INIT	Metals	Molybdenum	Мо	26.2	5.6	LVL LANL Int BG	2.9	9	0.200	μg/L	1.00	<u> </u>	IQ I	NQ S'	W-846:6020B	GELC	
C4	24	24	7/26/2006	1.36	3.03	1.765	24	Upper Los Alamos	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG F	INIT	Geninorg	Nitrate-Nitrite	NO3+NO2-N	1.47	0.8	LVL LANL Int BG	0.459	3.2	0.0850	mg/L	5.00	<u> </u>	IQ I	NQ E	PA:353.2	GELC	
								Canyon								as Nitrogen				LVL		<u> </u>	<u> </u>								

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Table 1: NMED 10-23 Groundwater Report

Ta	ible 1	NME	ED 10-23	Grou	ndwat	er Rep	oort	1		,						_														
دادم دادماند و	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	Analy Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilu	Lab Qualifier	Validation Reason Code	Code	Lab Code	Comment
C	22	22 2	2/16/2007	1.3	3.55	2.46	22	Upper Los Alamos Canyon	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG F	INIT	LCMS/MS	Perchlorate	CIO4	1.30	0.5	LANL Int BG LVL	0.27	4.8	0.0500	μg/L	1.00 -	_ NO	NQ	SW-846:6850	GELC	
C	23	23	7/26/2006	9.09	10.8	10.1	23	Upper Los Alamos Canyon	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG F	INIT	Metals	Potassium	K	10.7	1.1	LANL Int BG LVL	2.35	4.6	0.0500	mg/L	1.00 -	_ NO	NQ	SW-846:6010D	GELC	
C	23	23	7/26/2006	127	179	152	23	Upper Los Alamos Canyon	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG F	INIT	Metals	Strontium	Sr	179	1.2	LANL Int BG LVL	59.6	3	1.00	μg/L	1.00 -	– NO	NQ	SW-846:6010D	GELC	
C	24	24	7/26/2006	8.13	18	9.88	24	Upper Los Alamos Canyon	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG F	INIT	Geninorg	Sulfate	SO4(-2)	18.0	1.8	LANL Int BG LVL	7.1	2.5	0.133	mg/L	1.00 -	– NO	NQ	EPA:300.0	GELC	
C	24	29	5/9/2006	3.56	38.3	22.9	29	Upper Los Alamos Canyon	Intermediate	LAOI-7	240.0	9/12/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	31.7	1.4	LANL Int BG LVL	3.11	10.2	0.670	mg/L	10.0 -	_ NO	NQ	EPA:300.0	GELC	
C	23	28	5/9/2006	5.8	8.91	6.79	28	Upper Los Alamos Canyon	Intermediate	LAOI-7	240.0	9/12/2023	REG F	INIT	Metals	Magnesium	Mg	7.46	1.1	LANL Int BG LVL	3.14	2.4	0.11	mg/L	1.00 -	– NO	NQ	SW-846:6010D	GELC	
C4	23	28	5/9/2006	1.1	959	2.275	28	Upper Los Alamos Canyon	Intermediate	LAOI-7	240.0	9/12/2023	REG F	INIT	Metals	Nickel	Ni	959	422	LANL Int BG LVL	3.65	263	0.600	μg/L	1.00 -	– NO	NQ	SW-846:6020B	GELC	
C	21	23 2	2/15/2007	0.522	0.856	0.671	23	Upper Los Alamos Canyon	Intermediate	LAOI-7	240.0	9/12/2023	REG F	INIT	LCMS/MS	Perchlorate	CIO4	0.575	0.9	LANL Int BG LVL	0.27	2.1	0.0500	μg/L	1.00 -	_ NO	NQ	SW-846:6850	GELC	
C	23	28	5/9/2006	4.55	5.68	4.995	28	Upper Los Alamos Canyon	Intermediate	LAOI-7	240.0	9/12/2023	REG F	INIT	Metals	Potassium	К	5.36	1.1	LANL Int BG LVL	2.35	2.3	0.0500	mg/L	1.00 -	_ NO	NQ	SW-846:6010D	GELC	
C4	111	134	5/17/2005	2.27	9.25	5.62	134	Sandia Canyon	Regional	R-11	855.0	9/8/2023	REG F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	8.83	1.6	LANL Reg BG LVL	0.769	11.5	0.425	mg/L	25.0 -	_ NO	NQ	EPA:353.2	GELC	
C	104	122 (6/13/2007	0.664	1.55	0.787	122	Sandia Canyon	Regional	R-11	855.0	9/8/2023	REG F	INIT	LCMS/MS	Perchlorate	CIO4	0.891	1.1	LANL Reg BG LVL	0.414	2.2	0.0500	μg/L	1.00 -	_ NO	NQ	SW-846:6850	GELC	
C	111	134	5/17/2005	5.95	20.2	9.85	134	Sandia Canyon	Regional	R-11	855.0	9/8/2023	REG F	INIT	Geninorg	Sulfate	SO4(-2)	11.4	1.2		4.59	2.5	0.133	mg/L	1.00 -	_ J+	l6b	EPA:300.0	GELC	
C	25	27	9/22/2000	0.409	0.849	0.57	27	Pajarito Canyon	Intermediate	R-19 S2	893.3	9/6/2023	REG F	INIT	Geninorg	Fluoride	F(-1)	0.570	1	LANL Int BG	0.234	2.4	0.0330	mg/L	1.00 -	_ NO	NQ	EPA:300.0	GELC	
C	99	116	3/30/2007	68	408	348	116	Sandia Canyon	Regional	R-35a	1013.1	9/22/2023	REG F	INIT	Metals	Barium	Ва	353	1	LANL Reg BG LVL	38.1	9.3	1.00	μg/L	1.00 -	_ NO	NQ	SW-846:6010D	GELC	
C	98	116	3/30/2007	5.97	7.31	6.58	116	Sandia Canyon	Regional	R-35a	1013.1	9/22/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	6.29	1		2.7	2.3	0.0670	mg/L	1.00 -	_ J+	l6b	EPA:300.0	GELC	
C	32	34	10/9/2008	28.7	52.4	39.7	34	Mortandad Canyon	Regional	R-42	931.8	7/24/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	51.2	1.3	LANL Reg BG LVL	2.7	19	0.670	mg/L	10.0 H	H J	l9a	EPA:300.0	GELC	
C	32	43	10/9/2008	646	1240	890	43	Mortandad Canyon	Regional	R-42	931.8	7/24/2023	REG F	INIT	Metals	Chromium	Cr	646	0.7	LANL Reg BG LVL	7.48	86.4	3.00	μg/L	1.00 -	_ NO	NQ	EPA:200.8	GELC	
C	32	34	10/9/2008	9.45	16.8	14.3	34	Mortandad Canyon	Regional	R-42	931.8	7/24/2023	REG F	INIT	Metals	Magnesium	Mg	16.8	1.2		4.18	4	0.11	mg/L	1.00 -	– NO	NQ	EPA:200.7	GELC	
C	32	34	10/9/2008	8.8	34	23.6	34	Mortandad Canyon	Regional	R-42	931.8	7/24/2023	REG F	INIT	Metals	Nickel	Ni	22.8	1		2.9	7.9	0.600	μg/L	1.00 -	– NO	NQ	EPA:200.8	GELC	
C	32	34	10/9/2008	60.6	86.1	75.25	34	Mortandad Canyon	Regional	R-42	931.8	07/24/2023	REG F	INIT	Geninorg	Sulfate	SO4(-2)	86.1	1.1	LANL Reg BG LVL	4.59	18.8	1.33	mg/L	10.0 H	H J	I9a	EPA:300.0	GELC	
C	96	101 2	2/17/2009	1.99	21.6	17.1	101	Mortandad Canyon	Regional	R-44 S1	895.0	9/12/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	20.7	1.2	LANL Reg BG LVL	2.7	7.7	0.670	mg/L	10.0 -	_ NO	NQ	EPA:300.0	GELC	
C	96	101 2	2/17/2009	0.536	109	31.85	74	Mortandad Canyon	Regional	R-44 S1	895.0	9/12/2023	REG F	INIT	Metals	Nickel	Ni	29.2	0.9		2.9	10.1	0.600	μg/L	1.00 -	_ NO	NQ	SW-846:6020B	GELC	
C4	96	101 2	2/17/2009	0.123	3.86	2.265	100	Mortandad Canyon	Regional	R-44 S1	895.0	9/12/2023	REG F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.82	1.2	LANL Reg BG LVL	0.769	3.7	0.0850	mg/L	5.00 -	_ NO	NQ	EPA:353.2	GELC	
C4	96	101	2/17/2009	2.76	21.4	17	101	Mortandad Canyon	Regional	R-44 S1	895.0	9/12/2023	REG F	INIT	Geninorg	0	SO4(-2)	20.5	1.2	LANL Reg BG LVL	4.59	4.5	1.33	mg/L	10.0 -	_ NO	NQ	EPA:300.0	GELC	
C4	99	106	2/28/2009	3	21.5	5.905	106	Mortandad Canyon	Regional	R-45 S1	880.0	9/18/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	20.6	3.5		2.7	7.6	0.335	mg/L	5.00 -	_ NO	NQ	EPA:300.0	GELC	
C4	99	106	2/28/2009	0.535	13.8	1.59	91	Mortandad Canyon	Regional	R-45 S1	880.0	9/18/2023	REG F	INIT	Metals	Nickel	Ni	12.1	7.6		2.9	4.2	0.600	μg/L	1.00 -	- NO	NQ	SW-846:6020B	GELC	
C	99	106	2/28/2009	0.256	4.1	2.885	106	Mortandad Canyon	Regional	R-45 S1	880.0	9/18/2023	REG F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.97	1	LANL Reg BG LVL	0.769	3.9	0.0850	mg/L	5.00 -	_ NO	NQ	EPA:353.2	GELC	
C4	98	106	3/5/2009	2.74	8.15	5.15	106	Mortandad Canyon	Regional	R-45 S2	974.9	9/18/2023	REG F	INIT	Geninorg		CI(-1)	7.34	1.4	LANL Reg	2.7	2.7	0.0670	mg/L	1.00 -	_ NO	NQ	EPA:300.0	GELC	
				1	1					<u> </u>	1			1			İ			BG LVL		1						_i		

EM2023-0837

Table 1: NMED 10-23 Groundwater Report

Tal	ole 1:	NMI	ED 10-23	Grou	ındwat	er Re	port																							
Criteria Code	ts (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	Analy 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	9	Lab Code	Comment
C4	98	111	3/5/2009	6.1	69.1	33.75	110	Mortandad Canyon	Regional	R-45 S2	974.9	9/18/2023	REG F	INIT	Metals	Chromium	Cr	59.9	1.8	LANL Reg BG LVL	7.48	8	3.00	μg/L	1.00 -	_ NO	Q NQ	SW-846:6020E	GELC	
C4	17	18	2/23/2004	183	217	194.5	18	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	FD F	INIT	Metals	Barium	Ва	214	1.1	LANL Int BG	13.5	15.9	1.00	μg/L	1.00 -	- NO	Q NQ	SW-846:6010I	GELC	
C4	17	18	2/23/2004	183	217	194.5	18	Pueblo Canyon	Intermediate	R-5 S2	372.8	9/15/2023	REG F	INIT	Metals	Barium	Ва	217	1.1	LANL Int BG	13.5	16.1	1.00	μg/L	1.00 -	_ NO	Q NQ	SW-846:6010I	GELC	
C4	17	18	02/23/2004	27.9	31.9	30.55	18	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	FD F	INIT	Metals	Calcium	Са	29.9	1	LANL Int BG	10.7	2.8	0.0500	mg/L	1.00	N J-	l6a	SW-846:6010I	GELC	
C4	17	18	2/23/2004	27.9	31.9	30.55	18	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	REG F	INIT	Metals	Calcium	Са	30.3	1	LANL Int BG LVL	10.7	2.8	0.0500	mg/L	1.00 1	۷ J-	l6a	SW-846:6010I	GELC	
C4	20	21	2/23/2004	6.72	8.62	7.47	21	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	FD F	INIT	Geninorg	Chloride	CI(-1)	8.10	1.1	LANL Int BG	3.11	2.6	0.0670	mg/L	1.00 -	_ J+	l4g	EPA:300.0	GELC	
C4	20	21	2/23/2004	6.72	8.62	7.47	21	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	8.21	1.1	LANL Int BG	3.11	2.6	0.0670	mg/L	1.00 -	_ J+	l4g	EPA:300.0	GELC	
C4	20	21	2/23/2004	0.992	2 1.33	1.1	21	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	FD F	INIT	Geninorg	Fluoride	F(-1)	1.26	1.1	LANL Int BG	0.234	5.4	0.0330	mg/L	1.00 -	_ NO	Q NQ	EPA:300.0	GELC	
C4	20	21	2/23/2004	0.992	2 1.33	1.1	21	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	REG F	INIT	Geninorg	Fluoride	F(-1)	1.26	1.1	LANL Int BG	0.234	5.4	0.0330	mg/L	1.00 -	_ NO	Q NQ	EPA:300.0	GELC	
C4	14	15	7/25/2006	80.7	92.4	88.3	15	Pueblo Canyon	Intermediate	R-5 S2	372.8	9/15/2023	FD F	INIT	Geninorg	Hardness	Hardness	88.3	1	LANL Int BG	37.8	2.3	0.453	mg/L	1.00 -	- NO	Q NQ	SM:A2340B	GELC	
C4	14	15	7/25/2006	80.7	92.4	88.3	15	Pueblo Canyon	Intermediate	R-5 S2	372.8	9/15/2023	REG F	INIT	Geninorg	Hardness	Hardness	89.5	1	LANL Int BG	37.8	2.4	0.453	mg/L	1.00 -	- NO	Q NQ	SM:A2340B	GELC	
C4	21	22	2/23/2004	2.31	3.28	2.845	22	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	FD F	INIT	Geninorg	Nitrate-Nitrite	NO3+NO2-N	2.84	1	LANL Int BG LVL	0.459	6.2	0.170	mg/L	10.0 -	_ NO	Q NQ	EPA:353.2	GELC	
C4	21	22	2/23/2004	2.31	3.28	2.845	22	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	REG F	INIT	Geninorg		NO3+NO2-N	2.80	1	LANL Int BG	0.459	6.1	0.170	mg/L	10.0 -	_ NO	Q NQ	EPA:353.2	GELC	
C4	16	17	4/17/2007	1.24	2.35	1.4	17	Pueblo Canyon	Intermediate	R-5 S2	372.8	9/15/2023	FD F	INIT	LCMS/MS	as Nitrogen Perchlorate	CIO4	1.90	1.4	LANL Int BG	0.27	7	0.0500	μg/L	1.00 -	_ NO	Q NQ	SW-846:6850	GELC	
C4	16	17	4/17/2007	1.24	2.35	1.4	17	Pueblo Canyon	Intermediate	R-5 S2	372.8	9/15/2023	REG F	INIT	LCMS/MS	Perchlorate	CIO4	1.87	1.3	LVL LANL Int BG	0.27	6.9	0.0500	μg/L	1.00 -	- NO	Q NQ	SW-846:6850	GELC	
C4	17	18	2/23/2004	289	340	310	18	Pueblo Canyon	Intermediate	R-5 S2	372.8	9/15/2023	REG F	INIT	Metals	Strontium	Sr	340	1.1	LVL LANL Int BG	59.6	5.7	1.00	μg/L	1.00 -	- NO	Q NQ	SW-846:6010I) GELC	
C4	17	18	2/23/2004	289	340	310	18	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	FD F	INIT	Metals	Strontium	Sr	338	1.1	LVL LANL Int BG	59.6	5.7	1.00	μg/L	1.00 -	- NO	Q NQ	SW-846:6010I) GELC	
C4	17	18	2/23/2004	2.36	2.9	2.72	18	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	FD F	INIT	Metals	Uranium	U	2.71	1		0.992	2.7	0.0670	μg/L	1.00 -	- NO	Q NQ	SW-846:6020E	3 GELC	
C4	17	18	2/23/2004	2.36	2.9	2.72	18	Pueblo Canyon	Intermediate	e R-5 S2	372.8	9/15/2023	REG F	INIT	Metals	Uranium	U	2.73	1	LVL LANL Int BG	0.992	2.8	0.0670	μg/L	1.00 -	- NO	Q NQ	SW-846:6020E	3 GELC	
C4	100	109	3/6/2010	4.68	22.4	15.9	109	Mortandad Canyon	Regional	R-50 S1	1077.0	9/19/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	21.0	1.3		2.7	7.8	0.335	mg/L	5.00 -	- NO	Q NQ	EPA:300.0	GELC	
C4	101	110	3/6/2010	1.51	38.9	6.76	110	Mortandad Canyon	Regional	R-50 S1	1077.0	9/19/2023	REG F	INIT	Metals	Nickel	Ni	38.9	5.8		2.9	13.4	0.600	μg/L	1.00 -	- NO	Q NQ	SW-846:6020E	3 GELC	
C4	101	111	3/6/2010	0.398	3 3.21	2.38	111	Mortandad Canyon	Regional	R-50 S1	1077.0	9/19/2023	REG F	INIT	Geninorg	Nitrate-Nitrite	NO3+NO2-N	3.12	1.3		0.769	4.1	0.0850	mg/L	5.00 -	- NO	Q NQ	EPA:353.2	GELC	
C4	100	109	3/6/2010	7.22	21.5	18	109	Mortandad Canyon	Regional	R-50 S1	1077.0	9/19/2023	REG F	INIT	Geninorg	as Nitrogen Sulfate	SO4(-2)	20.5	1.1	BG LVL LANL Reg	4.59	4.5	0.665	mg/L	5.00 -	- NO	Q NQ	EPA:300.0	GELC	
							96	Mortandad Canyon	Regional	R-61 S1			REG F		_	Chromium	Cr			BG LVL	7.48	9.3						SW-846:6020E	3 GELC	
								Mortandad Canyon	Regional	R-61 S1		9/8/2023				Nitrate-Nitrite	NO3+NO2-N	2.52		BG LVL								EPA:353.2	GELC	
								Mortandad Canyon	Regional	R-61 S1	1125 0	9/8/2023	REG F	INIT	LCMS/MS	as Nitrogen Perchlorate	CIO4	12.6	1	BG LVL	0.414							SW-846:6850	GELC	
								Upper Los Alamos	Intermediate						Geninorg		CI(-1)			BG LVL LANL Int BG								I EPA:300.0	GELC	
		- 1	/2000		1.0	. 5.5		Canyon	odiate		302.0	-, 5, 2020	-		25.miorg	551140	J.(·/		1	LVL	J	J	3.70 +	9,∟			6b		5220	

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Table 1: NMED 10-23 Groundwater Report

Criteria Code Visits	Samples	ent																								ge			
		First Ev	Min Detect	Max Detect		Num Detect	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fid Prep Code Lab Sample Type Code	Analy 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	Analy Meth Code	Lab Code	Comment
C4 26 3	34 8/24	4/2005	10.1	18	16.5 3	4 Upper Los Alamos Canyon	Intermediate	R-6i	602.0	9/5/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	10.1	0.6	LANL Int BG LVL	3.11	3.2	0.134	mg/L	2.00 -	_			PA:300.0	GELC	
C4 26	34 8/24	4/2005	0.575	1.51	0.7115 3	4 Upper Los Alamos Canyon	Intermediate	R-6i	602.0	9/5/2023	FD F	INIT	Geninorg	Fluoride	F(-1)	1.35	1.9	LANL Int BG LVL	0.234	5.8	0.0330	mg/L	1.00 -		VQ.	NQ EF	PA:300.0	GELC	
C4 26	34 8/24	4/2005	0.575	1.51	0.7115 3	4 Upper Los Alamos Canyon	Intermediate	R-6i	602.0	9/5/2023	REG F	INIT	Geninorg	Fluoride	F(-1)	1.51	2.1	LANL Int BG LVL	0.234	6.5	0.0330	mg/L	1.00 -	_	NQ.	NQ EF	PA:300.0	GELC	
C4 26	34 8/24	4/2005	1.99	5.06	3.685 3	4 Upper Los Alamos Canyon	Intermediate	R-6i	602.0	9/5/2023	FD F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.19	0.6	LANL Int BG LVL	0.459	4.8	0.170	mg/L	10.0	_	l+	6b EF	A:353.2	GELC	
C4 26 3	34 8/24	4/2005	1.99	5.06	3.685 3	4 Upper Los Alamos Canyon	Intermediate	R-6i	602.0	9/5/2023	REG F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.21	0.6	LANL Int BG LVL	0.459	4.8	0.170	mg/L	10.0		l+	6b EF	PA:353.2	GELC	
C4 21 2	29 4/12	2/2007	2.81	7.51	6.2 2	9 Upper Los Alamos Canyon	Intermediate	R-6i	602.0	9/5/2023	FD F	INIT	LCMS/MS	Perchlorate	CIO4	3.09	0.5	LANL Int BG	0.27	11.4	0.0500	μg/L	1.00 -		NQ.	NQ SV	V-846:6850	GELC	
C4 21 2	29 04/1	12/2007	2.81	7.51	6.2 2	9 Upper Los Alamos Canyon	Intermediate	R-6i	602.0	9/5/2023	REG F	INIT	LCMS/MS	Perchlorate	CIO4	3.03	0.5	LANL Int BG	0.27	11.2	0.0500	μg/L	1.00 -	_	NQ.	NQ SV	V-846:6850	GELC	
C4 38 4	42 8/4/2	/2020	0.208	3.19	2.42 4	2 Mortandad Canyon	Regional	R-70 S1 b	963.0	9/21/2023	REG F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.19	1.3		0.769	4.1	0.170	mg/L	10.0 -	_	NQ.	NQ EF	PA:353.2	GELC	
C4 37	40 8/4/2	/2020	8.37	19.3	14.15 4	0 Mortandad Canyon	Regional	R-70 S2 b	1048.0	9/27/2023	REG F	INIT	Geninorg	_	CI(-1)	16.2	1.1		2.7	6	0.134	mg/L	2.00 -		NQ	NQ EF	PA:300.0	GELC	
C4 37	40 8/4/2	/2020	74.7	272	180.5 4	0 Mortandad Canyon	Regional	R-70 S2 b	1048.0	9/27/2023	REG F	INIT	Metals	Chromium	Cr	233	1.3		7.48	31.1	3.00	μg/L	1.00 -		VQ.	NQ SV	V-846:6020B	GELC	
C4 37	40 08/0	04/2020	2.59	4.06	3.455 4	0 Mortandad Canyon	Regional	R-70 S2 b	1048.0	9/27/2023	REG F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.94	1.1	LANL Reg BG LVL	0.769	5.1	0.170	mg/L	10.0 -	_	NQ.	NQ EF	PA:353.2	GELC	
C4 37	40 8/4/2	/2020	12.1	32.6	22.6 4	0 Mortandad Canyon	Regional	R-70 S2 b	1048.0	9/27/2023	REG F	INIT	Geninorg	Sulfate	SO4(-2)	25.5	1.1	LANL Reg BG LVL	4.59	5.6	0.266	mg/L	2.00 -		l+	6b EF	PA:300.0	GELC	
C4 8	10 1/30	0/2022	5.24	5.76	5.495 1	0 Sandia Canyon	Regional	R-71 S1 b	1285.0	9/21/2023	FD F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.49	1		0.769	7.1	0.170	mg/L	10.0 -		1Q	NQ EF	PA:353.2	GELC	
C4 8	10 1/30	0/2022	5.24	5.76	5.495 1	0 Sandia Canyon	Regional	R-71 S1 b	1285.0	9/21/2023	REG F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.55	1		0.769	7.2	0.170	mg/L	10.0 -	_	NQ.	NQ EF	PA:353.2	GELC	
C4 9	10 1/23	3/2022	3.87	5.13	4.77 1	0 Sandia Canyon	Regional	R-71 S2 b	1349.7	9/21/2023	REG F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	4.95	1		0.769	6.4	0.170	mg/L	10.0 -		1Q	NQ EF	PA:353.2	GELC	
C4 23 3	30 2/28	8/2000	10.1	209	177.5 3	0 Upper Los Alamos Canyon	Regional	R-9	683.0	9/11/2023	REG F	INIT	Metals	-	Ва	168	0.9		38.1	4.4	1.00	μg/L	1.00 -		NQ.	NQ SV	V-846:6010D	GELC	
C4 24 3	33 2/28	8/2000	5.59	7.4	6.02 3	3 Upper Los Alamos Canyon	Regional	R-9	683.0	9/11/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	5.69	0.9		2.7	2.1	0.0670	mg/L	1.00 -		1Q	NQ EF	PA:300.0	GELC	
C4 18	19 9/14	4/2000	35.1	72.6	45 1	9 Upper Los Alamos Canyon	Intermediate	R-9i S1	189.1	9/11/2023	REG F	INIT	Metals	Barium	Ва	38.3	0.9	LANL Int BG	13.5	2.8	1.00	μg/L	1.00 -	_	NQ.	NQ SV	V-846:6010D	GELC	
C4 20 2	22 9/14	4/2000	24	46.4	39.2 2	1 Upper Los Alamos Canyon	Intermediate	R-9i S1	189.1	9/11/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	36.8	0.9	LANL Int BG	3.11	11.8	0.670	mg/L	10.0 -	_	NQ.	NQ EF	PA:300.0	GELC	
C4 14	15 8/29	9/2008	74.5	96.9	83.2 1	5 Upper Los Alamos Canyon	Intermediate	R-9i S1	189.1	9/11/2023	REG F	INIT	Geninorg	Hardness	Hardness	85.7	1	LANL Int BG	37.8	2.3	0.453	mg/L	1.00 -	_	V Q	NQ SN	1:A2340B	GELC	
C4 18	19 9/14	4/2000	5.6	8.84	7.07 1	9 Upper Los Alamos Canyon	Intermediate	R-9i S1	189.1	9/11/2023	REG F	INIT	Metals	Magnesium	Mg	7.62	1.1	LANL Int BG LVL	3.14	2.4	0.11	mg/L	1.00 -	_	NQ.	NQ SV	V-846:6010D	GELC	
C4 18	19 9/14	4/2000	110	141	126 1	9 Upper Los Alamos Canyon	Intermediate	R-9i S1	189.1	9/11/2023	REG F	INIT	Metals	Strontium	Sr	134	1.1	LANL Int BG LVL	59.6	2.2	1.00	μg/L	1.00 -	<u> </u>	NQ.	NQ SV	V-846:6010D	GELC	
C4 21 2	22 9/10	0/2004	33.7	84.9	48.15 2	2 Pajarito Canyon	Intermediate	Starmer Spring	0	9/19/2023	REG F	INIT	Metals	Barium	Ва	76.4	1.6	LANL Int BG LVL	13.5	5.7	1.00	μg/L	1.00 -	— I	NQ	NQ SV	V-846:6010D	GELC	
C4 21 2	22 9/10	0/2004	3.57	51	15.95 2	2 Pajarito Canyon	Intermediate		0	9/19/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	45.9	2.9	LANL Int BG LVL	3.11	14.8								GELC	
C4 17	21 5/21	1/2009	37.8	55.7	42 2	1 Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG F	INIT	Metals	Barium	Ва			LANL Int BG LVL									V-846:6010D		
						1 Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG F	INIT	Metals	Calcium	Са			LANL Int BG LVL										GELC	
C4 18 2	22 5/21	1/2009	25.3	40.6	35.75 2	2 Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG F	INIT	Geninorg	Chloride	CI(-1)	39.0	1.1	LANL Int BG LVL	3.11	12.5	0.670	mg/L	10.0 -	<u> </u>	NQ	NQ EF	PA:300.0	GELC	

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Table 1: NMED 10-23 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 Analy 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	Analy Meth Code	Lab Code	Comment	
C4	17 2	21 5/2	1/2009	109	174	131	21	Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG	F II	NIT Geninorg	Hardness	Hardness	174	1.3	LANL Int BG LVL	37.8	4.6	0.453	mg/L	1.00	- [٧Q	NQ	SM:A2340B	GELC		
C4	17 2	21 5/2	1/2009	6.74	12	8.2	21	Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG	F II	NIT Metals	Magnesium	Mg	12	1.5	LANL Int BG LVL	3.14	3.8							SW-846:6010D			
			1/2009					Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG	F II	NIT Metals	Molybdenum	Мо	139	1	LANL Int BG LVL	2.9	47.9	0.200	μg/L	1.00	_	νQ	NQ	SW-846:6020B	GELC		
C4	18 2	22 5/2	1/2009	0.96	1.45	1.09	22	Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG	F II	NIT Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.33	1.2	LANL Int BG LVL	0.459	2.9	0.0170	mg/L	1.00	-	Q	NQ	EPA:353.2	GELC		
			21/2009				21	Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG	F II	NIT Metals	Potassium	K	6.88	1.3	LANL Int BG LVL	2.35	2.9							SW-846:6010D			
			21/2009					Upper Los Alamos Canyon	Intermediate			9/20/2023				Strontium	Sr	305	1.4	LANL Int BG LVL	59.6	5.1	1.00	μ <mark>g/L</mark>	1.00	_	٧Q	NQ	SW-846:6010D			
C4	18 2	22 5/2	1/2009	15.4	39.3	19.95	22	Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG	F II	NIT Geninorg	Sulfate	SO4(-2)	39.3	2	LANL Int BG LVL	7.1	5.5	1.33	mg/L	10.0	- 1	VQ	NQ	EPA:300.0	GELC		

^a S1 = Screen 1.

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

c — = Lab qualifier not applicable.

^d S2 = Screen 2.

Table 2: NMED 10-23 Groundwater Report Addendum

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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	WON PIS	Dilution Factor	ıb Qualifi	Validation Qualifier Validation Reason Code	Anyl Meth Code	Lab Code	Comment
XC2scr	23	23 7/26/2006	49.7	219	134.35	2	Upper Los Alamos Canyon	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG	F	INIT Met	tals	Iron	Fe	219	2	Int-Scr_95	54.1	4	30.0	μg/L	1.00	_a N	NQ NQ	SW-846:6010D	GELC	
XC2scr	21	23 2/25/2004	1.84	2.36	2.06	23	Upper Los Alamos Canyon	Regional	R-8 S1 ^b	705.31	9/5/2023	REG	F	INIT Met	tals	Potassium	K	2.36	1	Reg-Scr_95	2.357	1	0.0500	mg/L	1.00	— N	NQ NQ	SW-846:6010D	GELC	
XC2scr	17	18 4/27/2004	413	413	413	1	Upper Los Alamos Canyon	Regional	R-8 S2 ^c	821.3	9/5/2023	REG	F	INIT Met	tals	Aluminum	Al	413	1	Reg-Scr_95	68	6.1	68.0	μg/L	1.00		NQ NQ	SW-846:6010D	GELC	
XC4scr	35	41 6/1/2005	33	95.5	62.7	41	Water Canyon	Intermediate	CdV-16-1(i)	624.0	9/1/2023	REG	F	INIT Met	tals	Boron	В	95.5	2	Int-Scr_95	16.2	5.9	15.0	μg/L	1.00		NQ NQ	SW-846:6010D	GELC	
XC4scr	25	26 11/15/2005	0.069	1.6	0.96	17	Upper Los Alamos Canyon	Intermediate	LAOI-3.2	153.3	9/18/2023	REG	F	INIT Ger	ninorg	Bromide	Br(-1)	1.52	2	Int-Scr_95	0.0716	21	0.0670	mg/L	1.00		NQ NQ	EPA:300.0	GELC	
XC4scr	23	24 11/15/2005	1.21	6.5	1.55	24	Upper Los Alamos Canyon	Intermediate	LAOI-3.2	153.3	9/18/2023	REG	F	INIT Met	tals	Uranium	U	2.00	1	Int-Scr_95	0.614	3.3	0.0670	μg/L	1.00	_ J	J+ 14a	SW-846:6020B	GELC	
XC4scr	24	24 7/26/2006	0.162	1.76	0.503	24	Upper Los Alamos Canyon	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG	F	INIT Ger	ninorg	Bromide	Br(-1)	1.76	4	Int-Scr_95	0.0716	25	0.0670	mg/L	1.00		NQ NQ	EPA:300.0	GELC	
XC4scr	23	23 7/26/2006	1.1	2.1	1.6	23	Upper Los Alamos Canyon	Intermediate	LAOI-3.2a	181.4	9/12/2023	REG	F	INIT Met	tals	Uranium	U	1.86	1	Int-Scr_95	0.614	3	0.0670	μg/L	1.00		NQ NQ	SW-846:6020B	GELC	
XC4scr	23	28 5/9/2006	20.7	29.7	24	28	Upper Los Alamos Canyon	Intermediate	LAOI-7	240.0	9/12/2023	REG	F	INIT Met	tals	Barium	Ва	29.5	1	Int-Scr_95	11.96	2.5	1.00	μg/L	1.00		NQ NQ	SW-846:6010D	GELC	
XC4scr	24	29 5/9/2006	0.088	0.267	0.1395	22	Upper Los Alamos Canyon	Intermediate	LAOI-7	240.0	9/12/2023	REG	F	INIT Ger	ninorg	Bromide	Br(-1)	0.267	2	Int-Scr_95	0.0716	3.7	0.0670	mg/L	1.00		NQ NQ	EPA:300.0	GELC	
XC4scr	23	28 5/9/2006	2.19	8.76	5.18	4	Upper Los Alamos Canyon	Intermediate	LAOI-7	240.0	9/12/2023	REG	F	INIT Met	tals	Cobalt	Со	8.76	2	Int-Scr_95	1	8.8	1.00	μg/L	1.00		NQ NQ	SW-846:6010D	GELC	
XC4scr	99	116 8/30/2007	137	199	168.5	116	Sandia Canyon	Regional	R-35a	1013.1	9/22/2023	REG	F	INIT Met	tals	Strontium	Sr	167	1	Reg-Scr_95	74.4	2.2	1.00	μg/L	1.00		NQ NQ	SW-846:6010D	GELC	
XC4scr	32	34 10/9/2008	0.102	0.443	0.221	33	Mortandad Canyon	Regional	R-42	931.8	7/24/2023	REG	F	INIT Ger	ninorg	Bromide	Br(-1)	0.443	2	Reg-Scr_95	0.067	6.6	0.0670	mg/L	1.00	H J	J 19a	EPA:300.0	GELC	
XC4scr	96	101 2/17/2009	0.0757	0.203	0.147	56	Mortandad Canyon	Regional	R-44 S1	895.0	9/12/2023	REG	F	INIT Ger	ninorg	Bromide	Br(-1)	0.203	1	Reg-Scr_95	0.067	3	0.0670	mg/L	1.00		NQ NQ	EPA:300.0	GELC	
XC4scr	99	106 2/28/2009	0.0667	0.637	0.132	65	Mortandad Canyon	Regional	R-45 S1	880.0	9/18/2023	REG	F	INIT Ger	ninorg	Bromide	Br(-1)	0.223	2	Reg-Scr_95	0.067	3.3	0.0670	mg/L	1.00	_ N	NQ NQ	EPA:300.0	GELC	
XC4scr	100	109 3/6/2010	0.0691	0.545	0.137	87	Mortandad Canyon	Regional	R-50 S1	1077.0	9/19/2023	REG	F	INIT Ger	ninorg	Bromide	Br(-1)	0.154	1	Reg-Scr_95	0.067	2.3	0.0670	mg/L	1.00	J	J J_LAB	EPA:300.0	GELC	
XC4scr	85	97 5/20/2011	0.0531	11.8	0.361	91	Mortandad Canyon	Regional	R-61 S1	1125.0	9/8/2023	REG		INIT Ger	•	Total Phosphate as Phosphorus	PO4-P		1	Reg-Scr_95	0.0822	2.7	0.0200	mg/L	1.00	_ \	NQ NQ	EPA:365.4	GELC	
XC4scr	23	30 2/28/2000	39	57.6	47.2	29	Upper Los Alamos Canyon	Regional	R-9	683.0	9/11/2023	REG	F	INIT Met	tals	Boron	В	50.3	1	Reg-Scr_95	18.7	2.7	15.0	μg/L	1.00		NQ NQ	SW-846:6010D	GELC	
XC4scr	23	30 2/28/2000	63.5	199	176.5	30	Upper Los Alamos Canyon	Regional	R-9	683.0	9/11/2023	REG	F	INIT Met	tals	Strontium	Sr	185	1	Reg-Scr_95	74.4	2.5	1.00	μg/L	1.00		NQ NQ	SW-846:6010D	GELC	
XC4scr	21	22 9/10/2004	169	5730	579	22	Pajarito Canyon	Intermediate	Starmer Spring	0	9/19/2023	REG	F	INIT Met	tals	Aluminum	Al	747	1	Int-Scr_95	68	11	68.0	μg/L	1.00	_ N	NQ NQ	SW-846:6010D	GELC	
XC4scr	21	22 9/10/2004	84.2	2910	258	22	Pajarito Canyon	Intermediate	Starmer Spring	0	9/19/2023	REG	F	INIT Met	tals	Iron	Fe	387	2	Int-Scr_95	54.1	7.2	30.0	μg/L	1.00		NQ NQ	SW-846:6010D	GELC	
XC4scr	18	22 5/21/2009	0.894	2.55	1.805	22	Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG	F	INIT Ger	ninorg	Bromide	Br(-1)	2.55	1	Int-Scr_95	0.0716	36	0.0670	mg/L	1.00	1	NQ NQ	EPA:300.0	GELC	
XC4scr	18	22 05/21/2009	0.523	0.767	0.628	22	Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG	F	INIT LCN	MS/MS	Perchlorate	CIO4	0.767	1	Int-Scr_95	0.257	3	0.0500		1.00		NQ NQ	SW-846:6850	GELC	
XC4scr	18	22 5/21/2009	217	307	245.5	22	Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG	F	INIT Ger	ninorg	Total Dissolved Solids	TDS	306	1	Int-Scr_95	135	2.3	2.38	mg/L	1.00	— J	J I10er	EPA:160.1	GELC	
XC4scr	17	21 5/21/2009	0.777	2.08	1.05	21	Upper Los Alamos Canyon	Intermediate	TA-53i	600.0	9/20/2023	REG	F	INIT Met	tals	Uranium	U	2.08	2	Int-Scr_95	0.614	3.4	0.0670	μg/L	1.00	_ N	NQ NQ	SW-846:6020B	GELC	
		•					·																							

^a — = Lab qualifier not applicable.

^b S1 = Screen 1

c S2 = Screen