



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

MAR 19 2020



EMLA-2020-1330-02-001

Mr. Kevin Pierard
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 March 2020

Dear Mr. Pierard:

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 March 12, 2020, to review groundwater data loaded or released in the Environmental Information Management System (EIM) in February 2020, along with additional data for October through December 2019, in accordance with Section XXVI.C of the 2016 Consent Order. The enclosed report was prepared by comparing the data against groundwater notification criteria as defined in Section IX of the 2016 Consent Order. These criteria consider New Mexico Water Quality Control Commission (NMWQCC) groundwater standards, U.S. Environmental Protection Agency (EPA) maximum contaminant levels (MCLs), New Mexico Environment Department (NMED) screening levels for tap water, EPA regional screening levels for tap water, and NMED-approved background values for hydrogeological zones as set forth in the "Groundwater Background Investigation Report, Revision 5." For comparison with EPA tap water standards, the standard's carcinogenic risk value was adjusted to 1×10^{-5} , as specified in the Consent Order.

The enclosed report was prepared using the November 2019 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.

There are a significant number of analytes detected that meet the reporting criteria for 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 (criteria code C1). These include per- and polyfluoroalkyl substances (PFAS), acetone, 2-nitrotoluene, and 1,4-dioxane. This notification provides the initial baseline data for the new regulatory constituents, including PFAS; focused validation and assessment of these results are ongoing. For 1,4-dioxane, this is the first evaluation at these monitoring locations using the low method detection limit of 0.1 µg/L.

N3B has finished updating its data management software and has completed a comprehensive review of groundwater data results for the periods represented in the October through December 2019 reports that

were nominally affected during software updates. Supplemental information is provided in Table 3 of the enclosed report, including analytical data that were not reported previously. At the time of submittal of those reports, the produced results were incomplete. These updated results were generated using upgraded data management software and associated procedures, which were recently put in place.

The enclosed report also includes analytical data from samples collected at locations within the Pueblo de San Ildefonso, which are subject to reporting at this time. These data have been reviewed by the Pueblo. This review is required under the Memorandum of Agreement dated May 28, 2014, between the DOE National Nuclear Security Administration Los Alamos Field Office and San Ildefonso Pueblo.

1-Day Notification

One-day notification was not required because there were no cases of a contaminant detected in a well screen interval or spring at a concentration that exceeded a water quality standard for the first time. There were no instances of a contaminant detected at a concentration that exceeded the NMWQCC groundwater standard or federal MCL at locations where contaminants have not previously been detected above the respective standard as defined in the 2016 Consent Order (based on samples collected since June 14, 2007).

15-Day Notification

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

If you have questions, please contact Steve Veenis at (505) 309-1362 (steve.veenis@em-la.doe.gov) or Hai Shen at (505) 257-7943 (hai.shen@em.doe.gov).

Sincerely,



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

Enclosure:

1. Two hard copies with electronic files – Summary of Groundwater Data Reviewed in March 2020 That Meet Notification Requirements (EM2020-0131)

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

Harry Burgess, 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

Neelam Dhawan, NMED

Michelle Hunter, NMED

Steve Pullen, NMED

Andrew C. Romero, NMED

Melanie Sandoval, NMED

Chris Catechis, NMED-DOE-OB

Steve Yanicak, NMED-DOE-OB

Jocelyn Buckley, LANL

Leslie Dale, LANL

Brian Iacona, LANL

William Mairson, LANL

Jacob Meadows, LANL

Enrique Torres, LANL

William Alexander, N3B

Emily Day, N3B

Mei Ding, N3B

Lori Huntoon, N3B

Danny Katzman, N3B

Joseph Legare, N3B

Dana Lindsay, N3B

Frazer Lockhart, N3B

Elizabeth Lowes, N3B

Pamela Maestas, N3B

Glenn Morgan, N3B

Bruce Robinson, N3B

Bradley Smith, N3B

Steve Veenis, N3B

Brinson Willis, N3B

Karen Armijo, NA-LA

Pete Maggiore, NA-LA

David Nickless, EM-LA

Cheryl Rodriguez, EM-LA

Hai Shen, EM-LA

n3brecords@em-la.doe.gov

Public Reading Room (EPRR)

PRS Website

emla.docs@em.doe.gov

SUMMARY OF GROUNDWATER DATA REVIEWED IN MARCH 2020 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 2020 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 three tables. Table 1, NMED 02-20 Groundwater Report, presents categorical results (criteria code) since June 14, 2007, that met the five reporting criteria as specified in the 2016 Consent Order. Table 2, NMED 02-20 Groundwater Report Addendum, presents results that exceed the 95th percentile of those results in the data set defined in the “Groundwater Background Investigation Report, Revision 5.” Only the contaminants and other chemical constituents that lack a calculated groundwater background value (i.e., the frequency of detections was too low to calculate a background value at the 95% upper tolerance level) are listed in this table. Table 2 is a voluntary submission by N3B to NMED to identify the potential risk resulting from contaminants and other chemical constituents that are without defined background values. Table 3, Groundwater Data October 1, 2019–December 31, 2019, provides results which, as described in the attached letter, supplement the analytical data results and correct omissions in previous reports (October 2019 through February 2020) as a result of updates to the data management software.

These tables include the following:

- Comments on results that appear to be exceptional based on consideration of monitoring data acquired from previous analyses (using statistics described below)
- Supplemental information summarizing monitoring results obtained from previous analyses
- Sampling date, name of the well or spring, location of the well or spring, depth of the screened interval, groundwater zone sampled, analytical result, detection limit, values for regulatory standards or screening levels, and analytical and secondary validation qualifiers. Additional information describing the locations and analytical data is also included. All data have been through secondary validation.

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

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

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

DESCRIPTION OF TABLES

15-Day Notification Requirement

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

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

- C1. Detection of a contaminant that is an organic compound in a spring or screened interval of a well if that contaminant has not previously been detected in the spring or screened interval.
- C2. Detection of a contaminant that is a metal or other inorganic compound at a concentration above the background level in a spring or screened interval of a well if that contaminant has not previously exceeded the background level in the spring or screened interval.
- C3. Detection of a contaminant in a spring or screened interval of a well at a concentration that (1) exceeds the lower of either one-half the NMWQCC water quality standard or one-half the federal MCL, or, if there is no such standard for the contaminant, (2) exceeds one-half the tap water screening levels in Table A-1 of NMED's "Risk Assessment Guidance for Site Investigations and Remediation" (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.”

Table 3 provides results that qualify as C2, C4, C5, XC2scr, and XC4scr.

Columns 2 through 8 in all three tables provide summary statistics for metals or organic/inorganic compounds by field preparation code (e.g., filtered aluminum) for samples collected since January 1, 2000, including the currently reported data. The statistics include the date of the first sampling event; the number of sampling events and samples analyzed; the number of detections; and the minimum, maximum, and median concentration for detections. This information indicates whether the new result is consistent with the range of earlier data.

The subsequent columns contain location and sampling information as follows:

Canyon—canyon where monitoring location is found

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

Location—monitoring location name

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

Start Date—date the sample was collected

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

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

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

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

Analyte Desc—name of analyte

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

Std Result—analytical result in standard measurement units

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

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

Screen Level—value of the LVL Type/Risk Code

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

Std MDL—method detection limit in standard measurement units

Std UOM—standard units of measurement

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

Lab Qualifier—analytical laboratory 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

Anyl 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.

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

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

GENINORG—General inorganic

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

HEXP—high explosive

HRMS—high-resolution 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

MDL—method detection limit

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

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

NMED A1 TAP SCRNLVL—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)

SVOC—semivolatile organic compound

TDS—total dissolved solids

TNX—2,4,6-trinitroxylyene

UAL—upper acceptance limit

UOM—units of measurement

VOC—Volatile organic compound

ANALYTICAL LABORATORY CODES AND QUALIFIERS

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

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

F—filtered

FD—field duplicate

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

SwRI—Southwest Research Institute

GENINORG—general inorganic

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

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.

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.

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 >10% but <75%.

RE—reanalysis

REG—regular sample

UF—unfiltered

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

Table 1: NMED 2-20 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth	Start Date	Fid QC Type Code	Fid Prep Code	Lab Sample Type Code	AnyI Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	AnyI Meth Code	Lab Code	Comment
C1	9	10	2/13/2019	0.178	0.178	0.178	1	Water Canyon	Regional	R-69 S2	1375.5	12/10/2019	REG	UF	INIT	HEXP	Nitrotoluene[2-]	88-72-2	0.178	1	NMED A1 TAP SCRNLVL	3.14	0.1	0.0837	µg/L	2	J	J	J_LAB	SW-846:8330B	GELC	
C1	1	1	12/10/2019	1.25	1.25	1.25	1	Water Canyon	Regional	R-69 S2	1375.5	12/10/2019	REG	UF	INIT	PFAS	Perfluorooctanoic acid	335-67-1	1.25	1	NMED A1 TAP SCRNLVL	70	0	0.703	ng/L	1	J	J	J_LAB	EPA:537M	GELC	First sampling for PFAS
C1	15	17	6/29/2006	1.89	3.06	2.475	2	Sandia Canyon	Regional Deep	R-10 S1	874	11/7/2019	REG	UF	INIT	VOC	Acetone	67-64-1	1.89	0.8	NMED A1 TAP SCRNLVL	14100	0	1.5	µg/L	1	J	J	J_LAB	SW-846:8260B	GELC	
C1	3	3	10/3/2017	6.15	6.15	6.15	1	White Rock Canyon and Rio Grande	Regional Spring	Lower Sandia Spring	0	10/9/2019	REG	UF	INIT	VOC	Acetone	67-64-1	6.15	1	NMED A1 TAP SCRNLVL	14100	0	1.5	µg/L	1	J	J	J_LAB	SW-846:8260B	GELC	
C1	1	2	12/10/2019	0.729	0.99	0.8595	2	Water Canyon	Regional Top	R-69 S1	1310	12/10/2019	FD	UF	INIT	PFAS	Perfluorooctanoic acid	335-67-1	0.99	1.2	NMED A1 TAP SCRNLVL	70	0	0.696	ng/L	1	J	J	J_LAB	EPA:537M	GELC	First sampling for PFAS
C1	1	2	12/10/2019	0.729	0.99	0.8595	2	Water Canyon	Regional Top	R-69 S1	1310	12/10/2019	REG	UF	INIT	PFAS	Perfluorooctanoic acid	335-67-1	0.729	0.8	NMED A1 TAP SCRNLVL	70	0	0.705	ng/L	1	J	J	J_LAB	EPA:537M	GELC	First sampling for PFAS
C1	5	8	10/23/2015	0.117	0.117	0.117	1	Mortandad Canyon	Regional Top	SIMR-2	885	11/13/2019	REG	UF	INIT	Low-level 1,4-dioxane	Dioxane[1,4-]	123-91-1	0.117	1	NMED A1 TAP SCRNLVL	4.59	0	0.1	µg/L	1	J	J	J_LAB	SW-846:8270E_SIM	GELC	First analysis using low-level method (MDL = 0.1 µg/L)
C2	56	65	2/24/2000	3.2	4.31	3.83	65	Mortandad Canyon	Regional Top	R-15	958.6	1/23/2020	REG	F	INIT	Metals	Magnesium	Mg	4.31	1.1	LANL Reg BG LVL	4.18	1	0.11	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	58	78	6/15/2005	30.1	48.2	40	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Metals	Barium	Ba	34.4	0.9	LANL Int BG LVL	13.5	2.5	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	58	78	6/15/2005	42.8	75.5	62.85	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Metals	Calcium	Ca	57.2	0.9	LANL Int BG LVL	10.7	5.3	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	58	78	6/15/2005	21.2	64.8	54	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Geninorg	Chloride	Cl(-1)	49.4	0.9	LANL Int BG LVL	3.11	15.9	0.67	mg/L	10		NQ	NQ	EPA:300.0	GELC	
C4	58	78	6/15/2005	0.412	0.668	0.525	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Geninorg	Fluoride	F(-1)	0.499	1	LANL Int BG LVL	0.234	2.1	0.033	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	58	78	6/15/2005	142	253	210	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Geninorg	Hardness	Hardness	189	0.9	LANL Int BG LVL	37.8	5	0.453	mg/L	1		NQ	NQ	SM:A2340B	GELC	
C4	58	78	6/15/2005	8.49	15.7	12.9	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Metals	Magnesium	Mg	11.3	0.9	LANL Int BG LVL	3.14	3.6	0.11	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	58	78	6/15/2005	2.9	41.8	21.8	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Metals	Nickel	Ni	27.1	1.2	LANL Int BG LVL	3.65	7.4	0.6	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	58	78	6/15/2005	7.62	20.4	10.25	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	12.3	1.2	LANL Int BG LVL	0.459	26.8	0.17	mg/L	10		J+	I6b	EPA:353.2	GELC	

Table 1: NMED 2-20 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C4	58	78	6/15/2005	56.3	246	82.4	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Geninorg	Perchlorate	CIO4	96.6	1.2	LANL Int BG LVL	0.27	357.8	5	µg/L	100		NQ	NQ	SW-846:6850	GELC	
C4	58	78	6/15/2005	196	339	276	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Metals	Strontium	Sr	248	0.9	LANL Int BG LVL	59.6	4.2	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	58	78	6/15/2005	34.7	77.6	59.35	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	48.6	0.8	LANL Int BG LVL	7.1	6.8	1.33	mg/L	10		NQ	NQ	EPA:300.0	GELC	
C4	45	57	10/21/2008	53.4	93	67.7	57	Sandia Canyon	Intermediate Perched	SCI-2	548	1/23/2020	REG	F	INIT	Geninorg	Chloride	Cl(-1)	71	1	LANL Int BG LVL	3.11	22.8	1.34	mg/L	20		NQ	NQ	EPA:300.0	GELC	
C4	45	59	10/21/2008	14	19.6	16.7	59	Sandia Canyon	Intermediate Perched	SCI-2	548	1/23/2020	REG	F	INIT	Metals	Nickel	Ni	15.3	0.9	LANL Int BG LVL	3.65	4.2	0.6	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	45	57	10/21/2008	2.89	5.1	4.12	57	Sandia Canyon	Intermediate Perched	SCI-2	548	1/23/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	3.35	0.8	LANL Int BG LVL	0.459	7.3	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	45	57	10/21/2008	0.83	1.12	0.96	57	Sandia Canyon	Intermediate Perched	SCI-2	548	1/23/2020	REG	F	INIT	Geninorg	Perchlorate	CIO4	0.89	0.9	LANL Int BG LVL	0.27	3.3	0.05	µg/L	1		NQ	NQ	SW-846:6850	GELC	
C4	45	57	10/21/2008	77.9	103	88.7	57	Sandia Canyon	Intermediate Perched	SCI-2	548	1/23/2020	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	81.6	0.9	LANL Int BG LVL	7.1	11.5	2.66	mg/L	20		NQ	NQ	EPA:300.0	GELC	
C4	45	59	10/21/2008	1.2	2.56	1.84	59	Sandia Canyon	Intermediate Perched	SCI-2	548	1/23/2020	REG	F	INIT	Metals	Uranium	U	2.56	1.4	LANL Int BG LVL	0.992	2.6	0.067	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	57	62	8/30/2007	68	389	345.5	62	Sandia Canyon	Regional Deep	R-35a	1013.1	1/15/2020	REG	F	INIT	Metals	Barium	Ba	344	1	LANL Reg BG LVL	38.1	9	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	56	62	8/30/2007	5.97	7.31	6.47	62	Sandia Canyon	Regional Deep	R-35a	1013.1	1/15/2020	REG	F	INIT	Geninorg	Chloride	Cl(-1)	6.6	1	LANL Reg BG LVL	2.7	2.4	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	44	48	11/10/2008	3.37	7.39	4.675	48	Sandia Canyon	Regional Deep	R-43 S2	969.1	1/9/2020	REG	F	INIT	Geninorg	Chloride	Cl(-1)	6.99	1.5	LANL Reg BG LVL	2.7	2.6	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	44	53	11/10/2008	1.8	35.2	7.39	43	Sandia Canyon	Regional Deep	R-43 S2	969.1	1/9/2020	REG	F	INIT	Metals	Chromium	Cr	35.2	4.8	LANL Reg BG LVL	7.48	4.7	3	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	44	47	11/10/2008	0.389	5.4	3.03	47	Sandia Canyon	Regional Deep	R-43 S2	969.1	1/9/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	4.14	1.4	LANL Reg BG LVL	0.769	5.4	0.17	mg/L	10	J+	I6b	EPA:353.2	GELC		
C4	44	48	11/10/2008	0.411	0.953	0.7365	48	Sandia Canyon	Regional Deep	R-43 S2	969.1	1/9/2020	REG	F	INIT	Geninorg	Perchlorate	CIO4	0.933	1.3	LANL Reg BG LVL	0.414	2.3	0.05	µg/L	1		NQ	NQ	SW-846:6850	GELC	
C4	44	48	11/10/2008	3.96	10.8	6.75	48	Sandia Canyon	Regional Deep	R-43 S2	969.1	1/9/2020	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	10.1	1.5	LANL Reg BG LVL	4.59	2.2	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	56	64	3/5/2009	6.1	47.4	20.6	63	Mortandad Canyon	Regional Deep	R-45 S2	974.9	1/22/2020	REG	F	INIT	Metals	Chromium	Cr	42.1	2	LANL Reg BG LVL	7.48	5.6	3	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	3	3	10/3/2017	179	209	188	3	White Rock Canyon and Rio Grande	Regional Spring	Lower Sandia Spring	0	10/9/2019	REG	F	INIT	Geninorg	Alkalinity-CO3+HCO3	ALK-CO3+HCO3	179	1	LANL Reg BG LVL	72.9	2.5	1.45	mg/L	1		NQ	NQ	EPA:310.1	GELC	
C4	3	3	10/3/2017	175	203	198	3	White Rock Canyon and Rio Grande	Regional Spring	Lower Sandia Spring	0	10/9/2019	REG	F	INIT	Metals	Barium	Ba	175	0.9	LANL Reg BG LVL	38.1	4.6	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	

Table 1: NMED 2-20 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth	Start Date	Fld OC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C4	3	3	10/3/2017	51.4	58.6	55.7	3	White Rock Canyon and Rio Grande	Regional Spring	Lower Sandia Spring	0	10/9/2019	REG	F	INIT	Metals	Calcium	Ca	51.4	0.9	LANL Reg BG LVL	17.03	3	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	3	3	10/3/2017	145	170	160	3	White Rock Canyon and Rio Grande	Regional Spring	Lower Sandia Spring	0	10/9/2019	REG	F	INIT	Geninorg	Hardness	HARDNESS	145	0.9	LANL Reg BG LVL	67.1	2.2	0.453	mg/L	1		NQ	NQ	SM:A2340B	GELC	
C4	3	3	10/3/2017	360	430	387	3	White Rock Canyon and Rio Grande	Regional Spring	Lower Sandia Spring	0	10/9/2019	REG	F	INIT	Metals	Strontium	Sr	360	0.9	LANL Reg BG LVL	157	2.3	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	20	29	10/19/2000	96.5	238	132	29	White Rock Canyon and Rio Grande	Regional Spring	Sacred Spring	0	10/7/2019	REG	F	INIT	Geninorg	Alkalinity-CO3+HCO3	ALK-CO3+HCO3	164	1.2	LANL Reg BG LVL	72.9	2.2	1.45	mg/L	1		NQ	NQ	EPA:310.1	GELC	
C4	17	24	10/23/2001	81.1	239	93.65	24	White Rock Canyon and Rio Grande	Regional Spring	Sacred Spring	0	10/7/2019	REG	F	INIT	Metals	Barium	Ba	124	1.3	LANL Reg BG LVL	38.1	3.3	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	20	29	10/19/2000	30	68.8	35.9	29	White Rock Canyon and Rio Grande	Regional Spring	Sacred Spring	0	10/7/2019	REG	F	INIT	Metals	Calcium	Ca	44.7	1.2	LANL Reg BG LVL	17.03	2.6	0.05	mg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	17	24	10/23/2001	402	665	450.5	24	White Rock Canyon and Rio Grande	Regional Spring	Sacred Spring	0	10/7/2019	REG	F	INIT	Metals	Strontium	Sr	446	1	LANL Reg BG LVL	157	2.8	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	36	43	11/30/2005	5.62	7.09	6.09	43	Sandia Canyon	Regional Top	R-10a	690	11/7/2019	REG	F	INIT	Geninorg	Chloride	Cl(-1)	6.83	1.1	LANL Reg BG LVL	2.7	2.5	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	36	43	11/30/2005	0.528	14.2	1.5	41	Sandia Canyon	Regional Top	R-10a	690	11/7/2019	REG	F	INIT	Metals	Nickel	Ni	7.12	4.7	LANL Reg BG LVL	2.9	2.5	0.6	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	36	43	11/30/2005	9.36	12.9	10.3	43	Sandia Canyon	Regional Top	R-10a	690	11/7/2019	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	10.2	1	LANL Reg BG LVL	4.59	2.2	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	69	81	5/17/2005	2.27	7.43	5.37	81	Sandia Canyon	Regional Top	R-11	855	1/8/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.22	1	LANL Reg BG LVL	0.769	6.8	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	56	66	2/24/2000	1.35	3.31	2.16	66	Mortandad Canyon	Regional Top	R-15	958.6	1/23/2020	FD	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.86	0.9	LANL Reg BG LVL	0.769	2.4	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	56	66	2/24/2000	1.35	3.31	2.16	66	Mortandad Canyon	Regional Top	R-15	958.6	1/23/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	1.85	0.9	LANL Reg BG LVL	0.769	2.4	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	52	61	5/25/2005	5.34	12.3	7.76	61	Mortandad Canyon	Regional Top	R-15	958.6	1/23/2020	FD	F	INIT	Geninorg	Perchlorate	CIO4	10.2	1.3	LANL Reg BG LVL	0.414	24.6	0.5	µg/L	10		NQ	NQ	SW-846:6850	GELC	
C4	52	61	5/25/2005	5.34	12.3	7.76	61	Mortandad Canyon	Regional Top	R-15	958.6	1/23/2020	REG	F	INIT	Geninorg	Perchlorate	CIO4	10.4	1.3	LANL Reg BG LVL	0.414	25.1	0.5	µg/L	10		NQ	NQ	SW-846:6850	GELC	
C4	44	51	3/12/2008	4.05	6.83	6.05	51	Sandia Canyon	Regional Top	R-36	766.9	1/14/2020	FD	F	INIT	Geninorg	Chloride	Cl(-1)	6.2	1	LANL Reg BG LVL	2.7	2.3	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	44	51	3/12/2008	4.05	6.83	6.05	51	Sandia Canyon	Regional Top	R-36	766.9	1/14/2020	REG	F	INIT	Geninorg	Chloride	Cl(-1)	6.2	1	LANL Reg BG LVL	2.7	2.3	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	

Table 1: NMED 2-20 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth	Start Date	Fld OC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C4	44	52	3/12/2008	1.25	6.8	2.41	52	Sandia Canyon	Regional Top	R-36	766.9	1/14/2020	FD	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.86	1.2	LANL Reg BG LVL	0.769	3.7	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	44	52	3/12/2008	1.25	6.8	2.41	52	Sandia Canyon	Regional Top	R-36	766.9	1/14/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.86	1.2	LANL Reg BG LVL	0.769	3.7	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	43	50	3/12/2008	0.845	1.74	1.515	50	Sandia Canyon	Regional Top	R-36	766.9	1/14/2020	FD	F	INIT	Geninorg	Perchlorate	CIO4	1.41	0.9	LANL Reg BG LVL	0.414	3.4	0.05	µg/L	1		NQ	NQ	SW-846:6850	GELC	
C4	43	50	3/12/2008	0.845	1.74	1.515	50	Sandia Canyon	Regional Top	R-36	766.9	1/14/2020	REG	F	INIT	Geninorg	Perchlorate	CIO4	1.43	0.9	LANL Reg BG LVL	0.414	3.5	0.05	µg/L	1		NQ	NQ	SW-846:6850	GELC	
C4	45	52	11/5/2008	3.6	9.39	7.555	52	Sandia Canyon	Regional Top	R-43 S1	903.9	1/9/2020	REG	F	INIT	Geninorg	Chloride	Cl(-1)	8.58	1.1	LANL Reg BG LVL	2.7	3.2	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	45	57	11/5/2008	2.35	223	77	54	Sandia Canyon	Regional Top	R-43 S1	903.9	1/9/2020	REG	F	INIT	Metals	Chromium	Cr	215	2.8	LANL Reg BG LVL	7.48	28.7	3	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	45	51	11/5/2008	4.9	6.15	5.39	50	Sandia Canyon	Regional Top	R-43 S1	903.9	1/9/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	5.91	1.1	LANL Reg BG LVL	0.769	7.7	0.17	mg/L	10		J+	I6b	EPA:353.2	GELC	
C4	45	52	11/5/2008	8.77	21	15.6	52	Sandia Canyon	Regional Top	R-43 S1	903.9	1/9/2020	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	17.8	1.1	LANL Reg BG LVL	4.59	3.9	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	59	61	2/17/2009	1.99	20.3	2.41	61	Mortandad Canyon	Regional Top	R-44 S1	895	1/21/2020	REG	F	INIT	Geninorg	Chloride	Cl(-1)	18.2	7.6	LANL Reg BG LVL	2.7	6.7	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	59	61	2/17/2009	0.536	80.5	2.23	34	Mortandad Canyon	Regional Top	R-44 S1	895	1/21/2020	REG	F	INIT	Metals	Nickel	Ni	80.5	36.1	LANL Reg BG LVL	2.9	27.8	0.6	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	59	61	2/17/2009	0.123	2.66	1.17	60	Mortandad Canyon	Regional Top	R-44 S1	895	1/21/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.39	2	LANL Reg BG LVL	0.769	3.1	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	59	61	2/17/2009	2.76	19.8	3.49	61	Mortandad Canyon	Regional Top	R-44 S1	895	1/21/2020	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	18.6	5.3	LANL Reg BG LVL	4.59	4.1	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	57	64	2/28/2009	8.4	50.7	34.3	64	Mortandad Canyon	Regional Top	R-45 S1	880	1/22/2020	REG	F	INIT	Metals	Chromium	Cr	38.7	1.1	LANL Reg BG LVL	7.48	5.2	3	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	57	60	2/28/2009	0.256	3.47	2.805	60	Mortandad Canyon	Regional Top	R-45 S1	880	1/22/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.45	0.9	LANL Reg BG LVL	0.769	3.2	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	59	66	3/6/2010	4.68	19.6	9.28	66	Mortandad Canyon	Regional Top	R-50 S1	1077	1/14/2020	REG	F	INIT	Geninorg	Chloride	Cl(-1)	17.4	1.9	LANL Reg BG LVL	2.7	6.4	0.335	mg/L	5		NQ	NQ	EPA:300.0	GELC	
C4	59	68	3/6/2010	26.3	150	95.55	68	Mortandad Canyon	Regional Top	R-50 S1	1077	1/14/2020	REG	F	INIT	Metals	Chromium	Cr	26.3	0.3	LANL Reg BG LVL	7.48	3.5	3	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	59	66	3/6/2010	1.51	10.8	4.095	66	Mortandad Canyon	Regional Top	R-50 S1	1077	1/14/2020	REG	F	INIT	Metals	Nickel	Ni	6.75	1.6	LANL Reg BG LVL	2.9	2.3	0.6	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	59	67	3/6/2010	0.398	2.94	2	67	Mortandad Canyon	Regional Top	R-50 S1	1077	1/14/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.44	1.2	LANL Reg BG LVL	0.769	3.2	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	59	66	3/6/2010	7.22	20.2	13.5	66	Mortandad Canyon	Regional Top	R-50 S1	1077	1/14/2020	REG	F	INIT	Geninorg	Sulfate	SO4(-2)	18	1.3	LANL Reg BG LVL	4.59	3.9	0.133	mg/L	1		NQ	NQ	EPA:300.0	GELC	

Table 1: NMED 2-20 Groundwater Report

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth	Start Date	Fld OC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
C4	43	50	5/20/2011	2.03	39.1	20.6	49	Mortandad Canyon	Regional Top	R-61 S1	1125	1/8/2020	REG	F	INIT	Metals	Chromium	Cr	33.4	1.6	LANL Reg BG LVL	7.48	4.5	3	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	43	50	5/20/2011	0.427	2.77	2.08	50	Mortandad Canyon	Regional Top	R-61 S1	1125	1/8/2020	REG	F	INIT	Geninorg	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.31	1.1	LANL Reg BG LVL	0.769	3	0.085	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	42	49	5/20/2011	2.96	16.2	11.8	49	Mortandad Canyon	Regional Top	R-61 S1	1125	1/8/2020	REG	F	INIT	Geninorg	Perchlorate	CIO4	12.4	1.1	LANL Reg BG LVL	0.414	30	0.5	µg/L	10		NQ	NQ	SW-846:6850	GELC	

Table 2: NMED 2-20 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 OC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
XC2scr	69	81	5/17/2005	18.4	186	33.3	7	Sandia Canyon	Regional Top	R-11	855	1/8/2020	REG	F	INIT	Metals	Iron	Fe	186	5.6	Reg-Scr_95	53.8	3.5	30	µg/L	1	*	J	I10	SW-846:6010C	GELC	
XC2scr	44	51	3/12/2008	0.101	0.101	0.101	1	Sandia Canyon	Regional Top	R-36	766.9	1/14/2020	REG	F	INIT	Metals	Mercury	Hg	0.101	1	Reg-Scr_95	0.067	1.5	0.067	µg/L	1	J	J	J_LAB	SW-846:7470A	GELC	
XC2scr	59	66	3/6/2010	0.069	0.069	0.069	1	Mortandad Canyon	Regional Top	R-50 S1	1077	1/14/2020	REG	F	INIT	Metals	Mercury	Hg	0.069	1	Reg-Scr_95	0.067	1	0.067	µg/L	1	J	J	J_LAB	SW-846:7470A	GELC	
XC4scr	58	78	6/15/2005	0.212	0.703	0.571	75	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.481	0.8	Int-Scr_95	0.0716	6.7	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
XC4scr	58	81	6/15/2005	29.4	86.6	61.6	81	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Metals	Chromium	Cr	62.4	1	Int-Scr_95	2.72	23	3	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
XC4scr	58	78	6/15/2005	298	527	403.5	78	Mortandad Canyon	Intermediate Perched	MCOI-6	686	1/13/2020	REG	F	INIT	Geninorg	Total Dissolved Solids	TDS	370	0.9	Int-Scr_95	135	2.7	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
XC4scr	45	57	10/21/2008	0.194	0.846	0.622	56	Sandia Canyon	Intermediate Perched	SCI-2	548	1/23/2020	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.754	1.2	Int-Scr_95	0.0716	11	0.067	mg/L	1		NQ	NQ	EPA:300.0	GELC	
XC4scr	45	64	10/21/2008	262	658	438	64	Sandia Canyon	Intermediate Perched	SCI-2	548	1/23/2020	REG	F	INIT	Metals	Chromium	Cr	262	0.6	Int-Scr_95	2.72	96	15	µg/L	5		NQ	NQ	SW-846:6020B	GELC	
XC4scr	30	36	8/4/2009	0.0041	0.00983	0.00662	36	Sandia Canyon	Intermediate Perched	SCI-2	548	1/23/2020	REG	UF	INIT	Inorganic	Cyanide (Total)	CN(TOTAL)	0.00408	0.6	Int-Scr_95	0.0017	2.4	0.00167	mg/L	1	J	J	J_LAB	EPA:335.4	GELC	
XC4scr	45	58	10/21/2008	354	796	427.5	58	Sandia Canyon	Intermediate Perched	SCI-2	548	1/23/2020	REG	F	INIT	Geninorg	Total Dissolved Solids	TDS	430	1	Int-Scr_95	135	3.2	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
XC4scr	3	3	10/3/2017	32.4	340	168	3	White Rock Canyon and Rio Grande	Regional Spring	Lower Sandia Spring	0	10/9/2019	REG	F	INIT	Metals	Manganese	Mn	168	1	Reg-Scr_95	12.1	14	2	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	17	24	10/23/2001	36.3	946	140.5	22	White Rock Canyon and Rio Grande	Regional Spring	Sacred Spring	0	10/7/2019	REG	F	INIT	Metals	Iron	Fe	369	2.6	Reg-Scr_95	53.8	6.9	30	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
XC4scr	17	24	10/23/2001	32.8	994	223.5	22	White Rock Canyon and Rio Grande	Regional Spring	Sacred Spring	0	10/7/2019	REG	F	INIT	Metals	Manganese	Mn	374	1.7	Reg-Scr_95	12.1	31	2	µg/L	1		NQ	NQ	SW-846:6010C	GELC	

Table 2: NMED 2-20 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	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
XC4scr	59	61	2/17/2009	0.0757	0.157	0.139	17	Mortandad Canyon	Regional Top	R-44 S1	895	1/21/2020	REG	F	INIT	Geninorg	Bromide	Br(-1)	0.152	1.1	Reg-Scr_95	0.067	2.3	0.067	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	
XC4scr	43	50	5/20/2011	0.0531	11.8	0.581	47	Mortandad Canyon	Regional Top	R-61 S1	1125	1/8/2020	REG	F	INIT	Geninorg	Total Phosphate as Phosphorus	PO4-P	0.322	0.6	Reg-Scr_95	0.0822	3.9	0.02	mg/L	1		J+	I4a	EPA:365.4	GELC	

Table 3: Groundwater Data October 1, 2019–December 31, 2019

Criteria Code	Visits	Samples	First Event	Min Detect	Max Detect	Median Detect	Num Detect	Canyon	Zone	Location	Screen Depth	Start Date	Fld QC Type Code	Fld Prep Code	Lab Sample Type Code	Anyl Suite Code	Analyte Desc	Analyte	Std Result	Result/Median	LVL Type/Risk Code	Screen Level	Exceedance Ratio	Std MDL	Std UOM	Dilution Factor	Lab Qualifier	Validation Qualifier	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
Supplementary Information for October 2019 Report																																
C5	52	60	3/5/2009	6.1	47.4	19.5	59	Mortandad Canyon	Regional Deep	R-45 S2	974.9	9/26/2019	REG	F	INIT	Metals	Chromium	Cr	36.4	1.9	NM GW STD	50	0.7	3	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
XC2scr	19	24	5/9/2006	1.6	4.49	1.8	5	Upper Los Alamos Canyon	Intermediate Perched	LAOI-7	240	9/17/2019	REG	F	INIT	Metals	Arsenic	As	4.49	2.5	Int-Scr_95	2.82	1.6	2	µg/L	1	J	J	J_LAB	SW-846:6020A	GELC	
Supplementary Information for November 2019 Report																																
C4	13	16	5/21/2009	76.9	175	106	16	Upper Los Alamos Canyon	Intermediate	TA-53i	600	9/18/2019	REG	F	INIT	Metals	Molybdenum	Mo	165	1.6	LANL Int BG LVL	2.9	57	0.2	µg/L	1		NQ	NQ	SW-846:6020A	GELC	
C4	56	58	2/17/2009	0.536	32.5	1.995	31	Mortandad Canyon	Regional Top	R-44 S1	895	10/11/2019	REG	F	INIT	Metals	Nickel	Ni	29.2	14.6	LANL Reg BG LVL	2.9	10	0.6	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	56	58	2/17/2009	0.536	32.5	1.995	31	Mortandad Canyon	Regional Top	R-44 S1	895	9/12/2019	REG	F	INIT	Metals	Nickel	Ni	25.4	12.7	LANL Reg BG LVL	2.9	8.8	0.6	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
Supplementary Information for December 2019 Report																																
C2	57	60	3/11/2010	0.552	4.16	1.22	59	Mortandad Canyon	Regional Deep	R-50 S2	1185	11/19/2019	REG	F	INIT	Metals	Nickel	Ni	4.16	3.4	LANL Reg BG LVL	2.9	1.4	0.6	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	57	77	6/15/2005	2.9	41.8	21.7	77	Mortandad Canyon	Intermediate Perched	MCOI-6	686	11/14/2019	REG	F	INIT	Metals	Nickel	Ni	24.7	1.1	LANL Int BG LVL	3.65	6.8	0.6	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	29	32	10/3/2006	6.44	9.16	7.925	32	Pajarito Canyon	Intermediate Perched	R-23i S2	470.2	10/22/2019	REG	F	INIT	Geninorg	Chloride	Cl(-1)	8.68	1.1	LANL Int BG LVL	3.11	2.8	0.067	mg/L	1		J+	I6b	EPA:300.0	GELC	
C4	34	35	1/11/2007	44.9	97	74.1	35	Sandia Canyon	Intermediate Perched	SCI-1	358.4	11/15/2019	REG	F	INIT	Metals	Molybdenum	Mo	65.1	0.9	LANL Int BG LVL	2.9	22	0.2	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	44	58	10/21/2008	14	19.6	16.75	58	Sandia Canyon	Intermediate Perched	SCI-2	548	11/15/2019	REG	F	INIT	Metals	Nickel	Ni	14.4	0.9	LANL Int BG LVL	3.65	3.9	0.6	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
C4	44	58	10/21/2008	1.2	2.29	1.835	58	Sandia Canyon	Intermediate Perched	SCI-2	548	11/15/2019	REG	F	INIT	Metals	Uranium	U	2.29	1.2	LANL Int BG LVL	0.992	2.3	0.067	µg/L	1		NQ	NQ	SW-846:6020B	GELC	
XC4scr	34	37	1/11/2007	7.99	22.1	12.15	36	Sandia Canyon	Intermediate Perched	SCI-1	358.4	11/15/2019	REG	F	INIT	Metals	Chromium	Cr	8.23	0.7	Int-Scr_95	2.72	3	3	µg/L	1	J	J	J_LAB	SW-846:6020B	GELC	