EMID-701595

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

EMLA-2021-BF151-02-001

August 26, 2021

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

Subject: Monthly Notification of Groundwater Data Reviewed in August 2021

Dear Mr. Maestas:

This letter is the U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) written submission in accordance with Section XXVI.D of the 2016 Compliance Order on Consent (2016 Consent Order). Members of EM-LA and N3B met on August 12, 2021, 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 2021 EPA regional screening levels for tap water; the NMWQCC groundwater standards published December 21, 2018; and the June 2019 Table A-1 of "Risk Assessment Guidance for Site Investigations and Remediation" for NMED tap water screening levels.

1-Day Notification

There were three instances of a constituent detected at a concentration that exceeded the NMWQCC groundwater standard or EPA MCL at locations where that constituent has not previously been detected above the respective standard as defined in the Consent Order (based on samples collected since June 14, 2007).

In accordance with the notification provisions of the 2016 Consent Order, NMED was notified by phone on August 12, 2021, and an email was sent the same day.

An unfiltered sample collected on June 9, 2021, from the alluvial well LAUZ-1 resulted in the measurement of the three contaminants that exceeded corresponding screening levels. The organic compounds perfluorohexanesulfonic acid (PFHxS), perfluorooctanesulfonic acid (PFOS), and

perfluorooctanoic acid (PFOA) were measured at 284 ng/L, 113 ng/L, and 123 ng/L, respectively. Each exceeded the 70-ng/L NMED tap water screening level for total per- and polyfluoroalkyl substances (PFAS). Total PFAS represents the summation of the measurements from these three compounds. Resultantly, the total PFAS metric itself also exceeded the same screening level value of 70 ng/L.

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 Steve Veenis at (505) 309-1362 (steve.veenis@em-la.doe.gov) or Hai Shen at (505) 257-7943 (hai.shen@em.doe.gov).

Sincerely,

ARTURO DURAN

Digitally signed by ARTURO DURAN
Date: 2021.08.23 06:52:02 -06'00'

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

Enclosure(s):

1. Summary of Groundwater Data Reviewed in August 2021 that Meet Notification Requirements (EM2021-0525)

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 AUGUST 2021
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 2021 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 7-21 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 7-21 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 2021 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 2019 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 8 in both tables provide summary statistics for metals or organic/inorganic compounds by field preparation code (e.g., filtered aluminum) for samples collected since January 1, 2000, including the currently reported data. The statistics include the date of the first sampling event; the number of sampling events and samples analyzed; the number of detections; and the minimum, maximum, and median concentration for detections. This information indicates whether the new result is consistent with the range of earlier data.

The subsequent columns contain location and sampling information as follows:

Canyon—canyon where monitoring location is found

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

Location—monitoring location name

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

Start Date—date the sample was collected

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

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

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

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

Analyte Desc—name of analyte

Analyte—chemical symbol for analyte or CAS (Chemical Abstracts Service) number for organic compounds

Std Result—analytical result in standard measurement units

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

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

Screen Level—value of the LVL Type/Risk Code

Exceedance Ratio—ratio of Std Result to LVL Type/Risk Code. In earlier versions of this report, the ratio was divided by the basis for comparison in the criterion, but that is no longer the case. For example, for a criterion (such as C3) that compares the value with one-half the standard, a value equal to a standard previously had an exceedance ratio of 2. The current report shows this ratio as 1.

Std MDL—method detection limit in standard measurement units

Std UOM—standard units of measurement

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

Lab Qualifier—analytical laboratory 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:

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

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

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 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)

SIM—selected ion monitoring

SVOC—semivolatile organic compound

TDS—total dissolved solids

TNX—2,4,6-trinitroxylene

UAL—upper acceptance limit

UOM—unit of measurement

VOC—volatile organic compound

Analytical Laboratory Codes and Qualifiers

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

CFA—Cape Fear Analytical, LLC

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

F—filtered

FD—field duplicate

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

GENINORG—general inorganic

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

HE1a (validation reason code)—The quantitating internal standard area count was below the lower acceptance limit.

HE12a (validation reason code)—The LCS %recovery was less than the lower acceptance limit but greater than 10%.

HJ (lab qualifier)—The required extraction or analysis holding time for this result was exceeded. The associated numerical value is an estimated quantity.

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

I4g (validation reason code)—Result less than a multiple of some secondary higher value found in field, trip, or rinsate blank.

I6a (validation reason code)— MS/MSD recovery below lower limit.

I6b (validation reason code)—The associated matrix spike recovery was above the UAL. Follow the external laboratory limits located within the associated data package.

I9b (validation reason code)—The affected analytes are regarded as rejected because the analytical holding time was exceeded.

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

I10a—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.

INIT—primary sample

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

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

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

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

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

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

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

PE12e (validation reason code)—The MS/MSD percent recovery was greater than 10% but less than 75%.

RE—reanalysis

RL—reporting limit

RPD—relative percent difference

REG—regular sample

SV7c (validation reason code)—The percent drift was above acceptance limits in the initial calibration verification (ICV) or continuing calibration verification (CCV).

SwRI—Southwest Research Institute

UF—unfiltered

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

Table 1: NMED 7-21 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	S+3:31creen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Analy Meth Code	Lab Code	Comment
C1	1	1	06/09/2021	284	284	284	1	Upper Los Alamos Canyon	Alluvial	LAUZ-1	5.4	06/09/2021	REG	UF	DL	LCMS/MS	Perfluorohexanesulfonic acid	355-46-4	284	1.0	NMED A1 TAP SCRN LVL	70	4.1	3.11	ng/L	5.00		NQ	NQ	EPA:537M	GELC	
C1	1	1	06/09/2021	113	113	113	1	Upper Los Alamos Canyon	Alluvial	LAUZ-1	5.4	06/09/2021	REG	UF	INIT	LCMS/MS	Perfluorooctanesulfonic acid	1763-23-1	113	1.0	NMED A1 TAP SCRN LVL	70	1.6	0.753	ng/L	1.00		NQ	NQ	EPA:537M	GELC	
C1	1	1	06/09/2021	123	123	123	1	Upper Los Alamos Canyon	Alluvial	LAUZ-1	5.4	06/09/2021	REG	UF	INIT	LCMS/MS	Perfluorooctanoic acid	335-67-1	123	1.0	NMED A1 TAP SCRN LVL	70	1.8	0.753	ng/L	1.00		NQ	NQ	EPA:537M	GELC	
C1	12	13	02/25/2004	1.78	1.78	1.78	1	Pueblo Canyon	Intermediate	R-5 S2	372.8	06/14/2021	REG	UF	INIT	VOC	Methylene Chloride	75-09-2	1.78	1.0	NM GW STD	5	0.4	1.67	µg/L	1.00	J	J	J_LAB	SW-846:8260D	GELC	
C1	21	27	05/21/2015	0.522	0.522	0.522	1	Water Canyon	Intermediate Perched	CDV-9-1(i) S1	937.4	05/28/2021	REG	UF	INIT	HEXP	2,6-Diamino-4-nitrotoluene	59229-75-3	0.522	1.0				0.513	µg/L	2.00	J	J	J_LAB	SW-846:8330B	GELC	
C1	6	7	08/19/2005	0.42	0.42	0.42	1	Ancho Canyon	Regional	R-31 S3	666.3	06/02/2021	REG	UF	INIT	SVOC	Bis(2-ethylhexyl)phthalate	117-81-7	0.420	1.0	EPA MCL	6	0.1	0.300	µg/L	1.00	J	J	J_LAB	SW-846:8270D	GELC	
C1	2	2	08/27/2020	0.883	0.883	0.883	1	Lower Los Alamos Canyon	Regional Top	R-24	825.0	06/11/2021	REG	UF	INIT	LCMS/MS	Perfluorooctanesulfonic acid	1763-23-1	0.883	1.0	NMED A1 TAP SCRN LVL	70	0.0	0.689	ng/L	1.00	J	J	J_LAB	EPA:537M	GELC	
C1	13	14	02/25/2004	2.13	2.13	2.13	1	Upper Los Alamos Canyon	Regional Top	R-8 S1	705.3	06/23/2021	REG	UF	INIT	VOC	Methylene Chloride	75-09-2	2.13	1.0	NM GW STD	5	0.4	1.67	µg/L	1.00	HJ	J-	V9a	SW-846:8260D	GELC	
C2	7	7	05/30/2001	3.99	5.4	4.63	7	Upper Los Alamos Canyon	Regional Top	R-7 S3	895.5	06/10/2021	REG	F	INIT	Metals	Magnesium	Mg	4.63	1.0	LANL Reg BG LVL	4.18	1.1	0.11	mg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C3	1	1	06/09/2021	284	284	284	1	Upper Los Alamos Canyon	Alluvial	LAUZ-1	5.4	06/09/2021	REG	UF	DL	LCMS/MS	Perfluorohexanesulfonic acid	355-46-4	284	1.0	NMED A1 TAP SCRN LVL	70	4.1	3.11	ng/L	5.00		NQ	NQ	EPA:537M	GELC	
C3	1	1	06/09/2021	113	113	113	1	Upper Los Alamos Canyon	Alluvial	LAUZ-1	5.4	06/09/2021	REG	UF	INIT	LCMS/MS	Perfluorooctanesulfonic acid	1763-23-1	113	1.0	NMED A1 TAP SCRN LVL	70	1.6	0.753	ng/L	1.00		NQ	NQ	EPA:537M	GELC	
C3	1	1	06/09/2021	123	123	123	1	Upper Los Alamos Canyon	Alluvial	LAUZ-1	5.4	06/09/2021	REG	UF	INIT	LCMS/MS	Perfluorooctanoic acid	335-67-1	123	1.0	NMED A1 TAP SCRN LVL	70	1.8	0.753	ng/L	1.00		NQ	NQ	EPA:537M	GELC	
C4	14	14	02/23/2004	184	204	194.5	14	Pueblo Canyon	Intermediate	R-5 S2	372.8	06/14/2021	REG	F	INIT	Metals	Barium	Ba	184	0.9	LANL Int BG LVL	13.5	13.6	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	14	14	02/23/2004	27.9	31.9	30.65	14	Pueblo Canyon	Intermediate	R-5 S2	372.8	06/14/2021	REG	F	INIT	Metals	Calcium	Ca	29.7	1.0	LANL Int BG LVL	10.7	2.8	0.05	mg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	17	17	02/23/2004	6.72	8.62	7.36	17	Pueblo Canyon	Intermediate	R-5 S2	372.8	06/14/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	8.49	1.2	LANL Int BG LVL	3.11	2.7	0.0670	mg/L	1.00		J+	I4g,I6b	EPA:300.0	GELC	
C4	17	17	02/23/2004	0.992	1.29	1.07	17	Pueblo Canyon	Intermediate	R-5 S2	372.8	06/14/2021	REG	F	INIT	Geninorg	Fluoride	F(-1)	1.23	1.1	LANL Int BG LVL	0.234	5.3	0.0330	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C4	11	11	07/25/2006	80.7	92.4	88.1	11	Pueblo Canyon	Intermediate	R-5 S2	372.8	06/14/2021	REG	F	INIT	Geninorg	Hardness	HARDNESS	87.4	1.0	LANL Int BG LVL	37.8	2.3	0.453	mg/L	1.00		NQ	NQ	SM:A2340B	GELC	
C4	18	18	02/23/2004	2.31	3.28	2.815	18	Pueblo Canyon	Intermediate	R-5 S2	372.8	06/14/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.85	1.0	LANL Int BG LVL	0.459	6.2	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	13	13	04/17/2007	1.24	2.35	1.39	13	Pueblo Canyon	Intermediate	R-5 S2	372.8	06/14/2021	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	2.35	1.7	LANL Int BG LVL	0.27	8.7	0.100	µg/L	2.00		NQ	NQ	SW-846:6850	GELC	
C4	14	14	02/23/2004	289	329	310	14	Pueblo Canyon	Intermediate	R-5 S2	372.8	06/14/2021	REG	F	INIT	Metals	Strontium	Sr	322	1.0	LANL Int BG LVL	59.6	5.4	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	14	14	02/23/2004	2.36	2.9	2.77	14	Pueblo Canyon	Intermediate	R-5 S2	372.8	06/14/2021	REG	F	INIT	Metals	Uranium	U	2.50	0.9	LANL Int BG LVL	0.992	2.5	0.0670	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	18	18	08/08/2006	141	296	170.5	18	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Geninorg	Alkalinity-CO3+HCO3	ALK-CO3+HCO3	169	1.0	LANL Int BG LVL	62	2.7	1.45	mg/L	1.00		NQ	NQ	EPA:310.1	GELC	
C4	17	17	08/08/2006	43.7	117	111	17	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Metals	Barium	Ba	117	1.1	LANL Int BG LVL	13.5	8.7	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	17	17	08/08/2006	26.6	53	47.6	17	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Metals	Calcium	Ca	45	0.9	LANL Int BG LVL	10.7	4.2	0.05	mg/L	1.00	N	J-	I6a	SW-846:6010C	GELC	

Table 1: NMED 7-21 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	S+3:31creen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Analy Meth Code	Lab Code	Comment
C4	18	18	08/08/2006	42.5	50.4	47.55	18	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	48.6	1.0	LANL Int BG LVL	3.11	15.6	0.670	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	17	17	08/08/2006	103	184	169	17	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Geninorg	Hardness	HARDNESS	162	1.0	LANL Int BG LVL	37.8	4.3	0.453	mg/L	1.00		NQ	NQ	SM:A2340B	GELC	
C4	17	17	08/08/2006	8.83	13.2	12.1	17	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Metals	Magnesium	Mg	12.1	1.0	LANL Int BG LVL	3.14	3.9	0.11	mg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	19	19	05/07/2005	3.16	7.65	4.1	19	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.65	0.9	LANL Int BG LVL	0.459	8.0	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	18	18	08/08/2006	22.5	33	30.3	18	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	32.0	1.1	LANL Int BG LVL	7.1	4.5	1.33	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	17	17	08/08/2006	1.17	3.6	2.89	17	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Metals	Uranium	U	3.09	1.1	LANL Int BG LVL	0.992	3.1	0.0670	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	19	22	08/10/2006	150	164	157	22	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Geninorg	Alkalinity-CO3+HCO3	ALK-CO3+HCO3	161	1.0	LANL Int BG LVL	62	2.6	1.45	mg/L	1.00		NQ	NQ	EPA:310.1	GELC	
C4	18	20	08/10/2006	94.5	114	98.45	20	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Metals	Barium	Ba	108	1.1	LANL Int BG LVL	13.5	8.0	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	18	20	08/10/2006	54.8	62.7	58.05	20	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Metals	Calcium	Ca	60.6	1.0	LANL Int BG LVL	10.7	5.7	0.05	mg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	19	22	08/10/2006	34.4	46.9	41.85	22	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	46.9	1.1	LANL Int BG LVL	3.11	15.1	0.670	mg/L	10.0		J+	I4g	EPA:300.0	GELC	
C4	18	20	08/10/2006	179	227	211	20	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Geninorg	Hardness	HARDNESS	221	1.0	LANL Int BG LVL	37.8	5.8	0.453	mg/L	1.00		NQ	NQ	SM:A2340B	GELC	
C4	18	20	08/10/2006	15.1	17.2	16.1	20	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Metals	Magnesium	Mg	16.9	1.0	LANL Int BG LVL	3.14	5.4	0.11	mg/L	1.00	E	NQ	NQ	SW-846:6010C	GELC	
C4	19	22	08/10/2006	2.15	7.65	4.295	22	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.61	0.8	LANL Int BG LVL	0.459	7.9	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	17	20	04/09/2007	1.49	3.45	2.19	20	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	1.49	0.7	LANL Int BG LVL	0.27	5.5	0.0500	µg/L	1.00		NQ	NQ	SW-846:6850	GELC	
C4	18	20	08/10/2006	5.23	6.17	5.915	20	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Metals	Potassium	K	6.16	1.0	LANL Int BG LVL	2.35	2.6	0.05	mg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	18	20	08/10/2006	255	317	277	20	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Metals	Strontium	Sr	301	1.1	LANL Int BG LVL	59.6	5.1	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	19	22	08/10/2006	20.1	30.7	28.15	22	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	30.7	1.1	LANL Int BG LVL	7.1	4.3	1.33	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	18	20	08/10/2006	7.19	10.2	8.875	20	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Metals	Uranium	U	8.00	0.9	LANL Int BG LVL	0.992	8.1	0.0670	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	15	15	09/14/2000	37	72.6	53.2	15	Upper Los Alamos Canyon	Intermediate Perched	R-9i S1	189.1	06/24/2021	REG	F	INIT	Metals	Barium	Ba	37.0	0.7	LANL Int BG LVL	13.5	2.7	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	17	18	09/14/2000	24	45.6	39.1	17	Upper Los Alamos Canyon	Intermediate Perched	R-9i S1	189.1	06/24/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	45.6	1.2	LANL Int BG LVL	3.11	14.7	0.670	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	11	11	08/29/2008	74.5	96.9	86.4	11	Upper Los Alamos Canyon	Intermediate Perched	R-9i S1	189.1	06/24/2021	REG	F	INIT	Geninorg	Hardness	HARDNESS	80.7	0.9	LANL Int BG LVL	37.8	2.1	0.453	mg/L	1.00		NQ	NQ	SM:A2340B	GELC	
C4	15	15	09/14/2000	5.6	8.84	7.08	15	Upper Los Alamos Canyon	Intermediate Perched	R-9i S1	189.1	06/24/2021	REG	F	INIT	Metals	Magnesium	Mg	7.08	1.0	LANL Int BG LVL	3.14	2.3	0.11	mg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	15	15	09/14/2000	7.37	21	11	15	Upper Los Alamos Canyon	Intermediate Perched	R-9i S1	189.1	06/24/2021	REG	F	INIT	Metals	Molybdenum	Mo	7.44	0.7	LANL Int BG LVL	2.9	2.6	0.200	µg/L	1.00		NQ	NQ	SW-846:6020B	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 Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	S+3:31creen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Analy Meth Code	Lab Code	Comment
C4	15	15	09/14/2000	110	141	126	15	Upper Los Alamos Canyon	Intermediate Perched	R-9i S1	189.1	06/24/2021	REG	F	INIT	Metals	Strontium	Sr	126	1.0	LANL Int BG LVL	59.6	2.1	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	16	21	04/29/2010	56.7	67.4	62.7	21	Pueblo Canyon	Intermediate Perched	TW-2Ar	102.0	06/18/2021	REG	F	INIT	Metals	Barium	Ba	62.1	1.0	LANL Int BG LVL	13.5	4.6	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	16	21	04/29/2010	33.3	43.3	37.4	21	Pueblo Canyon	Intermediate Perched	TW-2Ar	102.0	06/18/2021	REG	F	INIT	Metals	Calcium	Ca	34.1	0.9	LANL Int BG LVL	10.7	3.2	0.05	mg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	16	21	04/29/2010	40.2	50.8	44.7	21	Pueblo Canyon	Intermediate Perched	TW-2Ar	102.0	06/18/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	43.0	1.0	LANL Int BG LVL	3.11	13.8	0.670	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	16	21	04/29/2010	108	137	121	21	Pueblo Canyon	Intermediate Perched	TW-2Ar	102.0	06/18/2021	REG	F	INIT	Geninorg	Hardness	HARDNESS	114	0.9	LANL Int BG LVL	37.8	3.0	0.453	mg/L	1.00		NQ	NQ	SM:A2340B	GELC	
C4	16	21	04/29/2010	5.96	7.49	7.01	21	Pueblo Canyon	Intermediate Perched	TW-2Ar	102.0	06/18/2021	REG	F	INIT	Metals	Magnesium	Mg	7	1.0	LANL Int BG LVL	3.14	2.2	0.11	mg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	16	21	04/29/2010	2.49	3.52	2.99	21	Pueblo Canyon	Intermediate Perched	TW-2Ar	102.0	06/18/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.52	1.2	LANL Int BG LVL	0.459	7.7	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	16	21	04/29/2010	175	231	205	21	Pueblo Canyon	Intermediate Perched	TW-2Ar	102.0	06/18/2021	REG	F	INIT	Metals	Strontium	Sr	195	1.0	LANL Int BG LVL	59.6	3.3	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	16	21	04/29/2010	22.1	26.1	25.5	21	Pueblo Canyon	Intermediate Perched	TW-2Ar	102.0	06/18/2021	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	25.3	1.0	LANL Int BG LVL	7.1	3.6	1.33	mg/L	10.0		NQ	NQ	EPA:300.0	GELC	
C4	72	82	08/30/2007	68	408	347	82	Sandia Canyon	Regional Deep	R-35a	1013.1	06/09/2021	FD	F	INIT	Metals	Barium	Ba	367	1.1	LANL Reg BG LVL	38.1	9.6	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	72	82	08/30/2007	68	408	347	82	Sandia Canyon	Regional Deep	R-35a	1013.1	06/09/2021	REG	F	INIT	Metals	Barium	Ba	369	1.1	LANL Reg BG LVL	38.1	9.7	1.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
C4	71	82	08/30/2007	5.97	7.31	6.56	82	Sandia Canyon	Regional Deep	R-35a	1013.1	06/09/2021	FD	F	INIT	Geninorg	Chloride	Cl(-1)	6.24	1.0	LANL Reg BG LVL	2.7	2.3	0.0670	mg/L	1.00		J+	I4g	EPA:300.0	GELC	
C4	71	82	08/30/2007	5.97	7.31	6.56	82	Sandia Canyon	Regional Deep	R-35a	1013.1	06/09/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	6.23	0.9	LANL Reg BG LVL	2.7	2.3	0.0670	mg/L	1.00		J+	I4g	EPA:300.0	GELC	
C4	72	82	08/30/2007	1.2	22.2	7.67	81	Sandia Canyon	Regional Deep	R-35a	1013.1	06/09/2021	FD	F	INIT	Metals	Nickel	Ni	7.41	1.0	LANL Reg BG LVL	2.9	2.6	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	72	82	08/30/2007	1.2	22.2	7.67	81	Sandia Canyon	Regional Deep	R-35a	1013.1	06/09/2021	REG	F	INIT	Metals	Nickel	Ni	7.46	1.0	LANL Reg BG LVL	2.9	2.6	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	71	75	03/05/2009	2.74	7	4.57	75	Mortandad Canyon	Regional Deep	R-45 S2	974.9	06/16/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	7.00	1.5	LANL Reg BG LVL	2.7	2.6	0.0670	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C4	71	80	03/05/2009	6.1	55	26	79	Mortandad Canyon	Regional Deep	R-45 S2	974.9	06/16/2021	REG	F	INIT	Metals	Chromium	Cr	48.7	1.9	LANL Reg BG LVL	7.48	6.5	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	11	12	08/04/2020	15.2	19.3	17.65	12	Mortandad Canyon	Regional Deep	R-70 S2	1048.0	06/14/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	15.9	0.9	LANL Reg BG LVL	2.7	5.9	0.134	mg/L	2.00		J+	I6b	EPA:300.0	GELC	
C4	11	12	08/04/2020	202	272	248	12	Mortandad Canyon	Regional Deep	R-70 S2	1048.0	06/14/2021	REG	F	INIT	Metals	Chromium	Cr	219	0.9	LANL Reg BG LVL	7.48	29.3	15.0	µg/L	5.00		NQ	NQ	SW-846:6020B	GELC	
C4	11	12	08/04/2020	3.57	4.06	3.775	12	Mortandad Canyon	Regional Deep	R-70 S2	1048.0	06/14/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.66	1.0	LANL Reg BG LVL	0.769	4.8	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	11	12	08/04/2020	26.1	32.6	30.55	12	Mortandad Canyon	Regional Deep	R-70 S2	1048.0	06/14/2021	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	26.1	0.9	LANL Reg BG LVL	4.59	5.7	0.266	mg/L	2.00		NQ	NQ	EPA:300.0	GELC	
C4	84	101	05/17/2005	2.27	7.43	5.43	101	Sandia Canyon	Regional Top	R-11	855.0	06/08/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.70	1.0	LANL Reg BG LVL	0.769	7.4	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	84	101	05/17/2005	5.95	20.2	10.1	101	Sandia Canyon	Regional Top	R-11	855.0	06/08/2021	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	9.69	1.0	LANL Reg BG LVL	4.59	2.1	0.133	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	

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C4	21	25	11/15/2005	6.96	8.56	7.57	25	Lower Los Alamos Canyon	Regional Top	R-24	825.0	06/11/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	7.79	1.0	LANL Reg BG LVL	2.7	2.9	0.0670	mg/L	1.00		J+	I6b	EPA:300.0	GELC	
C4	22	32	04/27/2005	4.67	8.53	5.59	32	Pueblo Canyon	Regional Top	R-4	792.9	06/09/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	7.77	1.4	LANL Reg BG LVL	2.7	2.9	0.0670	mg/L	1.00		NQ	NQ	EPA:300.0	GELC	
C4	22	32	04/27/2005	1.06	2.32	1.77	32	Pueblo Canyon	Regional Top	R-4	792.9	06/09/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.31	1.3	LANL Reg BG LVL	0.769	3.0	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	17	25	04/17/2007	2	6.68	4.6	25	Pueblo Canyon	Regional Top	R-4	792.9	06/09/2021	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	6.68	1.5	LANL Reg BG LVL	0.414	16.1	0.250	µg/L	5.00		NQ	NQ	SW-846:6850	GELC	
C4	74	78	02/17/2009	1.99	20.7	2.585	78	Mortandad Canyon	Regional Top	R-44 S1	895.0	06/15/2021	FD	F	INIT	Geninorg	Chloride	Cl(-1)	20.7	8.0	LANL Reg BG LVL	2.7	7.7	0.335	mg/L	5.00		J+	I4g	EPA:300.0	GELC	
C4	74	78	02/17/2009	1.99	20.7	2.585	78	Mortandad Canyon	Regional Top	R-44 S1	895.0	06/15/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	20.1	7.8	LANL Reg BG LVL	2.7	7.4	0.335	mg/L	5.00		J+	I4g	EPA:300.0	GELC	
C4	74	78	02/17/2009	0.536	109	20.2	51	Mortandad Canyon	Regional Top	R-44 S1	895.0	06/15/2021	FD	F	INIT	Metals	Nickel	Ni	49.4	2.4	LANL Reg BG LVL	2.9	17.0	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	74	78	02/17/2009	0.536	109	20.2	51	Mortandad Canyon	Regional Top	R-44 S1	895.0	06/15/2021	REG	F	INIT	Metals	Nickel	Ni	48.3	2.4	LANL Reg BG LVL	2.9	16.7	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	74	78	02/17/2009	0.123	2.75	1.23	77	Mortandad Canyon	Regional Top	R-44 S1	895.0	06/15/2021	FD	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.72	2.2	LANL Reg BG LVL	0.769	3.5	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	74	78	02/17/2009	0.123	2.75	1.23	77	Mortandad Canyon	Regional Top	R-44 S1	895.0	06/15/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.75	2.2	LANL Reg BG LVL	0.769	3.6	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	74	78	02/17/2009	2.76	20.7	3.62	78	Mortandad Canyon	Regional Top	R-44 S1	895.0	06/15/2021	FD	F	INIT	Geninorg	Sulfate	SO4(-2)	20.7	5.7	LANL Reg BG LVL	4.59	4.5	0.665	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	74	78	02/17/2009	2.76	20.7	3.62	78	Mortandad Canyon	Regional Top	R-44 S1	895.0	06/15/2021	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	20.1	5.6	LANL Reg BG LVL	4.59	4.4	0.665	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	72	77	02/28/2009	3	19.5	5.25	77	Mortandad Canyon	Regional Top	R-45 S1	880.0	06/16/2021	REG	F	INIT	Geninorg	Chloride	Cl(-1)	19.5	3.7	LANL Reg BG LVL	2.7	7.2	0.335	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	72	77	02/28/2009	0.256	3.47	2.79	77	Mortandad Canyon	Regional Top	R-45 S1	880.0	06/16/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.00	1.1	LANL Reg BG LVL	0.769	3.9	0.170	mg/L	10.0		NQ	NQ	EPA:353.2	GELC	
C4	72	77	02/28/2009	4.1	19.8	7.98	77	Mortandad Canyon	Regional Top	R-45 S1	880.0	06/16/2021	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	19.8	2.5	LANL Reg BG LVL	4.59	4.3	0.665	mg/L	5.00		NQ	NQ	EPA:300.0	GELC	
C4	74	84	03/06/2010	15.5	150	82.25	84	Mortandad Canyon	Regional Top	R-50 S1	1077.0	06/10/2021	REG	F	INIT	Metals	Chromium	Cr	15.9	0.2	LANL Reg BG LVL	7.48	2.1	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	74	82	03/06/2010	1.51	14.6	5.34	82	Mortandad Canyon	Regional Top	R-50 S1	1077.0	06/10/2021	REG	F	INIT	Metals	Nickel	Ni	6.66	1.2	LANL Reg BG LVL	2.9	2.3	0.600	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	74	83	03/06/2010	0.398	2.96	2.09	83	Mortandad Canyon	Regional Top	R-50 S1	1077.0	06/10/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.96	1.4	LANL Reg BG LVL	0.769	3.8	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	58	67	05/20/2011	2.03	43.9	21.65	66	Mortandad Canyon	Regional Top	R-61 S1	1125.0	06/18/2021	REG	F	INIT	Metals	Chromium	Cr	37.2	1.7	LANL Reg BG LVL	7.48	5.0	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	58	67	05/20/2011	0.427	2.95	2.2	67	Mortandad Canyon	Regional Top	R-61 S1	1125.0	06/18/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.57	1.2	LANL Reg BG LVL	0.769	3.3	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	
C4	57	66	05/20/2011	2.96	16.2	12.05	66	Mortandad Canyon	Regional Top	R-61 S1	1125.0	06/18/2021	REG	F	INIT	LCMS/MS	Perchlorate	ClO4	12.7	1.1	LANL Reg BG LVL	0.414	30.7	0.500	µg/L	10.0		NQ	NQ	SW-846:6850	GELC	
C4	11	12	08/04/2020	13.5	30.5	18.65	12	Mortandad Canyon	Regional Top	R-70 S1	963.0	06/11/2021	REG	F	INIT	Metals	Chromium	Cr	16.2	0.9	LANL Reg BG LVL	7.48	2.2	3.00	µg/L	1.00		NQ	NQ	SW-846:6020B	GELC	
C4	11	12	08/04/2020	2.39	2.92	2.61	12	Mortandad Canyon	Regional Top	R-70 S1	963.0	06/11/2021	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.41	0.9	LANL Reg BG LVL	0.769	3.1	0.0850	mg/L	5.00		NQ	NQ	EPA:353.2	GELC	

Table 1: NMED 7-21 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	S+3:31creen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Analy Meth Code	Lab Code	Comment
CA	1	1	06/09/2021	284	284	284	1	Upper Los Alamos Canyon	Alluvial	LAUZ-1	5.4	06/09/2021	REG	UF	DL	LCMS/MS	Perfluorohexanesulfonic acid	355-46-4	284	1.0	NMED A1 TAP SCRN LVL	70	4.1	3.11	ng/L	5.00		NQ	NQ	EPA:537M	GELC	
CA	1	1	06/09/2021	113	113	113	1	Upper Los Alamos Canyon	Alluvial	LAUZ-1	5.4	06/09/2021	REG	UF	INIT	LCMS/MS	Perfluorooctanesulfonic acid	1763-23-1	113	1.0	NMED A1 TAP SCRN LVL	70	1.6	0.753	ng/L	1.00		NQ	NQ	EPA:537M	GELC	
CA	1	1	06/09/2021	123	123	123	1	Upper Los Alamos Canyon	Alluvial	LAUZ-1	5.4	06/09/2021	REG	UF	INIT	LCMS/MS	Perfluorooctanoic acid	335-67-1	123	1.0	NMED A1 TAP SCRN LVL	70	1.8	0.753	ng/L	1.00		NQ	NQ	EPA:537M	GELC	

Table 2: NMED 7-21 Groundwater Report Addendum

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
XC2scr	11	12	08/04/2020	0.00207	0.00207	0.00207	1	Mortandad Canyon	Regional Deep	R-70 S2	1048.0	06/14/2021	REG	UF	INIT	Inorganic	Cyanide (Total)	CN(TOTAL)	0.00207	1.0	Reg-Scr_95	0.0017	1.2	0.00167	mg/L	1.00	J	J	J_LAB	EPA:335.4	GELC	
XC4scr	18	18	08/08/2006	331	403	370.5	18	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Geninorg	Total Dissolved Solids	TDS	380	1.0	Int-Scr_95	135	2.8	3.40	mg/L	1.00		NQ	NQ	EPA:160.1	GELC	
XC4scr	19	19	05/07/2005	0.032	1.69	1.09	19	Pueblo Canyon	Intermediate Perched	POI-4	159.0	06/10/2021	REG	F	INIT	Geninorg	Total Phosphate as Phosphorus	PO4-P	0.886	0.8	Int-Scr_95	0.178	5.0	0.0200	mg/L	1.00		J+	I4g	EPA:365.4	GELC	
XC4scr	18	20	08/10/2006	84.6	152	104.5	20	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Metals	Boron	B	142	1.4	Int-Scr_95	16.2	8.8	15.0	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
XC4scr	19	22	08/10/2006	251	437	327.5	22	Pueblo Canyon	Intermediate Perched	R-3i	215.2	06/21/2021	REG	F	INIT	Geninorg	Total Dissolved Solids	TDS	350	1.1	Int-Scr_95	135	2.6	3.40	mg/L	1.00		J+	I4a	EPA:160.1	GELC	
XC4scr	16	21	04/29/2010	149	195	168	21	Pueblo Canyon	Intermediate Perched	TW-2Ar	102.0	06/18/2021	REG	F	INIT	Metals	Boron	B	149	0.9	Int-Scr_95	16.2	9.2	15.0	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
XC4scr	16	21	04/29/2010	249	326	289	21	Pueblo Canyon	Intermediate Perched	TW-2Ar	102.0	06/18/2021	REG	F	INIT	Geninorg	Total Dissolved Solids	TDS	303	1.0	Int-Scr_95	135	2.2	3.40	mg/L	1.00		NQ	NQ	EPA:160.1	GELC	
XC4scr	7	8	12/16/2000	250	4170	791.5	8	Ancho Canyon	Regional	R-31 S3	666.3	06/02/2021	REG	F	INIT	Metals	Iron	Fe	811	1.0	Reg-Scr_95	53.8	15.1	30.0	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
XC4scr	7	8	12/16/2000	99.6	3500	185.5	8	Ancho Canyon	Regional	R-31 S3	666.3	06/02/2021	REG	F	INIT	Metals	Manganese	Mn	114	0.6	Reg-Scr_95	12.1	9.4	2.00	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
XC4scr	7	8	12/16/2000	3.2	46.2	33.15	6	Ancho Canyon	Regional	R-31 S3	666.3	06/02/2021	REG	F	INIT	Metals	Zinc	Zn	36.3	1.1	Reg-Scr_95	14.4	2.5	3.30	µg/L	1.00		NQ	NQ	SW-846:6010C	GELC	
XC4scr	20	24	11/15/2005	41.8	64	50.6	23	Lower Los Alamos Canyon	Regional Top	R-24	825.0	06/11/2021	REG	F	INIT	Metals	Boron	B	41.9	0.8	Reg-Scr_95	18.7	2.2	15.0	µg/L	1.00	J	J	J_LAB	SW-846:6010C	GELC	
XC4scr	74	78	02/17/2009	0.0757	0.165	0.145	33	Mortandad Canyon	Regional Top	R-44 S1	895.0	06/15/2021	FD	F	INIT	Geninorg	Bromide	Br(-1)	0.145	1.0	Reg-Scr_95	0.067	2.2	0.0670	mg/L	1.00	J	J	J_LAB	EPA:300.0	GELC	
XC4scr	74	78	02/17/2009	0.0757	0.165	0.145	33	Mortandad Canyon	Regional Top	R-44 S1	895.0	06/15/2021	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.148	1.0	Reg-Scr_95	0.067	2.2	0.0670	mg/L	1.00	J	J	J_LAB	EPA:300.0	GELC	
XC4scr	72	77	02/28/2009	0.0667	0.637	0.07995	36	Mortandad Canyon	Regional Top	R-45 S1	880.0	06/16/2021	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.154	1.9	Reg-Scr_95	0.067	2.3	0.0670	mg/L	1.00	J	J	J_LAB	EPA:300.0	GELC	