

DEPARTMENT OF ENERGY

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

EMLA-23-BF9-2-1

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



October 28, 2022

Subject: Monthly Notification of Groundwater Data Reviewed in October 2022

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 (2016 Consent Order). Members of EM-LA and N3B met on October 13, 2022, to review groundwater data loaded or released in the Environmental Information Management (EIM) 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 2016 Consent Order. These criteria consider New Mexico Water Quality Control Commission (NMWQCC) groundwater standards, U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs), New Mexico Environment Department (NMED) screening levels for tap water, EPA regional screening levels for tap water, and NMED-approved background values for hydrogeological zones as set forth in the "Groundwater Background Investigation Report, Revision 5." The EPA tap water standard's carcinogenic risk values were adjusted to 1 × 10⁻⁵, as specified in the 2016 Consent Order.

The enclosed report was prepared using the May 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 also includes analytical data from samples collected at a location within the Pueblo de San Ildefonso, which are subject to reporting at this time. These data 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

There were three instances of a constituent detected at a concentration that exceeded the NMWQCC groundwater standard or EPA MCL at one location where that 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). EM-LA notified NMED orally within one business day of the review of the analytical data that showed detection of the contaminants, on October 14, 2022 (per Section XXVI.C of the Consent Order).

Analysis of an unfiltered water sample collected on August 24, 2022, from CdV-16-2(i)r resulted in the measurement of the three constituents at values exceeding respective screening level values. Dibromo-3-chloropropane[1,2-] was measured at 1.28 μ g/L, exceeding the 0.2- μ g/L EPA MCL. Dibromoethane[1,2-] was measured at 0.48 μ g/L (J), exceeding the 0.05- μ g/L NMWQCC groundwater standard. Trichloropropane[1,2,3-] was measured at 0.56 μ g/L (J), exceeding the 0.00835- μ g/L NMED Table A-1 tap water screening level. Results are under review due to potential contamination during analytical laboratory processing.

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 Ryan Flynn at (505) 470-0624 (ryan.flynn@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: 2022.10.27 11:44:03 -06'00'

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 October 2022 that Meet Notification Requirements (EM2022-0758)

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

cc (letter and enclosure[s] emailed):
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SUMMARY OF GROUNDWATER DATA REVIEWED IN OCTOBER 2022 THAT MEET NOTIFICATION REQUIREMENTS

INTRODUCTION

This report provides information to the New Mexico Environment Department (NMED) concerning recent groundwater monitoring data obtained by Newport News Nuclear BWXT-Los Alamos, LLC (N3B) under the annual "Interim Facility-Wide Groundwater Monitoring Plan" for the 2022 monitoring year and contains results for contaminants and other chemical constituents that meet the five screening criteria described in Section XXVI of the 2016 Compliance Order on Consent, modified February 2017 (2016 Consent Order). The report covers groundwater samples collected from wells or springs (listed in the accompanying tables) that provide surveillance of the hydrogeological zones at Los Alamos National Laboratory, as indicated in the tables.

The report includes two tables. Table 1, NMED 9-22 Groundwater Report, presents categorical results since June 14, 2007, that met the five reporting criteria as specified in the 2016 Consent Order. Table 2, NMED 9-22 Groundwater Report Addendum, presents results that exceed the 95th percentile of those results in the data set defined in the "Groundwater Background Investigation Report, Revision 5." Only the contaminants and other chemical constituents that lack a calculated groundwater background value (i.e., the frequency of detections was too low to calculate a background value at the 95% upper tolerance level) are listed in this table. Table 2 is a voluntary submission by N3B to NMED 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 also included. All data have been through secondary validation.

This report was prepared by comparing the data against groundwater notification criteria as defined in Section IX of the 2016 Consent Order. These criteria consider New Mexico Water Quality Control Commission (NMWQCC) groundwater standards, U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs), NMED screening levels for tap water, EPA regional screening levels for tap water, and NMED-approved background values for hydrogeological zones as set forth in the "Groundwater Background Investigation Report, Revision 5." The EPA tap water standard's carcinogenic risk values were adjusted to 1 × 10⁻⁵, as specified in the 2016 Consent Order. This report was prepared using the May 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."

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

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

DESCRIPTION OF TABLES

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 of the 2016 Consent Order. In several cases, data met more than one of the notification criteria and therefore appear in the table multiple times.

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

- C1. Detection of a contaminant that is an organic compound in a spring or screened interval of a well if that contaminant has not previously been detected in the spring or screened interval
- C2. Detection of a contaminant that is a metal or other inorganic compound at a concentration above the background level in a spring or screened interval of a well if that contaminant has not previously exceeded the background level in the spring or screened interval
- C3. Detection of a contaminant in a spring or screened interval of a well at a concentration that (1) exceeds the lower of either one-half the NMWQCC water quality standard or one-half the federal MCL, or, if there is no such standard for the contaminant, (2) exceeds one-half the tap water screening levels in Table A-1 of NMED's "Risk Assessment Guidance for Site Investigations and Remediation" (June 2019), or, if there is no NMED tap water screening level available for a contaminant, (3) exceeds one-half the EPA regional human health medium-specific screening level for tap water if that contaminant has not previously exceeded one-half such standard or screening level in the spring or screened interval
- C4. Detection of a contaminant that is a metal or other inorganic compound in a spring or screened interval of a well at a concentration that exceeds 2 times the background level for the third consecutive sampling of the spring or screened interval
- C5. Detection of a contaminant in a spring or screened interval of a well at a concentration that exceeds either one-half the NMWQCC water quality standard or one-half the federal MCL and which has increased for the third consecutive sampling of that spring or screened interval

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

The two criteria are as follows:

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

XC4scr Detection of a contaminant that is a metal or other inorganic compound in a spring or screened interval of a well at a concentration that for the third consecutive sampling exceeds 2 times the 95th percentile of the data set used to establish background as defined in the "Groundwater Background Investigation Report, Revision 5"

Columns 2 through 7 in both tables provide summary statistics for metals or organic/inorganic compounds by field preparation code (e.g., filtered aluminum) for samples collected since January 1, 2000, including the currently reported data. The statistics include the date of the first sampling event; the number of sampling events and samples analyzed; the number of detections; and the minimum, maximum, and median concentration for detections. This information indicates whether the new result is consistent with the range of earlier data.

The subsequent columns contain location and sampling information as follows:

Canyon—canyon where monitoring location is found

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

Location—monitoring location name

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

Start Date—date the sample was collected

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

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

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

Analy 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 (i.e., sample collection, additional quality control samples such as field duplicates, etc.) on the quality of the sample data

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

Analy Meth 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

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 SCRN LVL—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

TDS—total dissolved solids

TNX—2,4,6-trinitroxylene

UAL—upper acceptance limit

UF—unfiltered

UOM—unit of measurement

VOC-volatile organic compound

Analytical Laboratory Codes and Qualifiers

* (lab qualifier)—A quality control analyte recovery is outside of specified acceptance criteria.

B (lab qualifier)—Target analyte was detected in the associated blank.

H (lab qualifier)—Analytical holding time was exceeded.

HE1a (validation reason code)—The quantitating internal standard area count is less than the rejection limit of the expected value.

HE4f (validation reason code)—There is evidence of cross-contamination.

HE12a (validation reason code)—The laboratory control sample percent recovery was less than the lower acceptance limit and greater than or equal to the rejection limit.

HR4g (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 associated blank.

HR12a (validation reason code)—The laboratory control sample or ongoing precision and recovery sample percent recovery was less than the lower acceptance limit and greater than or equal to the rejection limit.

HR12e (validation reason code)—The matrix spike percent recovery was less than the lower control limit.

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

I4g (validation reason code)—The detected sample result is greater than or equal to 5 times and less than 100 times the concentration of the same analyte in the associated 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.

I7h (validation reason code)—The initial or continuing calibration blank result is greater than method detection limit and the detected sample result is greater than or equal to 5 times and less than 100 times the blank result.

I9 (validation reason code)—The extraction or analytical holding time was exceeded but was less than or equal to 2 times the appropriate holding time.

I9c (validation reason code)—The non-aqueous mercury, chromium(VI), or general chemistry sample temperature was greater than 10°C upon receipt at the laboratory.

I10a (validation reason code)—The sample and the duplicate sample results are greater than or equal to 5 times the reporting limit, and the duplicate sample relative percent difference is greater than 20% for water samples and greater than 35% for soil samples, or outside of the laboratory's limits.

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

I10k (validation reason code)—Level 3 data validation identified duplicate sample issues affecting data usability.

I19 (validation reason code)— The data validator identified quality deficiencies in the reported data that require further qualification. The best value flag of the original result is also changed to N.

- J (lab qualifier)—Value is estimated.
- J (validation qualifier)—The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J- (validation qualifier)—The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample but likely to have a low bias.
- J+ (validation qualifier)—The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample but likely to have a high bias.
- J_LAB (validation reason code)—The analytical laboratory qualified the detected result as estimated (J) because the result was less than the PQL but greater than the MDL.

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

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

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

PE9c (validation reason code)—The sample temperature was greater than 6°C, or the sample preservation criteria was not met, upon receipt at the laboratory.

PE12e (validation reason code)—The matrix spike or matrix spike duplicate percent recovery was less than the lower acceptance limit.

SV7b (validation reason code)—The initial or continuing calibration verification relative response factor is less than the laboratory's lower limit.

SV7c (validation reason code)—The initial and/or continuing calibration verification recoveries are outside the appropriate limits.

SV8 (validation reason code)—The affected analyte is considered not detected because mass spectrum did not meet specifications.

SV9 (validation reason code)—The holding time was greater than 1 time and less than 2 times the applicable holding-time requirement.

V7b (validation reason code)—The initial or continuing calibration verification relative response factor was less than the laboratory's lower limit.

V7k (validation reason code)—Level 3 data validation identified calibration issues affecting data usability.

Table 1: NMED 9-22 Groundwater Report

Tab	le 1: N	MED	9-22 Grou	ndwate	er Repo	ort			•																							
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 Description	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	<u>ie</u>	Validation Qualifier	Validation Reason Code	Analy Meth Code	Lab Code	Comment
C1	10	11	02/27/2017	0.67	0.67	0.67	1	Water Canyon	Alluvial	16-61439	0	08/18/2022	REG		INIT	VOC	Chloromethane	74-87-3	0.670	1.0	NMED A1 TAP SCRN LVL	20.3	0.0	0.333	μg/L	1.00	J J	J	J_LAB	SW-846:8260D	GELC	
C1	48	59	03/28/2000	0.99	0.99	0.99	1	Water Canyon	Alluvial	CDV-16-02659	1.7	08/18/2022	REG	UF	INIT	VOC	Chloromethane	74-87-3	0.990	1.0	NMED A1 TAP SCRN LVL	20.3	0.0	0.333	μg/L	1.00	J J	J	J_LAB	SW-846:8260D	GELC	
C1	29	34	03/15/2006	16.4	16.4	16.4	1	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	UF	INIT	VOC	Acetonitrile	75-05-8	16.4	1.0	EPA TAP SCRN LVL	130	0.1	8.33	µg/L	1.00	J J	J	J_LAB	SW-846:8260D	GELC	See Note a
C1	33	39		0.37	0.37	0.37	1	Water Canyon		CdV-16-2(i)r	850.0		REG		INIT			71-43-2	0.370		NM GW STD				. 0	1.00			_	SW-846:8260D		
C1	33	39		0.39	0.39	0.39	1	Water Canyon		CdV-16-2(i)r	850.0	08/24/2022			INIT			74-97-5	0.390		EPA TAP SCRN LVL				. 0	1.00			_	SW-846:8260D		
	33	39	12/15/2005	0.34	0.34	0.34	1	Water Canyon		CdV-16-2(i)r	850.0	08/24/2022			INIT		Bromodichloromethane		0.340		EPA MCL				. 0	1.00			_	SW-846:8260D		
C1	33	39	12/15/2005	1.23	1.23	1.23	1	Water Canyon		CdV-16-2(i)r	850.0	08/24/2022			INIT		Bromoform	75-25-2	1.23	1.0	EPA MCL	80			. 0	1.00				SW-846:8260D		
	25			3.04	66.4	66.4	1	Water Canyon		CdV-16-2(i)r	850.0		REG		INIT			71-36-3	66.4	1.0	EPA TAP SCRN LVL		0.0		. 0	1.00				SW-846:8260D		
C1	33	39			11.7	7.37	2	Water Canyon		CdV-16-2(i)r	850.0		REG		INIT		Butanone[2-]	78-93-3	3.04	0.4	NMED A1 TAP SCRN LVL		0.0		. 0	1.00				SW-846:8260D		
C1	33	39	12/15/2005	0.34	0.34	0.34	1	Water Canyon		CdV-16-2(i)r	850.0		REG		INIT		Chlorodibromomethane		0.340		EPA MCL					1.00			_	SW-846:8260D		
C1	33	39	12/15/2005 12/15/2005	1.28	1.28	1.28	1	Water Canyon Water		CdV-16-2(i)r	850.0 850.0	08/24/2022	REG		INIT		Chloroform Dibromo-3-	96-12-8	0.410	1.0	EPA MCL			0.333	. 0	1.00			_	SW-846:8260D SW-846:8260D		See Note a
C1	32	38		0.48	0.48	0.48	1	Canyon		CdV-16-2(i)r	850.0		REG		INIT		Chloropropane[1,2-] Dibromoethane[1,2-]	106-93-4	0.48	1	NM GW STD				. 0	1.00				SW-846:8260D		
C1	33	39	12/15/2005	0.46	0.46	0.46	1	Canyon		CdV-16-2(i)r	850.0		REG		INIT		Dibromomethane	74-95-3	0.460	1.0	NMED A1	8.0		0.333	μg/L	1.00				SW-846:8260D		See Note a
			12/10/2000		00	00		Canyon		0 1 10 2(1)	000.0	00/2 1/2022	0	0.			2.2.0		0.100		TAP SCRN LVL	0.0		0.000	F-9/ =					0.0.02002	5225	
C1	33	39			0.37	0.37	1	Water Canyon		CdV-16-2(i)r	850.0	08/24/2022			INIT			75-34-3	0.370		NM GW STD			0.333	μg/L	1.00				SW-846:8260D		
	33	39		0.51	0.51	0.51	1	Water Canyon		CdV-16-2(i)r	850.0	08/24/2022						107-06-2			NM GW STD				. •	1.00				SW-846:8260D		
	33		12/15/2005		0.36	0.36	1	Water Canyon		CdV-16-2(i)r	850.0	08/24/2022					Dichloroethene[cis-1,2-]	156-59-2	0.360		NM GW STD			0.333		1.00			_	SW-846:8260D		
	33	39	12/15/2005		0.4	0.4	1	Water Canyon		CdV-16-2(i)r	850.0	08/24/2022						78-87-5	0.400		NM GW STD			0.333		1.00				SW-846:8260D		
		39		0.59	0.59	0.59	1	Water Canyon		CdV-16-2(i)r	850.0	08/24/2022						142-28-9	0.590		EPA TAP SCRN LVL	370		0.333		1.00			_	SW-846:8260D		
	33	39	12/15/2005 12/15/2005		0.38	0.38	1	Water Canyon		CdV 16-2(i)r	850.0 850.0	08/24/2022					Dichloropropene[trans-1,3-]		0.380		EPA TAP	38	0.1			1.00				SW-846:8260D SW-846:8260D		
C1	33		12/15/2005	1.71	1.71	1.71	1	Water Canyon Water		CdV-16-2(i)r	850.0	08/24/2022					Hexanone[2-] Iodomethane	591-78-6 74-88-4		1.0	SCRN LVL	38	U. I		. 0	1.00				SW-846:8260D SW-846:8260D		
C1	JJ	39	12/13/2003	1.71	1./ 1	1./1	'	Canyon	memediale	Guv-10-2(I)I	030.0	00/24/2022	NEG	UF	IINII	VUC	Todometrarie	14-00-4	1.71	1.0				1.07	µg/L	1.00	J J		_LAB	Jvv-040.0∠0UD	GELU	oee note a

EM2022-0758 9 October 2022

Table 1: NMED 9-22 Groundwater Report

ıa	oie 1:	NIME	O 9-22 Grou	nawate	er Kep	ort	1	1					1	ı	1	•	1	1	-				1									1
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 Description	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
C1	33	39		3.37	5.35	4.36	2	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	UF		VOC	Methyl-2-pentanone[4-]		3.37	0.8	NMED A1 TAP SCRN LVL	1240	0.0	1.67	μg/L	1.00	J		J_LAB	SW-846:8260D	GELC	See Note a.
C1	33	39	12/15/2005	0.64	0.64	0.64	1	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	UF	INIT	VOC	Methylene Chloride	75-09-2	0.640	1.0	NM GW STD	5	0.1	0.500	μg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	See Note a.
C1	33	39	12/15/2005	0.37	0.37	0.37	1	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	UF	INIT	VOC	Tetrachloroethane[1,1, 1,2-]	630-20-6	0.370	1.0	NMED A1 TAP SCRN LVL	5.74	0.1	0.333	μg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	See Note a.
C1	33	39	12/15/2005	0.54	0.54	0.54	1	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	UF	INIT	VOC	Tetrachloroethane[1,1, 2,2-]	79-34-5	0.54	1.0	NM GW STD	10	0.1	0.333	μg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	See Note a.
C1	33	39	12/15/2005	0.53	0.53	0.53	1	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	UF	INIT	VOC	Trichloroethane[1,1,2-]	79-00-5	0.530	1.0	NM GW STD	5	0.1	0.333	μg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	See Note a.
C1	33	41	12/15/2005	0.56	0.56	0.56	1	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	UF	INIT	VOC	Trichloropropane[1,2, 3-]	96-18-4	0.56	1	NMED A1 TAP SCRN LVL	0.00835	67.1	0.333	µg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	See Note a.
C1	9	9	04/26/2007	2.54	2.54	2.54	1	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	UF	INIT	VOC	Acetone	67-64-1	2.54	1.0	NMED A1 TAP SCRN LVL	14100	0	1.74	μg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	
C1	3	3	02/10/2018	0.302	0.302	0.302	1	Water Canyon	Alluvial	MSC-16-06294	2.5	08/11/2022	REG	UF	INIT	Hexmod	DNX	DNX	0.302	1.0				0.0817	μg/L	2.00		NQ	NQ	SW-846:8330B	GELC	
C1	3	3	02/10/2018	0.466	0.466	0.466	1	Water Canyon	Alluvial	MSC-16-06294	2.5	08/11/2022	REG	UF	INIT	Hexmod	MNX	MNX	0.466	1.0				0.0817	μg/L	2.00		NQ	NQ	SW-846:8330B	GELC	
C1	3	3	02/10/2018	0.227	0.227	0.227	1	Water Canyon	Alluvial	MSC-16-06294	2.5	08/11/2022	REG	UF	INIT	Hexmod	TNX	TNX	0.227	1.0				0.0817	μg/L	2.00	J	J	J_LAB	SW-846:8330B	GELC	
C1 ^t	26	32	02/01/2007	0.0872	0.0872	0.0872	1	Water Canyon	Intermediate	R-26 S1	651.8	08/23/2022	REG	UF	INIT	HEXP	НМХ	2691-41-0	0.0872	1.0	NMED A1 TAP SCRN LVL	1000	0.0	0.0811	μg/L	2.00	J	R	HE4f	SW-846:8330B		Result rejected due to data quality
C1 ^t	26	32	02/01/2007	0.721	0.721	0.721	1	Water Canyon	Intermediate	R-26 S1	651.8	08/23/2022	REG	UF	INIT	HEXP	RDX	121-82-4	0.721	1.0	NMED A1 TAP SCRN LVL	9.66	0.1	0.0811	μg/L	2.00		R	HE4f	SW-846:8330B		Result rejected due to data quality
C1	27	42	04/02/2011	0.86	0.86	0.86	1	Water Canyon	Regional	R-63	1325.0	08/19/2022	FD	UF	INIT	VOC	Chloromethane	74-87-3	0.860	1.0	NMED A1 TAP SCRN LVL	20.3	0.0	0.333	μg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	
C1	22	28	03/20/2017	0.0814	0.0814	0.0814	1	Water Canyon	Regional	R-68	1340.0	08/09/2022	FD	UF	INIT	HEXP	НМХ	2691-41-0	0.0814	1.0	NMED A1 TAP SCRN LVL	1000	0.0	0.0784	μg/L	2.00	J	J	J_LAB	SW-846:8330B	GELC	
C1	20	23	12/12/2011	2.05	2.05	2.05	1	Lower Los Alamos Canyon	Intermediate	Vine Tree Spring	0	06/21/2022	REG	UF	INIT	VOC	Acetone	67-64-1	2.05	1.0	NMED A1 TAP SCRN LVL	14100	0	1.74	μg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	
C3	32	38	12/15/2005	1.28	1.28	1.28	1	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	UF	INIT	VOC	Dibromo-3- Chloropropane[1,2-]	96-12-8	1.28	1	EPA MCL	0.2	6.4	0.333	μg/L	1.00		NQ	NQ	SW-846:8260D	GELC	See Note a.
C3	32	38	12/15/2005	0.48	0.48	0.48	1	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	UF	INIT	VOC	Dibromoethane[1,2-]	106-93-4	0.48	1	NM GW STD	0.05	9.6	0.333	μg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	See Note a.
C3	33	41	12/15/2005	0.56	0.56	0.56	1	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	UF	INIT	VOC	Trichloropropane[1,2, 3-]	96-18-4	0.56	1	NMED A1 TAP SCRN LVL	0.00835	67.1	0.333	µg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	See Note a.
С3	28	28	11/14/2000	1.8	5.47	2.635	10	Water Canyon	Alluvial	MSC-16-06294	2.50	08/11/2022	REG	F	INIT	Metals	Arsenic	As	5.47	2.1	NM GW STD	10	0.5	2.00	μg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	29	35	04/20/2010	21.7	160	52.5	35	Water Canyon	Intermediate	16-26644	129.0	08/23/2022	REG	F	INIT	Metals	Barium	Ва	63.4	1.2	LANL Int BG LVL	13.5	4.7	1.00	μg/L	1.00		NQ	NQ	SW-846:6010D	GELC	

Table 1: NMED 9-22 Groundwater Report

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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	Fld Prep Code	Lab Sample Type Code	Analy Suite Code	Analyte Description	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier		Analy Meth Code	Lab Code	Comment
C4	26	31	04/20/2010	15.2	57.8	20.7	31	Water Canyon	Intermediate	16-26644	129.0	08/23/2022	REG	F I	NIT	Geninorg	Chloride	CI(-1)	35.4	1.7	LANL Int BG LVL	3.11	11.4	0.670	mg/L	10.0	NO	NQ	EPA:300.0	GELC	
C4	37	42	09/09/2004	53.1	91.6	69.8	42	Pajarito Canyon	Intermediate	Bulldog Spring	0	08/11/2022	REG	F I	NIT	Metals	Barium	Ва	84.0	1.2	LANL Int BG LVL	13.5	6.2	1.00	μg/L	1.00	NO	NQ	SW-846:6010D	GELC	
C4	36	41	09/09/2004	12.1	45.9	19.2	41	Pajarito Canyon	Intermediate	Bulldog Spring	0	08/11/2022	REG	F I	NIT	Geninorg	Chloride	CI(-1)	30.3	1.6	LANL Int BG LVL	3.11	9.7	0.335	mg/L	5.00	NO	NQ	EPA:300.0	GELC	
C4	31	36	03/26/2007	0.514	1.11	0.752	36	Pajarito Canyon	Intermediate	Bulldog Spring	0	08/11/2022	REG	F I		LCMS/ MS	Perchlorate	CIO4	1.11	1.5	LANL Int BG	0.27	4.1	0.0500	μg/L	1.00	NO	NQ	SW-846:6850	GELC	
C4	37	42	09/09/2004	88.1	159	116	42	Pajarito Canyon	Intermediate	Bulldog Spring	0	08/11/2022	REG	F			Strontium	Sr	126	1.1	LANL Int BG	59.6	2.1	1.00	μg/L	1.00	NO	NQ	SW-846:6010D	GELC	
C4	32	37	01/29/2007	13.6	50	19.8	37	Water Canyon	Intermediate	Burning Ground Spring	0	08/13/2022	REG	F I	NIT	Geninorg	Chloride	CI(-1)	50.0	2.5	LANL Int BG LVL	3.11	16.1	0.670	mg/L	10.0	J+	l6b	EPA:300.0	GELC	
C4	40	48	08/26/2005	49.5	107	66.9	48	Water Canyon	Intermediate	Burning Ground Spring	0	08/13/2022	REG	F I	NIT	Geninorg	Hardness	Hardness	81.3	1.2	LANL Int BG LVL	37.8	2.2	0.453	mg/L	1.00	NO	NQ	SM:A2340B	GELC	
C4	32	37	01/29/2007	0.319	2.16	1.115	36	Water Canyon	Intermediate	Burning Ground Spring	0	08/13/2022	REG	F I	NIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.15	1.0	LANL Int BG LVL	0.459	2.5	0.0170	mg/L	1.00	NC	NQ	EPA:353.2	GELC	
C4	30	34	05/15/2007	0.385	0.941	0.59	34	Water Canyon	Intermediate	Burning Ground Spring	0	08/13/2022	REG	F I		LCMS/ MS	Perchlorate	CIO4	0.892	1.5	LANL Int BG LVL	0.27	3.3	0.0500	μg/L	1.00	NC	NQ	SW-846:6850	GELC	
C4	31	37	06/01/2005	5.78	9	7.23	37	Water Canyon	Intermediate	CdV-16-1(i)	624.0	08/15/2022	REG	F I	NIT	Geninorg	Chloride	CI(-1)	9.00	1.2	LANL Int BG LVL	3.11	2.9	0.0670	mg/L	1.00	J+	l6b	EPA:300.0	GELC	
C4	17	22	05/21/2015	9.11	66.5	12.95	22	Water Canyon	Intermediate	CDV-9-1(i) S1	937.4	08/16/2022	REG	F I	NIT	Geninorg	Chloride	CI(-1)	13.8	1.1	LANL Int BG LVL	3.11	4.4	0.134	mg/L	2.00	J+	l6b	EPA:300.0	GELC	
C4	17	22	05/21/2015	0.905	2.63	1.08	22	Water Canyon	Intermediate	CDV-9-1(i) S1	937.4	08/16/2022	REG	F I	NIT		Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.17	1.1	LANL Int BG LVL	0.459	2.5	0.0170	mg/L	1.00	NO	NQ	EPA:353.2	GELC	
C4	13	15	04/26/2007	37.3	45.8	40.6	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	NIT	Metals	Barium	Ва	37.3	0.9	LANL Int BG LVL	13.5	2.8	1.00	µg/L	1.00	NO	NQ	SW-846:6010D	GELC	
C4	13	15	04/26/2007	31.9	36.4	34.1	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	NIT	Metals	Calcium	Са	31.9	0.9	LANL Int BG LVL	10.7	3.0	0.05	mg/L	1.00	NO	NQ	SW-846:6010D	GELC	
C4	13	15	04/26/2007	17.5	19.7	19	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F I	NIT	Geninorg	Chloride	CI(-1)	18.7	1	LANL Int BG LVL	3.11	6	0.335	mg/L	5.00	J+	l6b	EPA:300.0	GELC	
C4	13	15	04/26/2007	0.768	0.961	0.895	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	NIT	Geninorg	Fluoride	F(-1)	0.96	1.1	LANL Int BG LVL	0.234	4.1	0.0330	mg/L	1.00	J+	l6b	EPA:300.0	GELC	
C4	13	15	04/26/2007	112	129	120	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	NIT	Geninorg	Hardness	Hardness	112	0.9	LANL Int BG LVL	37.8	3	0.453	mg/L	1.00	NO	NQ	SM:A2340B	GELC	
C4	13	15	04/26/2007	7.88	9.18	8.52	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	NIT	Metals	Magnesium	Mg	7.88	0.9	LANL Int BG LVL	3.14	2.5	0.11	mg/L	1.00	NO	NQ	SW-846:6010D	GELC	
C4	13	15	04/26/2007	2.8	3.61	3.05	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	NIT		Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.18	1	LANL Int BG LVL	0.459	6.9	0.0850	mg/L	5.00	NO	NQ	EPA:353.2	GELC	
C4	13	15	04/26/2007	1.43	2.09	1.64	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F		LCMS/ MS	Perchlorate	CIO4	1.92	1.2	LANL Int BG LVL	0.27	7.1	0.0500	μg/L	1.00	NO	NQ	SW-846:6850	GELC	

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Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Analy Suite Code	Analyte Description	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	<u>e</u> .	Validation Qualifier	Validation Reason Code	Analy Meth Code	Lab Code	Comment
C4	13	15	04/26/2007	161	193	181	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	INIT	Metals	Strontium	Sr	170	0.9	LANL Int BG LVL	59.6	2.9	1.00	μg/L	1.00	N	Q N	VQ	SW-846:6010D	GELC	
C4	13	15	04/26/2007	32.4	37.6	34.8	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	33.7	1	LANL Int BG LVL	7.1	4.7	0.665	mg/L	5.00	N	Q N	٧Q	EPA:300.0	GELC	
C4	74	83	01/10/2000	115	243	166	76	Water Canyon	Intermediate	Martin Spring	0	08/25/2022	REG	F	INIT	Metals	Barium	Ва	142	0.9	LANL Int BG LVL		10.5		. 0	1.00	N	Q N	NQ	SW-846:6010D	GELC	
C4	74	83	01/10/2000	15.5	42.8	28.3	83	Water Canyon	Intermediate	Martin Spring	0	08/25/2022	REG	F	INIT	Metals	Calcium	Ca	24.2	0.9	LANL Int BG LVL	10.7	2.3	0.05	mg/L	1.00	N	Q N	NQ	SW-846:6010D	GELC	
C4	30	37	01/30/2007	18	45.3	23	37	Water Canyon	Intermediate	Martin Spring	0	08/25/2022	REG	F	INIT	Geninorg	Chloride	CI(-1)	26.7	1.2	LANL Int BG LVL	3.11	8.6	0.335	mg/L	5.00	J-	+ 4	4g	EPA:300.0	GELC	
C4	30	37	01/30/2007	0.349	0.688	0.48	37	Water Canyon	Intermediate	Martin Spring	0	08/25/2022	REG	F	INIT	Geninorg	Fluoride	F(-1)	0.517	1.1	LANL Int BG LVL	0.234	2.2	0.0330	mg/L	1.00	N	Q N	NQ	EPA:300.0	GELC	
C4	38	46	08/25/2005	63.1	112	94.05	46	Water Canyon	Intermediate	Martin Spring	0	08/25/2022	REG	F	TINI	Geninorg	Hardness	Hardness	84.6	0.9	LANL Int BG LVL	37.8	2.2	0.453	mg/L	1.00	Ν	Q N	Q	SM:A2340B	GELC	
C4	30	37	01/30/2007	0.95	4.88	2.68	37	Water Canyon	Intermediate	Martin Spring	0	08/25/2022	REG	F	TINI	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.03	8.0	LANL Int BG LVL	0.459	4.4	0.170	mg/L	10.0	Ν	Q N	Q	EPA:353.2	GELC	
C4	30	37	01/30/2007	11.7	20	16.5	37	Water Canyon	Intermediate	Martin Spring	0	08/25/2022	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	14.7	0.9	LANL Int BG LVL	7.1	2.1	0.133	mg/L	1.00	N	Q N	VQ	EPA:300.0	GELC	
C4	98	118	05/17/2005	2.27	7.43	5.53	118	Sandia Canyon	Regional	R-11	855.0	08/09/2022	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	6.95	1.3	LANL Reg BG LVL	0.769	9	0.0850	mg/L	5.00	N	Q N	QV	EPA:353.2	GELC	
C4	98	118	05/17/2005	5.95	20.2	9.615	118	Sandia Canyon	Regional	R-11	855.0	08/09/2022	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	9.32	1	LANL Reg BG LVL	4.59	2	0.133	mg/L	1.00	N	Q N	VQ	EPA:300.0	GELC	
C4	86	99	08/30/2007	68	408	348	99	Sandia Canyon	Regional	R-35a	1013.1	08/25/2022	FD	F	INIT	Metals	Barium	Ва	353	1	LANL Reg BG LVL	38.1	9.3	1.00	μg/L	1.00	N	Q N	QV	SW-846:6010D	GELC	
C4	86	99	08/30/2007	68	408	348	99	Sandia Canyon	Regional	R-35a	1013.1	08/25/2022	REG	F	INIT	Metals	Barium	Ва	369	1.1	LANL Reg BG LVL	38.1	9.7	1.00	μg/L	1.00	N	Q N	VQ	SW-846:6010D	GELC	
C4	85	99	08/30/2007	5.97	7.31	6.58	99	Sandia Canyon	Regional	R-35a	1013.1	08/25/2022	FD	F	INIT	Geninorg	Chloride	CI(-1)	7.10	1.1	LANL Reg BG LVL	2.7	2.6	0.0670	mg/L	1.00	N	Q N	QV	EPA:300.0	GELC	
C4	85	99	08/30/2007	5.97	7.31	6.58	99	Sandia Canyon	Regional	R-35a	1013.1	08/25/2022	REG	F	INIT	Geninorg	Chloride	CI(-1)	6.88	1	LANL Reg BG LVL	2.7	2.5	0.0670	mg/L	1.00	N	Q N	QV	EPA:300.0	GELC	
C4	86	99	08/30/2007	1.2	22.2	8.175	98	Sandia Canyon	Regional	R-35a	1013.1	08/25/2022	FD	F	INIT	Metals	Nickel	Ni	9.24	1.1	LANL Reg BG LVL	2.9	3.2	0.600	μg/L	1.00	N	Q N	QV	SW-846:6020B	GELC	
C4	86	99	08/30/2007	1.2	22.2	8.175	98	Sandia Canyon	Regional	R-35a	1013.1	08/25/2022	REG	F	INIT	Metals	Nickel	Ni	8.86	1.1	LANL Reg BG LVL	2.9	3.1	0.600	μg/L	1.00	N	Q N	NQ	SW-846:6020B	GELC	
C4	88	92	02/17/2009	1.99	21.6	10.62	92	Mortandad Canyon	Regional	R-44 S1	895.0	08/18/2022	REG	F	INIT	Geninorg	Chloride	CI(-1)	21.2	2	LANL Reg BG LVL	2.7	7.9	0.335	mg/L	5.00	J	+ I6	6b	EPA:300.0	GELC	
C4	88	92	02/17/2009	0.536	109	32.5	65	Mortandad Canyon	Regional	R-44 S1	895.0	08/18/2022	REG	F	INIT	Metals	Nickel	Ni	47.5	1.5	LANL Reg BG LVL	2.9	16.4	0.600	μg/L	1.00	N	Q N	NQ	SW-846:6020B	GELC	
C4	88	92	02/17/2009	0.123	3.86	2.01	91	Mortandad Canyon	Regional	R-44 S1	895.0	08/18/2022					Nitrate-Nitrite as Nitrogen	NO3+NO2-N		1.4	LANL Reg BG LVL			0.0850				Q N			GELC	
C4	88	92	02/17/2009	2.76	21.3	11.25		Mortandad Canyon	Regional	R-44 S1	895.0	08/18/2022	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	20.3	1.8	LANL Reg BG LVL			0.665				Q N			GELC	
		92	02/28/2009	3	21.5	5.575	92	Mortandad Canyon	Regional	R-45 S1	880.0	08/11/2022					Chloride	CI(-1)	20.5	3.7	LANL Reg BG LVL				mg/L	5.00		Q N			GELC	
C4	86	92	02/28/2009	0.535	13.8	1.26	77	Mortandad Canyon	Regional	R-45 S1	880.0	08/11/2022	REG	F	INIT	Metals	Nickel	Ni	11.1	8.8	LANL Reg BG LVL	2.9	3.8	0.600	μg/L	1.00	N	Q N	NQ	SW-846:6020B	GELC	

Table 1: NMED 9-22 Groundwater Report

Ta	able 1	NME	D 9-22 Groւ	ındwat	er Rep	ort																										
	orneria code Visite	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Prep Code	Lab Sample Type Code	Analy Suite Code	Analyte Description	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	ē	Validation Qualifier	Validation Reason Code	Analy Meth Code	Lab Code	Comment
C4	86	92	02/28/2009	0.256	3.47	2.83	92	Mortandad Canyon	Regional	R-45 S1	880.0	08/11/2022	REG	F II	NIT		itrate-Nitrite as itrogen	NO3+NO2-N	3.32	1.2	LANL Reg BG LVL	0.769	4.3	0.0850	mg/L	5.00	N	Q N	IQ	EPA:353.2	GELC	
C4	86	92	02/28/2009	4.1	21.4	8.43	92	Mortandad Canyon	Regional	R-45 S1	880.0	08/11/2022	REG	F II	NIT	Geninorg S	ulfate	SO4(-2)	20.0	2.4	LANL Reg BG LVL	4.59	4.4	0.665	mg/L	5.00	N	Q N	IQ	EPA:300.0	GELC	
C2	85	90	03/05/2009	2.74	7.95	4.78	90	Mortandad Canyon	Regional	R-45 S2	974.9	08/11/2022	REG	F II	TIN	Geninorg C	hloride	CI(-1)	7.95	1.7	LANL Reg BG LVL	2.7	2.9	0.0670	mg/L	1.00	N	Q N	1Q	EPA:300.0	GELC	
C4	85	95	03/05/2009	6.1	65.2	29	94	Mortandad Canyon	Regional	R-45 S2	974.9	08/11/2022	REG	F II	NIT	Metals C	hromium	Cr	64.9	2.2	LANL Reg BG LVL	7.48	8.7	3.00	μg/L	1.00	N	Q N	IQ	SW-846:6020B	GELC	
C4	85	90	03/05/2009	3.37	12.4	5.895	90	Mortandad Canyon	Regional	R-45 S2	974.9	08/11/2022	REG	F II	NIT	Geninorg S	ulfate	SO4(-2)	10.1	1.7	LANL Reg BG LVL	4.59	2.2	0.133	mg/L	1.00	N	Q N	IQ	EPA:300.0	GELC	
C4	87	96	03/06/2010	4.68	22.4	10.4	96	Mortandad Canyon	Regional	R-50 S1	1077.0	08/16/2022	REG	F II	NIT	Geninorg C	hloride	CI(-1)	21.4	2.1	LANL Reg BG LVL	2.7	7.9	0.335	mg/L	5.00	J÷	- 16	6b	EPA:300.0	GELC	
C4	1 88	97	03/06/2010	1.51	25.6	6.35	97	Mortandad Canyon	Regional	R-50 S1	1077.0	08/16/2022	REG	F II	NIT	Metals N	ickel	Ni	9.67	1.5	LANL Reg BG LVL	2.9	3.3	0.600	μg/L	1.00	N	Q N	IQ	SW-846:6020B	GELC	
C4	1 88	98	03/06/2010	0.398	3.21	2.275	98	Mortandad Canyon	Regional	R-50 S1	1077.0	08/16/2022	REG	F II	NIT		itrate-Nitrite as itrogen	NO3+NO2-N	3.04	1.3	LANL Reg BG LVL	0.769	4	0.0850	mg/L	5.00	N	Q N	IQ	EPA:353.2	GELC	
C2	87	96	03/06/2010	7.22	21.5	15.1	96	Mortandad Canyon	Regional	R-50 S1	1077.0	08/16/2022	REG	F II	NIT	Geninorg S	ulfate	SO4(-2)	21.1	1.4	LANL Reg BG LVL	4.59	4.6	0.665	mg/L	5.00	N	Q N	IQ	EPA:300.0	GELC	
C4	72	83	05/20/2011	2.03	51	24.75	82	Mortandad Canyon	Regional	R-61 S1	1125.0	08/10/2022	REG	F II	TIN	Metals C	hromium	Cr	42.5	1.7	LANL Reg BG LVL	7.48	5.7	3.00	µg/L	1.00	N	Q N	IQ	SW-846:6020B	GELC	
C4	72	83	05/20/2011	0.427	3.3	2.31	83	Mortandad Canyon	Regional	R-61 S1	1125.0	08/10/2022	REG	F II	NIT		itrate-Nitrite as itrogen	NO3+NO2-N	2.85	1.2	LANL Reg BG LVL	0.769	3.7	0.0850	mg/L	5.00	N	Q N	1Q	EPA:353.2	GELC	
C4	71	82	05/20/2011	2.96	17	12.3	82	Mortandad Canyon	Regional	R-61 S1	1125.0	08/10/2022	REG	F II		LCMS/ Po	erchlorate	CIO4	12.2	1	LANL Reg BG LVL	0.414	29.5	0.250	µg/L	5.00	N	Q N	IQ	SW-846:6850	GELC	
C4	25	28	08/04/2020	2.13	2.92	2.49	28	Mortandad Canyon	Regional	R-70 S1 ^c	963.0	08/23/2022	REG	F II	NIT		itrate-Nitrite as itrogen	NO3+NO2-N	2.31	0.9	LANL Reg BG LVL	0.769	3	0.0850	mg/L	5.00	N	Q N	1Q	EPA:353.2	GELC	
C4	25	27	08/04/2020	11.1	19.3	15.2	27	Mortandad Canyon	Regional	R-70 S2 ^c	1048.0	08/23/2022	REG	F II	NIT	Geninorg C	hloride	CI(-1)	14.2	0.9	LANL Reg BG LVL	2.7	5.3	0.134	mg/L	2.00	N	Q N	IQ	EPA:300.0	GELC	
	25		08/04/2020		272	202	27	Mortandad Canyon	Regional	R-70 S2 ^c		08/23/2022					hromium	Cr		_	LANL Reg BG LVL		23.4		. 0	1.00		Q N		SW-846:6020B		
C4	1 25	27	08/04/2020					Mortandad Canyon	Regional	R-70 S2 ^c						N	itrogen	NO3+NO2-N			BG LVL	0.769						Q N			GELC	
C2	1 25	27	08/04/2020			25.5		Mortandad Canyon	Regional	R-70 S2 ^c	1048.0	08/23/2022			NIT	Geninorg S	ulfate	SO4(-2)	21.9		BG LVL			0.266	_			Q N			GELC	
C4	1 21	24	08/08/2011	39.7	54.1	43.5	24	Lower Los Alamos Canyon	Intermediate	Vine Tree Spring	0	06/21/2022	REG	F II	NIT	Metals Ba	arium	Ва	39.7	0.9	LANL Int BG LVL	13.5	2.9	1.00	μg/L	1.00	N	Q N	1Q	SW-846:6010D	GELC	
C4	1 21	24	08/08/2011	24	31	28.75	24	Lower Los Alamos	Intermediate	Vine Tree Spring	0	06/21/2022	REG	F II	NIT	Metals C	alcium	Са	28.8	1	LANL Int BG LVL	10.7	2.7	0.05	mg/L	1.00	N	Q N	IQ	SW-846:6010D	GELC	
C4	1 21	24	08/08/2011	15.5	32.4	16.85	24	Canyon Lower Los Alamos	Intermediate	Vine Tree Spring	0	06/21/2022	REG	F II	NIT	Geninorg C	hloride	CI(-1)	18.2	1.1	LANL Int BG LVL	3.11	5.9	0.134	mg/L	2.00	J÷	- 16	6b	EPA:300.0	GELC	
C/	1 21	24	08/08/2011	0.422	0.603	0 4805	5 24	Canyon	Intermediate		0	06/21/2022	REG	F II	NIT	Geninorg Fl	luoride	F(-1)	0.614	1 3	LANL Int BG	U 534	26	U U33U	ma/l	1.00	J⊦	- 16	3h	EPA:300.0	GELC	
	. 21		00/00/2011	0.422	0.033	0.4030		Los Alamos Canyon	micrinediale	Spring		00/2 1/2022	I LO	"	41.1			(-1)	0.014	1.5	LVL	0.204	2.0	0.0000	ilig/L	1.00				Li A.300.0		
C4	1 21	24	08/08/2011	87.6	113	104.5	24	Lower Los Alamos Canyon	Intermediate	Vine Tree Spring	0	06/21/2022	REG	F II	TIN	Geninorg H	ardness	Hardness	105	1	LANL Int BG LVL	37.8	2.8	0.453	mg/L	1.00	N	Q N	IQ	SM:A2340B	GELC	
			1	1	1				1	1	1	L	1	LL					1		1	L		L								

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Table 1: NMED 9-22 Groundwater Report

		T	9-22 GIO		, rope																											
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 Description	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	21	24	08/08/2011	6.73	8.61	7.98	24	Lower Los Alamos Canyon	Intermediate	Vine Tree Spring	0	06/21/2022	REG	F	INIT	Metals	Magnesium	Mg	8.05	1	LANL Int BG LVL	3.14	2.6	0.11	mg/L	1.00	1	NQ	NQ	SW-846:6010D	GELC	
C4	20	23	08/08/2011	2.67	4.35	3.59	23	Lower Los Alamos Canyon	Intermediate	Vine Tree Spring	0	06/21/2022	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.82	1.1	LANL Int BG LVL	0.459	8.3	0.0850	mg/L	5.00	1	NQ	NQ	EPA:353.2	GELC	
C4	21	24	08/08/2011	3.41	6.68	5.76	24	Lower Los Alamos Canyon	Intermediate	Vine Tree Spring	0	06/21/2022	REG	F	INIT	LCMS/ MS	Perchlorate	CIO4	5.89	1	LANL Int BG LVL	0.27	21.8	0.0500	μg/L	1.00	1	NQ	NQ	SW-846:6850	GELC	
C4	21	24	08/08/2011	122	153	139	24	Lower Los Alamos Canyon	Intermediate	Vine Tree Spring	0	06/21/2022	REG	F	INIT	Metals	Strontium	Sr	141	1	LANL Int BG LVL	59.6	2.4	1.00	μg/L	1.00	1	NQ	NQ	SW-846:6010D	GELC	
C4	21	24	08/08/2011	18.7	22.4	21.15	24	Lower Los Alamos Canyon	Intermediate	Vine Tree Spring	0	06/21/2022	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	22.2	1	LANL Int BG LVL	7.1	3.1	0.266	mg/L	2.00	1	NQ	NQ	EPA:300.0	GELC	
C4	21	24	08/08/2011	0.712	2.43	2.07	24	Lower Los Alamos Canyon	Intermediate	Vine Tree Spring	0	06/21/2022	REG	F	INIT	Metals	Uranium	U	2.21	1.1	LANL Int BG LVL	0.992	2.2	0.0670	μg/L	1.00	1	NQ	NQ	SW-846:6020B	GELC	
C5	13	15	04/26/2007	0.768	0.961	0.895	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	INIT	Geninorg	Fluoride	F(-1)	0.960	1.1	NM GW STD	1.6	0.6	0.0330	mg/L	1.00		J+	l6b	EPA:300.0	GELC	
C5	28	28	11/14/2000	1.8	5.47	2.635	10	Water Canyon	Alluvial	MSC-16-06294	2.5	08/11/2022	REG	F	INIT	Metals	Arsenic	As	5.47	2.1	NM GW STD	10	0.5	2.00	μg/L	1.00	1	NQ	NQ	SW-846:6020B	GELC	
C5	98	118	05/17/2005	2.27	7.43	5.53	118	Sandia Canyon	Regional	R-11	855.0	08/09/2022	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	6.95	1.3	EPA MCL	10	0.7	0.0850	mg/L	5.00	1	NQ	NQ	EPA:353.2	GELC	
CA		38	12/15/2005	1.28	1.28	1.28	1	Water Canyon	Intermediate	CdV-16-2(i)r	855.0	08/24/2022	REG				Dibromo-3- Chloropropane[1,2-]	96-12-8	1.28	1	EPA MCL	0.2	6.4			1.00		NQ			GELC Se	
CA	32	38		0.48	0.48	0.48	1	Water Canyon	Intermediate	CdV-16-2(i)r	855.0	08/24/2022	REG				Dibromoethane[1,2-]	106-93-4	0.48	1	NM GW STD				μg/L	1.00	J .	J		SW-846:8260D		e Note a.
CA	33	41	12/15/2005	0.56	0.56	0.56	1	Water Canyon	Intermediate	CdV-16-2(i)r	855.0	08/24/2022	REG	UF	INIT	VOC	Trichloropropane[1,2, 3-]	96-18-4	0.56	1	NMED A1 TAP SCRN LVL	0.00835	67.1	0.333	μg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC Se	ee Note a.

^a Result is under review due to potential contamination during analytical laboratory processing.

^b Rejected result. Result was rejected due to evidence of cross-contamination during the initial analysis and a GELC reanalysis that resulted in a nondetection.

^c 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 9-22 Groundwater Report Addendum

						nt Adden																									
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 Description	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
XC2sci	48	61	10/10/2001	0.02	0.129	0.03925	20	Water Canyon	Regional	CdV-R-15-3 S4	1235.1	08/16/2022	REG	F	INIT	Geninorg	Total Phosphate as Phosphorus	PO4-P	0.116	3	Reg-Scr_95	0.0822	1.4	0.0200	mg/L	1.00	J	I10ea	EPA:365.4	GELC	
XC4sci	37	42	09/09/2004	53.6	100	71	42	Pajarito Canyon	Intermediate	Bulldog Spring	0	08/11/2022	REG	F	INIT	Geninorg	Hardness	Hardness	75.1	1.1	Int-Scr_95	36.7	2	0.453	mg/L	1.00	NQ	NQ	SM:A2340B	GELC	
XC4sci	34	40	06/01/2005	33	92.3	62.2	40	Water Canyon	Intermediate	CdV-16-1(i)	624.0	08/15/2022	REG	F	INIT	Metals	Boron	В	92.0	1.5	Int-Scr_95	16.2	5.7	15.0	μg/L	1.00	NQ	NQ	SW-846:6010D	GELC	
XC4sci	34	40	06/01/2005	3.4	24.8	10.5	38	Water Canyon	Intermediate	CdV-16-1(i)	624.0	08/15/2022	REG	F	INIT	Metals	Copper	Cu	12.0	1.1	Int-Scr_95	3	4	3.00	μg/L	1.00	J J	J_LAB	SW-846:6010D	GELC	
XC4sci	34	40	06/01/2005	4.9	70.7	30.9	36	Water Canyon	Intermediate	CdV-16-1(i)	624.0	08/15/2022	REG	F	INIT	Metals	Zinc	Zn	35.9	1.2	Int-Scr_95	17.4	2.1	3.30	μg/L	1.00	NQ	NQ	SW-846:6010D	GELC	
XC4sci	35	44	12/15/2005	15.4	38.5	24.8	41	Water Canyon	Intermediate	CdV-16-2(i)r	850.0	08/24/2022	REG	F	INIT	Metals	Boron	В	36.8	1.5	Int-Scr_95	16.2	2.3	15.0	μg/L	1.00	J J	J_LAB	SW-846:6010D	GELC	
XC4sci	30	38	08/31/2010	22.9	115	63.6	38	Water Canyon	Intermediate	CDV-16-4ip S1	815.6	08/23/2022	FD	F	INIT	Metals	Boron	В	66.5	1.0	Int-Scr_95	16.2	4.1	15.0	μg/L	1.00	NQ	NQ	SW-846:6010D	GELC	
XC4sci	30	38	08/31/2010	22.9	115	63.6	38	Water Canyon	Intermediate	CDV-16-4ip S1	815.6	08/23/2022	REG	F	INIT	Metals	Boron	В	66.0	1.0	Int-Scr_95	16.2	4.1	15.0	μg/L	1.00	NQ	NQ	SW-846:6010D	GELC	
XC4sci	30	38	08/31/2010	0.661	1.58	0.9	38	Water Canyon	Intermediate	CDV-16-4ip S1	815.6	08/23/2022	FD	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	0.920	1.0	Int-Scr_95	0.424	2.2	0.0850	mg/L	5.00	NQ	NQ	EPA:353.2	GELC	
XC4sci	30	38	08/31/2010	0.661	1.58	0.9	38	Water Canyon	Intermediate	CDV-16-4ip S1	815.6	08/23/2022	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	0.925	1.0	Int-Scr_95	0.424	2.2	0.0850	mg/L	5.00	NQ	NQ	EPA:353.2	GELC	
XC4sci	13	15	04/26/2007	37.3	45.8	40.6	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	INIT	Metals	Barium	Ва	37.3	0.9	Int-Scr_95	11.96	3.1	1.00	μg/L	1.00	NQ	NQ	SW-846:6010D	GELC	
XC4sci	13	15	04/26/2007	0.253	0.34	0.2845	14	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.286	1.0	Int-Scr_95	0.0716	4.0	0.0670	mg/L	1.00	NQ	NQ	EPA:300.0	GELC	
XC4sci	13	15	04/26/2007	1.53	2.8	1.8	15	Lower Los Alamos Canyon	Intermediate	Los Alamos Spring	0	06/21/2022	REG	F	INIT	Metals	Uranium	U	1.63	0.9	Int-Scr_95	0.614	2.7	0.0670	μg/L	1.00	NQ	NQ	SW-846:6020B	GELC	
XC4sci	70	79	01/10/2000	508	2840	1290.0	79	Water Canyon	Intermediate	Martin Spring	0	08/25/2022	REG	F	INIT	Metals	Boron	В	1140	0.9	Int-Scr_95	16.2	70.4	15.0	μg/L	1.00	NQ	NQ	SW-846:6010D	GELC	
XC4sci	38	46	08/25/2005	83.8	158	132.5	46	Water Canyon	Intermediate	Martin Spring	0	08/25/2022	REG	F	INIT	Metals	Strontium	Sr	118	0.9	Int-Scr_95	57.1	2.1	1.00	μg/L	1.00	NQ	NQ	SW-846:6010D	GELC	
XC4sci	86	99	08/30/2007	20.6	54.5	40.5	93	Sandia Canyon	Regional	R-35a	1013.1	08/25/2022	FD	F	INIT	Metals	Boron	В	44.4	1.1	Reg-Scr_95	18.7	2.4	15.0	μg/L	1.00	1	J_LAB	SW-846:6010D	GELC	
XC4sci	86	99	08/30/2007	20.6	54.5	40.5	93	Sandia Canyon	Regional	R-35a	1013.1	08/25/2022	REG	F	INIT	Metals	Boron	В	44.1	1.1	Reg-Scr_95	18.7	2.4	15.0	μg/L	1.00	J J	J_LAB	SW-846:6010D	GELC	
XC4sci	86	99	08/30/2007	137	199	169.0	99	Sandia Canyon	Regional	R-35a	1013.1	08/25/2022	FD	F	INIT	Metals	Strontium	Sr	169	1.0	Reg-Scr_95	74.4	2.3	1.00	μg/L	1.00	NQ	NQ	SW-846:6010D	GELC	
XC4sci	86	99	08/30/2007	137	199	169.0	99	Sandia Canyon	Regional	R-35a	1013.1			F	INIT	Metals	Strontium	Sr	176	1.0	Reg-Scr_95	74.4	2.4	1.00	μg/L	1.00	NQ	NQ	SW-846:6010D	GELC	
XC4sci	88	92	02/17/2009	0.0757	0.181	0.1	47	Mortandad Canyon	Regional	R-44 S1	895.0	08/18/2022	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.141	1.0	Reg-Scr_95	0.067	2.1	0.0670		1.00	J J+	l6b	EPA:300.0	GELC	
XC4sci	72	83	05/20/2011	0.0531	11.8	0.4	79	Mortandad Canyon	Regional	R-61 S1	1125.0	08/10/2022	REG	F	INIT	Geninorg	Total Phosphate as Phosphorus	PO4-P	0.222	0.6	Reg-Scr_95	0.0822	2.7	0.0200	mg/L	1.00	NQ	NQ	EPA:365.4	GELC	

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