EMID-700405

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

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NMED
Hazardous Waste
Bureau

Mr. John E. Kieling
Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Dear Mr. Kieling:

Subject: Monthly Notification of Groundwater Data Reviewed in April 2019

This letter is the U.S. Department of Energy (DOE) Office of 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 (Consent Order). Members of EM-LA and N3B met on April 11, 2019, to review groundwater data received in March 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 2018 EPA regional screening levels for tap water, before inclusion of the NMWQCC groundwater standards published December 21, 2018, and the February 2019 update of Table A-1 of "Risk Assessment Guidance for Site Investigations and Remediation" for NMED tap water screening levels. N3B is updating its data screening software and procedures to incorporate both the updated NMWQCC groundwater standards and the NMED tap water screening levels. Upon completion of the upgrade, N3B will conduct a groundwater data review and resubmit revised reports for those samples collected on or after December 21, 2018, using the updated NMWQCC standards for groundwater and revised NMED screening levels for tap water.

1-Day Notification

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 Consent Order (based on samples collected since June 14, 2007).

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.

15-Day Notification

The required information for the contaminants and other chemical parameters that meet the five reporting criteria requiring written notification within 15 days is given 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) 665-5046 (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 April 2019 That Meet Notification Requirements (EM2019-0142)

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

cc (letter with enclosure[s] emailed):
L. King, EPA Region 6, Dallas, TX
R. Martinez, San Ildefonso Pueblo, NM
D. Chavarria, Santa Clara Pueblo, NM
D. Gomez, Los Alamos County, Los Alamos, NM
M. Hunter, NMED
S. Yanicak, NMED
J. Buckley, LANL
L. Dale, LANL
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W. Mairson, LANL
J. Meadows, LANL
E. Torres, LANL
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N3B Records
Public Reading Room (EPRR)
PRS Website

EM-LA-40AD-00429

SUMMARY OF GROUNDWATER DATA REVIEWED IN APRIL 2019
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 2019 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 03-19 Groundwater Report, presents results since June 14, 2007, that met the five reporting criteria as specified in the 2016 Consent Order. Table 2, NMED 03-19 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 which 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 which 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
- 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 2018 EPA regional screening levels for tap water and the NMWQCC groundwater standards and NMED screening levels for tap water published before December 21, 2018.

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” (February 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 two through eight in both tables provide summary statistics for metals or 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:

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 or unfiltered

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 qualifiers 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

Table 1: NMED 03-19 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
C1	16	21	5/19/2010	0.55	0.55	0.55	1	Water Canyon	Regional	R-30	1140	2/6/2019	REG[a]	UF[b]	INIT[c]	SVOC[d]	Bis(2-ethylhexyl)phthalate	117-81-7	0.55	1	EPA MCL[e]	6	0.1	0.3	µg/L	1	J[f]	J[g]	J_LAB[h]	SW-846:8270D	GELC[i]	The compound was not found in its field duplicate sample.
C1	1	1	2/13/2019	0.33	0.33	0.33	1	Water Canyon	Regional	R-69 S2	1375.5	2/13/2019	REG	UF	INIT	VOC[j]	Tetrachloroethene	127-18-4	0.33	1	EPA MCL	5	0.1	0.3	µg/L	1	J	J	J_LAB	SW-846:8260B	GELC	New well
C1	1	2	1/31/2019	1.88	2.87	2.375	2	Water Canyon	Regional Top	R-69 S1	1310	1/31/2019	FD[k]	UF	INIT	VOC	Acetone	67-64-1	2.87	1.2	NMED A1 TAP SCRN LVL[l]	14100	0	1.5	µg/L	1	J	J	J_LAB	SW-846:8260B	GELC	New well
C1	1	2	1/31/2019	1.88	2.87	2.375	2	Water Canyon	Regional Top	R-69 S1	1310	1/31/2019	REG	UF	INIT	VOC	Acetone	67-64-1	1.88	0.8	NMED A1 TAP SCRN LVL	14100	0	1.5	µg/L	1	J	J	J_LAB	SW-846:8260B	GELC	New well
C1	1	2	1/31/2019	3.65	3.65	3.65	1	Water Canyon	Regional Top	R-69 S1	1310	1/31/2019	FD	UF	INIT	SVOC	Bis(2-ethylhexyl)phthalate	117-81-7	3.65	1	EPA MCL	6	0.6	0.31	µg/L	1		NQ[m]	NQ[n]	SW-846:8270D	GELC	New well, the compound was not found in the regular sample.
C2	18	26	5/19/2010	82.9	211	124	26	Water Canyon	Regional	R-30	1140	2/6/2019	FD	F[o]	INIT	GENINORG[p]	Total Dissolved Solids	TDS[q]	211	1.7	LANL Reg BG LVL[r]	161	1.3	3.4	mg/L	1		NQ	NQ	EPA:160.1	GELC	
C2	1	1	2/13/2019	0.801	0.801	0.801	1	Water Canyon	Regional	R-69 S2	1375.5	2/13/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	0.801	1	LANL Reg BG LVL	0.769	1	0.02	mg/L	1		NQ	NQ	EPA:353.2	GELC	
C3	1	2	1/31/2019	3.65	3.65	3.65	1	Water Canyon	Regional Top	R-69 S1	1310	1/31/2019	FD	UF	INIT	SVOC	Bis(2-ethylhexyl)phthalate	117-81-7	3.65	1	EPA MCL	6	0.6	0.31	µg/L	1		NQ	NQ	SW-846:8270D	GELC	New well, the compound was not found in the regular sample.
C4	45	52	3/5/2009	6.1	47.4	18.1	51	Mortandad Canyon	Regional Deep	R-45 S2	974.9	2/12/2019	REG	F	INIT	METALS	Chromium	Cr	32.2	1.8	LANL Reg BG LVL	7.48	4.3	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	58	68	5/17/2005	2.27	7.43	5.25	68	Sandia Canyon	Regional Top	R-11	855	2/14/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	4.11	0.8	LANL Reg BG LVL	0.769	5.3	0.17	mg/L	10		NQ	NQ	EPA:353.2	GELC	
C4	58	68	5/17/2005	5.95	15.4	10.2	68	Sandia Canyon	Regional Top	R-11	855	2/14/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	9.97	1	LANL Reg BG LVL	4.59	2.2	0.13	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	46	47	8/30/2007	68	389	346	47	Sandia Canyon	Regional Top	R-35a	1013.1	2/15/2019	REG	F	INIT	METALS	Barium	Ba	348	1	LANL Reg BG LVL	38.1	9.1	1	µg/L	1		NQ	NQ	SW-846:6010C	GELC	
C4	45	46	8/30/2007	5.97	7.31	6.42	46	Sandia Canyon	Regional Top	R-35a	1013.1	2/15/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	6.42	1	LANL Reg BG LVL	2.7	2.4	0.07	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	48	49	2/17/2009	1.99	14.9	2.35	49	Mortandad Canyon	Regional Top	R-44 S1	895	2/11/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	14.9	6.3	LANL Reg BG LVL	2.7	5.5	0.13	mg/L	2		NQ	NQ	EPA:300.0	GELC	
C4	48	49	2/17/2009	0.123	2.3	1.135	48	Mortandad Canyon	Regional Top	R-44 S1	895	2/11/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.3	2	LANL Reg BG LVL	0.769	3	0.09	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	48	49	2/17/2009	2.76	14.4	3.41	49	Mortandad Canyon	Regional Top	R-44 S1	895	2/11/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	14.4	4.2	LANL Reg BG LVL	4.59	3.1	0.13	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	46	52	2/28/2009	8.4	50.7	36.25	52	Mortandad Canyon	Regional Top	R-45 S1	880	2/12/2019	REG	F	INIT	METALS	Chromium	Cr	37.4	1	LANL Reg BG LVL	7.48	5	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	46	48	2/28/2009	0.256	3.47	2.875	48	Mortandad Canyon	Regional Top	R-45 S1	880	2/12/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.63	0.9	LANL Reg BG LVL	0.769	3.4	0.09	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	48	54	3/6/2010	4.68	16.3	8.64	54	Mortandad Canyon	Regional Top	R-50 S1	1077	2/20/2019	REG	F	INIT	GENINORG	Chloride	Cl(-1)	16.3	1.9	LANL Reg BG LVL	2.7	6	0.13	mg/L	2		NQ	NQ	EPA:300.0	GELC	
C4	48	56	3/6/2010	49.8	150	101.4	56	Mortandad Canyon	Regional Top	R-50 S1	1077	2/20/2019	REG	F	INIT	METALS	Chromium	Cr	63.7	0.6	LANL Reg BG LVL	7.48	8.5	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	

Table 1: NMED 03-19 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	48	55	3/6/2010	0.398	2.72	1.85	55	Mortandad Canyon	Regional Top	R-50 S1	1077	2/20/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.56	1.4	LANL Reg BG LVL	0.769	3.3	0.09	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	48	54	3/6/2010	7.22	18.3	12.8	54	Mortandad Canyon	Regional Top	R-50 S1	1077	2/20/2019	REG	F	INIT	GENINORG	Sulfate	SO4(-2)	18.3	1.4	LANL Reg BG LVL	4.59	4	0.13	mg/L	1		NQ	NQ	EPA:300.0	GELC	
C4	32	38	5/20/2011	2.03	23.3	19.4	37	Mortandad Canyon	Regional Top	R-61 S1	1125	2/21/2019	REG	F	INIT	METALS	Chromium	Cr	20.5	1.1	LANL Reg BG LVL	7.48	2.7	3	µg/L	1		NQ	NQ	SW-846:6020	GELC	
C4	32	38	5/20/2011	0.427	2.64	1.935	38	Mortandad Canyon	Regional Top	R-61 S1	1125	2/21/2019	REG	F	INIT	GENINORG	Nitrate-Nitrite as Nitrogen	NO3+NO2-N	2.23	1.2	LANL Reg BG LVL	0.769	2.9	0.09	mg/L	5		NQ	NQ	EPA:353.2	GELC	
C4	31	37	5/20/2011	2.96	16.2	10.7	37	Mortandad Canyon	Regional Top	R-61 S1	1125	2/21/2019	REG	F	INIT	GENINORG	Perchlorate	ClO4	13.3	1.2	LANL Reg BG LVL	0.414	32.1	0.5	µg/L	10		NQ	NQ	SW-846:6850	GELC	

[a] REG = Regular sample.

[b] UF = Unfiltered.

[c] INIT = Primary sample.

[d] SVOC = Semivolatile organic compound.

[e] EPA MCL = U.S. Environmental Protection Agency maximum contaminant level.

[f] J (Lab Qualifier) = The associated numerical value is an estimated quantity.

[g] J (Validation Qualifier) = The analyte is classified as detected, but the reported concentration value is expected to be more uncertain than usual.

[h] J_LAB (Validation Reason Code) = The analytical laboratory qualified the detected result as estimated (J) because the result was less the practical quantitation limit (PQL) but greater than the method detection limit (MDL).

[i] GELC = General Engineering Laboratories, Inc., Charleston, SC.

[j] VOC = Volatile organic compound.

[k] FD = Field duplicate.

[l] NMED A1 TAP SCRN LVL = Updated to March 2018 NMED Soil Screening Levels Summary (SSLs) Table A-1 values for tap water screening level.

[m] NQ (Validation Qualifier) = No validation qualifier flag is associated with this result, and the analyte is classified as detected.

[n] 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.

[o] F = Filtered.

[p] GENINORG = General inorganic.

[q] TDS = Total dissolved solid.

[r] LANL Reg BG LV = Los Alamos National Laboratory regional background level.

Table 2: NMED 03-19 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 Qual Code	Validation Flag	Validation Reason Code	Anyl Meth Code	Lab Code	Comment
XC2scr	1	1	2/13/2019	0.073	0.073	0.073	1		Regional	R-69 S2	1375.5	2/13/2019	REG[a]	F[b]	INIT[c]	GENINORG[d]	Bromide	Br(-1)	0.073	1	Reg-Scr_95	0.067	1.1	0.07	mg/L	1	J[e]	J[f]	J_LAB[g]	EPA:300.0	GELC[h]	New well
XC2scr	1	2	1/31/2019	0.0688	0.0782	0.0735	2		Regional Top	R-69 S1	1310	1/31/2019	FD[i]	F	INIT	GENINORG	Bromide	Br(-1)	0.0688	0.9	Reg-Scr_95	0.067	1	0.07	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	New well
XC2scr	1	2	1/31/2019	0.0688	0.0782	0.0735	2		Regional Top	R-69 S1	1310	1/31/2019	REG	F	INIT	GENINORG	Bromide	Br(-1)	0.0782	1.1	Reg-Scr_95	0.067	1.2	0.07	mg/L	1	J	J	J_LAB	EPA:300.0	GELC	New well
XC2scr	1	2	1/31/2019	0.331	0.352	0.3415	2		Regional Top	R-69 S1	1310	1/31/2019	FD	F	INIT	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.352	1	Reg-Scr_95	0.0822	4.3	0.02	mg/L	1		NQ[j]	NQ[k]	EPA:365.4	GELC	New well
XC2scr	1	2	1/31/2019	0.331	0.352	0.3415	2		Regional Top	R-69 S1	1310	1/31/2019	REG	F	INIT	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.331	1	Reg-Scr_95	0.0822	4	0.02	mg/L	1		NQ	NQ	EPA:365.4	GELC	New well
XC4scr	32	38	5/20/2011	0.0531	11.8	0.737	35	Mortandad Canyon	Regional Top	R-61 S1	1125	2/21/2019	REG	F	INIT	GENINORG	Total Phosphate as Phosphorus	PO4-P	0.419	0.6	Reg-Scr_95	0.0822	5.1	0.02	mg/L	1		J+[l]	I4a[m]	EPA:365.4	GELC	

[a] REG = Regular sample.

[b] F = Filtered.

[c] INIT = Primary sample.

[d] GENINORG = General inorganic.

[e] J (Lab Qualifier) = The associated numerical value is an estimated quantity.

[f] J (Validation Qualifier) = The analyte is classified as detected but the reported concentration value is expected to be more uncertain than usual.

[g] J_LAB (Validation Reason Code) = The analytical laboratory qualified the detected result as estimated (J) because the result was less the practical quantitation limit (PQL) but greater than the method detection limit (MDL).

[h] GELC = General Engineering Laboratories, Inc., Charleston, SC.

[i] FD = Field Duplicate.

[j] NQ (Validation Qualifier) = No validation qualifier flag is associated with this result, and the analyte is classified as detected.

[k] 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.

[l] J+ = The analyte is classified as detected, but the reported concentration value is expected to be more uncertain than usual with a potential positive bias.

[m] I4a = The affected analyte is considered estimated and biased high because this analyte was identified in the method blank, but the sample result was >5 times the concentration of the related analyte in the method blank.