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GROUND WATER
QUALITY BUREAU

Environmental Management
Los Alamos Field Office
1200 Trinity Drive, Suite 400
Los Alamos, New Mexico 87544
(240) 562-1122

Date: December 1, 2021
Refer To: N3B-2021-0430

Justin Ball, Acting Chief
Ground Water Quality Bureau
New Mexico Environment Department
1190 S. St. Francis Drive
P.O. Box 5469
Santa Fe, NM 87502-5469

Subject: Submittal of the Quarterly Report for the Discharge of Treated Groundwater to the Regional Aquifer under Discharge Permit 1835, Calendar Year 2021 Quarter 3, Class V Underground Injection Control Wells

Dear Mr. Ball:

On August 31, 2016, the New Mexico Environment Department (NMED) issued Discharge Permit 1835 (DP-1835) to the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS) for the discharge of treated groundwater to the regional aquifer from up to six Class V underground injection control (UIC) wells. On July 21, 2017, NMED approved minor updates to DP-1835. During the second quarter of calendar year (CY) 2018, ownership of the discharge permit transferred to Newport News Nuclear BWXT-Los Alamos, LLC (N3B) from LANS. Pursuant to Condition No. 10 of the above-referenced discharge permit, DOE/N3B are required to submit quarterly reports for the previous quarter to document the following:

1. influent and discharge volumes from the treatment systems,
2. quarterly groundwater and treated effluent sampling results, and
3. operations and maintenance activities.

Pursuant to Conditions No. 11, 12, and 13 of DP-1835, the quarterly reports shall also contain general information, performance information, and monitoring data for treated effluent from each ion exchange treatment system. Condition No. 10 requires submission of a quarterly report to NMED by December 1 for the July 1 through September 30 discharge period.

During the CY 2021 Quarter 3 reporting period for DP-1835, discharge of treated groundwater to the regional aquifer occurred at five UIC wells: CrIN-1 through CrIN-5. Groundwater originated predominantly from five extraction wells: CrEX-1 through CrEX-5. The groundwater was treated

by chromium treatment unit A (CTUA) and chromium treatment unit C (CTUC) before injection at the UIC wells.

The enclosed "Quarterly Report for the Discharge of Treated Groundwater to the Regional Aquifer under Discharge Permit 1835, Calendar Year 2021 Quarter 3," provides the information required under DP-1835 for this reporting period.

If you have questions, please contact Christian Maupin at (505) 695-4281 (christian.maupin@em-la.doe.gov) or Cheryl Rodriguez at (505) 414-0450 (cheryl.rodriguez@em.doe.gov).

Sincerely,

Joseph Murdock
Program Manager
Environment, Safety and Health
N3B-Los Alamos

Sincerely,

ARTURO DURAN Digitally signed by ARTURO DURAN
Date: 2021.12.01 09:03:29 -07'00'

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

Enclosure(s):
1. Two hard copies with electronic files – Quarterly Report for the Discharge of Treated Groundwater to the Regional Aquifer under Discharge Permit 1835, Calendar Year 2021 Quarter 3 (EM2021-0700)

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
Chris Catechis, NMED-DOE-OB/-RPD
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December 2021
EM2021-0700

Quarterly Report for the Discharge of Treated Groundwater to the Regional Aquifer under Discharge Permit 1835, Calendar Year 2021 Quarter 3

N3B Los Alamos

CONTENTS

Figures

Tables

1.0 INTRODUCTION

On August 31, 2016, the New Mexico Environment Department (NMED) issued Discharge Permit 1835 (DP-1835) to the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS) for the discharge of treated groundwater to the regional aquifer through Class V underground injection control (UIC) wells. On July 21, 2017, NMED approved minor updates to DP-1835. During Quarter 2 of calendar year (CY) 2018, ownership of the discharge permit transferred from LANS to Newport News Nuclear BWXT-Los Alamos, LLC (N3B). Pursuant to Condition No. 10 of the above-referenced discharge permit, DOE and N3B are required to submit quarterly reports.

During the 2021 Quarter 3 reporting period for DP-1835, discharge of treated groundwater to the regional aquifer occurred at five UIC wells: CrIN-1 through CrIN-5. Groundwater originated predominantly from five extraction wells: CrEX-1 through CrEX-5. The groundwater was treated by chromium treatment unit A (CTUA) and chromium treatment unit C (CTUC) before injection at the UIC wells.

Condition No. 10 of DP-1835 requires submission of a quarterly report to NMED by December 1 for the July 1 through September 30 discharge period. Several conditions within the permit identify information to be submitted in the quarterly report, as follows:

1. Influent and discharge volumes for the ion exchange (IX) treatment systems (Condition No. 10)
2. Quarterly treated effluent sampling results from each IX treatment system (Conditions No. 10 and 13)
3. Quarterly depth-to-groundwater and groundwater-quality sampling results (Conditions No. 10 and 14)
4. Any operations/maintenance activities performed (Condition No. 10)
5. Any periodic test of mechanical integrity conducted (Condition No. 11)
6. Any replacement of primary or secondary IX vessels or associated treatment system infrastructure (Condition No. 11)
7. Any well workovers conducted (Condition No. 11)
8. Any additional operational changes with the potential to markedly affect the discharge (Condition No. 11)
9. Monthly average, maximum, and minimum values for flow rate and volume of treated effluent transferred to each UIC well (Condition No. 12)
10. Total monthly volume of treated effluent transferred to each UIC well (Condition No. 12)
11. Monthly average, maximum, and minimum values of injection water level (pressure head) above static level for each UIC well (Condition No. 12)
12. Daily volume injected at each UIC well (Condition No. 12)
13. Daily volume pumped from each extraction well (Condition No. 12)
14. Facility layout map (Condition No. 14)
15. Groundwater elevation contour map (Condition No. 15)

This report addresses each of these requirements.

2.0 REQUIREMENTS

2.1 Influent and Discharge Volumes for the Ion Exchange Treatment Systems (Requirement 1)

Table 2.1-1 provides the influent and discharge volumes for IX treatment systems during 2021 Quarter 3 for activities completed under DP-1835. As previously identified, injection occurred at UIC wells CrIN-1 through CrIN-5 during the quarter. Discharge, which originated from extraction wells CrEX-1 through CrEX-5, was treated with treatment units CTUA and CTUC.

Table 2.1-1
Total Influent and Discharge Volumes
for IX Treatment Systems – CY 2021 Quarter 3, DP-1835

Treatment Unit	Influent Volume[a] (gal.)	Effluent Volume[b] (gal.)
CTUA	28,697,465	16,273,840
CTUC		12,379,662

Note: Individual flow meter accurate to ±5%.

[a] Influent volume based on CrEX-1 through CrEX-5 extraction volumes.

[b] Effluent volume based on CTUA and CTUC flow-meter readings.

2.2 Quarterly Treated Effluent Sampling Results from Each IX Treatment System (Requirement 2)

Treated effluent analytical results from samples collected during 2021 Quarter 3 for activities completed under DP-1835 are summarized in Table 2.2-1. No sample results for total chromium, nitrate, perchlorate, sulfate, fluoride, chloride, or total dissolved solids exceeded 90% of the numeric standards of 20.6.2.3103 New Mexico Administrative Code (NMAC) or, for constituents not listed in 20.6.2.3103 NMAC, 90% of the numeric screening levels established for tap water in Table A-1 of the 2019 NMED "Risk Assessment Guidance for Site Investigations and Remediation Volume 1, Soil Screening Guidance for Human Health Risk Assessments" (NMED 2019). The 90% values for these seven analytes are as follows:

- Chromium 45 µg/L
- Nitrate 9 mg/L
- Perchlorate 12.4 µg/L
- Sulfate 540 mg/L
- Fluoride 1.44 mg/L
- Chloride 225 mg/L
- Total dissolved solids 900 mg/L

Table 2.2-1
Treated Effluent Analytical Results Summary Table – CY 2021 Quarter 3, DP-1835

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	90% of Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-229164	7/6/2021	Chloride	17.5	mg/L	225	n/a[b]	Y[c]	Y[d]	0.335
CTUA	CTUA-21-229165	7/13/2021	Chloride	18.4	mg/L	225	n/a	Y	Y	0.335
CTUA	CTUA-21-229166	7/20/2021	Chloride	19	mg/L	225	n/a	Y	Y	0.335
CTUA	CTUA-21-229167	7/26/2021	Chloride	22.9	mg/L	225	n/a	Y	Y	0.335
CTUA	CTUA-21-229168	8/3/2021	Chloride	21.7	mg/L	225	n/a	Y	Y	0.335
CTUA	CTUA-21-229169	8/10/2021	Chloride	21.2	mg/L	225	n/a	Y	Y	0.335
CTUA	CTUA-21-229161	8/17/2021	Chloride	19.4	mg/L	225	n/a	Y	Y	0.335
CTUA	CTUA-21-229170	8/24/2021	Chloride	31.6	mg/L	225	n/a	Y	Y	0.335
CTUA	CTUA-21-229171	8/31/2021	Chloride	20.3	mg/L	225	n/a	Y	Y	0.335
CTUA	CTUA-21-229172	9/7/2021	Chloride	20.6	mg/L	225	n/a	Y	Y	0.335
CTUA	CTUA-21-229173	9/14/2021	Chloride	18.8	mg/L	225	n/a	Y	Y	0.335
CTUA	CTUA-21-229175	9/21/2021	Chloride	18.8	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229261	7/6/2021	Chloride	17.6	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229262	7/13/2021	Chloride	18.3	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229263	7/20/2021	Chloride	18.8	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229264	7/26/2021	Chloride	74.4	mg/L	225	n/a	Y	Y	1.34
CTUC	CTUC-21-229265	8/3/2021	Chloride	21.4	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229266	8/10/2021	Chloride	21.3	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229267	8/17/2021	Chloride	19.4	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229268	8/24/2021	Chloride	20	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229269	8/31/2021	Chloride	20.4	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229270	9/7/2021	Chloride	21.1	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229271	9/14/2021	Chloride	19	mg/L	225	n/a	Y	Y	0.335
CTUC	CTUC-21-229273	9/21/2021	Chloride	18.8	mg/L	225	n/a	Y	Y	0.335

Table 2.2-1 (continued)

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	90% of Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-229164	7/6/2021	Chromium	3	µg/L	45	U[e]	N[f]	Y	3
CTUA	CTUA-21-229165	7/13/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229166	7/20/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229167	7/26/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229168	8/3/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229169	8/10/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229161	8/17/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229170	8/24/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229171	8/31/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229172	9/7/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229173	9/14/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229175	9/21/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229261	7/6/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229262	7/13/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229263	7/20/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229264	7/26/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229265	8/3/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229266	8/10/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229267	8/17/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229268	8/24/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229269	8/31/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229270	9/7/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229271	9/14/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUC	CTUC-21-229273	9/21/2021	Chromium	3	µg/L	45	U	N	Y	3
CTUA	CTUA-21-229164	7/6/2021	Fluoride	0.258	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229165	7/13/2021	Fluoride	0.264	mg/L	1.44	n/a	Y	Y	0.033

Table 2.2-1 (continued)

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	90% of Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-229166	7/20/2021	Fluoride	0.295	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229167	7/26/2021	Fluoride	0.263	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229168	8/3/2021	Fluoride	0.387	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229169	8/10/2021	Fluoride	0.266	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229161	8/17/2021	Fluoride	0.183	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229170	8/24/2021	Fluoride	0.365	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229171	8/31/2021	Fluoride	0.342	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229172	9/7/2021	Fluoride	0.242	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229173	9/14/2021	Fluoride	0.25	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229175	9/21/2021	Fluoride	0.49	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229261	7/6/2021	Fluoride	0.255	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229262	7/13/2021	Fluoride	0.263	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229263	7/20/2021	Fluoride	0.262	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229264	7/26/2021	Fluoride	0.289	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229265	8/3/2021	Fluoride	0.411	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229266	8/10/2021	Fluoride	0.265	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229267	8/17/2021	Fluoride	0.182	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229268	8/24/2021	Fluoride	0.246	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229269	8/31/2021	Fluoride	0.365	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229270	9/7/2021	Fluoride	0.243	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229271	9/14/2021	Fluoride	0.25	mg/L	1.44	n/a	Y	Y	0.033
CTUC	CTUC-21-229273	9/21/2021	Fluoride	0.43	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CTUA-21-229164	7/6/2021	Nitrate-Nitrite as Nitrogen	3.48	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229165	7/13/2021	Nitrate-Nitrite as Nitrogen	3.61	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229166	7/20/2021	Nitrate-Nitrite as Nitrogen	3.56	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229167	7/26/2021	Nitrate-Nitrite as Nitrogen	6.08	mg/L	9	n/a	Y	Y	0.17

Table 2.2-1 (continued)

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	90% of Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-229168	8/3/2021	Nitrate-Nitrite as Nitrogen	3.8	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229169	8/10/2021	Nitrate-Nitrite as Nitrogen	3.9	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229161	8/17/2021	Nitrate-Nitrite as Nitrogen	3.54	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229170	8/24/2021	Nitrate-Nitrite as Nitrogen	2.81	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229171	8/31/2021	Nitrate-Nitrite as Nitrogen	3.67	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229172	9/7/2021	Nitrate-Nitrite as Nitrogen	3.65	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229173	9/14/2021	Nitrate-Nitrite as Nitrogen	3.72	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229175	9/21/2021	Nitrate-Nitrite as Nitrogen	3.64	mg/L	9	n/a	Y	Y	0.085
CTUC	CTUC-21-229261	7/6/2021	Nitrate-Nitrite as Nitrogen	3.58	mg/L	9	n/a	Y	Y	0.17
CTUC	CTUC-21-229262	7/13/2021	Nitrate-Nitrite as Nitrogen	3.62	mg/L	9	n/a	Y	Y	0.17
CTUC	CTUC-21-229263	7/20/2021	Nitrate-Nitrite as Nitrogen	3.61	mg/L	9	n/a	Y	Y	0.17
CTUC	CTUC-21-229264	7/26/2021	Nitrate-Nitrite as Nitrogen	0.017	mg/L	9	U	N	Y	0.017
CTUC	CTUC-21-229265	8/3/2021	Nitrate-Nitrite as Nitrogen	3.84	mg/L	9	n/a	Y	Y	0.17
CTUC	CTUC-21-229266	8/10/2021	Nitrate-Nitrite as Nitrogen	3.93	mg/L	9	n/a	Y	Y	0.17
CTUC	CTUC-21-229267	8/17/2021	Nitrate-Nitrite as Nitrogen	3.68	mg/L	9	n/a	Y	Y	0.17
CTUC	CTUC-21-229268	8/24/2021	Nitrate-Nitrite as Nitrogen	3.59	mg/L	9	n/a	Y	Y	0.17
CTUC	CTUC-21-229269	8/31/2021	Nitrate-Nitrite as Nitrogen	4.08	mg/L	9	n/a	Y	Y	0.17
CTUC	CTUC-21-229270	9/7/2021	Nitrate-Nitrite as Nitrogen	3.68	mg/L	9	n/a	Y	Y	0.17
CTUC	CTUC-21-229271	9/14/2021	Nitrate-Nitrite as Nitrogen	3.68	mg/L	9	n/a	Y	Y	0.17
CTUC	CTUC-21-229273	9/21/2021	Nitrate-Nitrite as Nitrogen	3.69	mg/L	9	n/a	Y	Y	0.17
CTUA	CTUA-21-229164	7/6/2021	Perchlorate	0.095	µg/L	12.4	J[g]	Y	Y	0.05
CTUA	CTUA-21-229165	7/13/2021	Perchlorate	0.081	µg/L	12.4	J	Y	Y	0.05
CTUA	CTUA-21-229166	7/20/2021	Perchlorate	0.088	µg/L	12.4	J	Y	Y	0.05
CTUA	CTUA-21-229167	7/26/2021	Perchlorate	0.508	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CTUA-21-229168	8/3/2021	Perchlorate	0.828	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CTUA-21-229169	8/10/2021	Perchlorate	0.841	µg/L	12.4	n/a	Y	Y	0.05

Table 2.2-1 (continued)

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	90% of Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-229161	8/17/2021	Perchlorate	0.833	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CTUA-21-229170	8/24/2021	Perchlorate	0.175	µg/L	12.4	J	Y	Y	0.05
CTUA	CTUA-21-229171	8/31/2021	Perchlorate	0.372	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CTUA-21-229172	9/7/2021	Perchlorate	0.383	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CTUA-21-229173	9/14/2021	Perchlorate	0.375	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CTUA-21-229175	9/21/2021	Perchlorate	0.371	µg/L	12.4	n/a	Y	Y	0.05
CTUC	CTUC-21-229261	7/6/2021	Perchlorate	0.234	µg/L	12.4	n/a	Y	Y	0.05
CTUC	CTUC-21-229262	7/13/2021	Perchlorate	0.245	µg/L	12.4	n/a	Y	Y	0.05
CTUC	CTUC-21-229263	7/20/2021	Perchlorate	0.196	µg/L	12.4	J	Y	Y	0.05
CTUC	CTUC-21-229264	7/26/2021	Perchlorate	0.128	µg/L	12.4	J	Y	Y	0.05
CTUC	CTUC-21-229265	8/3/2021	Perchlorate	0.552	µg/L	12.4	n/a	Y	Y	0.05
CTUC	CTUC-21-229266	8/10/2021	Perchlorate	0.597	µg/L	12.4	n/a	Y	Y	0.05
CTUC	CTUC-21-229267	8/17/2021	Perchlorate	0.678	µg/L	12.4	n/a	Y	Y	0.05
CTUC	CTUC-21-229268	8/24/2021	Perchlorate	0.68	µg/L	12.4	n/a	Y	Y	0.05
CTUC	CTUC-21-229269	8/31/2021	Perchlorate	0.358	µg/L	12.4	n/a	Y	Y	0.05
CTUC	CTUC-21-229270	9/7/2021	Perchlorate	0.581	µg/L	12.4	n/a	Y	Y	0.05
CTUC	CTUC-21-229271	9/14/2021	Perchlorate	0.931	µg/L	12.4	n/a	Y	Y	0.05
CTUC	CTUC-21-229273	9/21/2021	Perchlorate	1	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CTUA-21-229164	7/6/2021	Sulfate	25.7	mg/L	540	n/a	Y	Y	0.665
CTUA	CTUA-21-229165	7/13/2021	Sulfate	26.4	mg/L	540	n/a	Y	Y	0.665
CTUA	CTUA-21-229166	7/20/2021	Sulfate	27.6	mg/L	540	n/a	Y	Y	0.665
CTUA	CTUA-21-229167	7/26/2021	Sulfate	0.166	mg/L	540	J	Y	Y	0.133
CTUA	CTUA-21-229168	8/3/2021	Sulfate	31.8	mg/L	540	n/a	Y	Y	0.665
CTUA	CTUA-21-229169	8/10/2021	Sulfate	31.2	mg/L	540	n/a	Y	Y	0.665
CTUA	CTUA-21-229161	8/17/2021	Sulfate	29.3	mg/L	540	n/a	Y	Y	0.665
CTUA	CTUA-21-229170	8/24/2021	Sulfate	0.211	mg/L	540	J	Y	Y	0.133

Table 2.2-1 (continued)

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	90% of Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-229171	8/31/2021	Sulfate	29.5	mg/L	540	n/a	Y	Y	0.665
CTUA	CTUA-21-229172	9/7/2021	Sulfate	30.7	mg/L	540	n/a	Y	Y	0.665
CTUA	CTUA-21-229173	9/14/2021	Sulfate	28.9	mg/L	540	n/a	Y	Y	0.665
CTUA	CTUA-21-229175	9/21/2021	Sulfate	27.8	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229261	7/6/2021	Sulfate	24.5	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229262	7/13/2021	Sulfate	26.6	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229263	7/20/2021	Sulfate	27.4	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229264	7/26/2021	Sulfate	0.133	mg/L	540	U	N	Y	0.133
CTUC	CTUC-21-229265	8/3/2021	Sulfate	30.7	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229266	8/10/2021	Sulfate	31.5	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229267	8/17/2021	Sulfate	29.2	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229268	8/24/2021	Sulfate	28.4	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229269	8/31/2021	Sulfate	24.8	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229270	9/7/2021	Sulfate	31.4	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229271	9/14/2021	Sulfate	29.2	mg/L	540	n/a	Y	Y	0.665
CTUC	CTUC-21-229273	9/21/2021	Sulfate	27.7	mg/L	540	n/a	Y	Y	0.665
CTUA	CTUA-21-229164	7/6/2021	Total Dissolved Solids	231	mg/L	900	n/a	Y	Y	3.4
CTUA	CTUA-21-229165	7/13/2021	Total Dissolved Solids	249	mg/L	900	n/a	Y	Y	3.4
CTUA	CTUA-21-229166	7/20/2021	Total Dissolved Solids	227	mg/L	900	n/a	Y	Y	3.4
CTUA	CTUA-21-229167	7/26/2021	Total Dissolved Solids	247	mg/L	900	n/a	Y	Y	3.4
CTUA	CTUA-21-229168	8/3/2021	Total Dissolved Solids	244	mg/L	900	n/a	Y	Y	3.4
CTUA	CTUA-21-229169	8/10/2021	Total Dissolved Solids	244	mg/L	900	n/a	Y	Y	3.4
CTUA	CTUA-21-229161	8/17/2021	Total Dissolved Solids	243	mg/L	900	n/a	Y	Y	3.4
CTUA	CTUA-21-229170	8/24/2021	Total Dissolved Solids	207	mg/L	900	n/a	Y	Y	3.4
CTUA	CTUA-21-229171	8/31/2021	Total Dissolved Solids	266	mg/L	900	n/a	Y	Y	3.4
CTUA	CTUA-21-229172	9/7/2021	Total Dissolved Solids	230	mg/L	900	n/a	Y	Y	3.4

Table 2.2-1 (continued)

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	90% of Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-229173	9/14/2021	Total Dissolved Solids	227	mg/L	900	n/a	Y	Y	3.4
CTUA	CTUA-21-229175	9/21/2021	Total Dissolved Solids	251	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229261	7/6/2021	Total Dissolved Solids	240	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229262	7/13/2021	Total Dissolved Solids	249	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229263	7/20/2021	Total Dissolved Solids	231	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229264	7/26/2021	Total Dissolved Solids	320	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229265	8/3/2021	Total Dissolved Solids	240	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229266	8/10/2021	Total Dissolved Solids	266	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229267	8/17/2021	Total Dissolved Solids	241	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229268	8/24/2021	Total Dissolved Solids	220	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229269	8/31/2021	Total Dissolved Solids	216	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229270	9/7/2021	Total Dissolved Solids	219	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229271	9/14/2021	Total Dissolved Solids	234	mg/L	900	n/a	Y	Y	3.4
CTUC	CTUC-21-229273	9/21/2021	Total Dissolved Solids	259	mg/L	900	n/a	Y	Y	3.4

[a] In accordance with Condition No. 13 of DP-1835, analysis of the treated effluent from each IX unit is required only once every month for the CY 2021 Quarter 3 reporting period.

[b] n/a = Not applicable: no qualifiers applied.

[c] In the Detect Flag column, Y = detected.

[d] In the Filtered column, Y = filtered.

[e] U = Analyte is classified as not detected.

[f] N = No (not detected).

[g] J = Analyte is classified as estimated.

The pilot-scale molasses and sodium dithionite amendment studies continued during 2021 Quarter 3. NMED determined that no permit was required for the deployment of these amendments, and these studies began with NMED conditional approvals during 2017 Quarter 4 (NMED 2017a, NMED 2017b). In accordance with the NMED conditional approvals, iron, manganese, and arsenic sampling in the treated water from extraction wells was completed, and the results were submitted in the quarterly monitoring reports under DP-1835. These results for 2021 Quarter 3 are provided in Table 2.2-2. No results for iron, manganese, or arsenic exceeded 90% of the numeric standards of 20.6.2.3103 NMAC. The 90% values for iron, manganese, and arsenic are 900 µg/L, 180 µg/L, and 9 µg/L, respectively.

DP-1835 Permit Condition No. 13 requires treated effluent to be analyzed annually for all water contaminants listed in 20.6.2.3103 NMAC and all toxic pollutants defined in 20.6.2.7.T(2) NMAC. The annual sample for 2021 was obtained during Quarter 3 and the results are provided in Table 2.2-3.

2.3 Quarterly Depth to Groundwater and Groundwater Quality Sampling Results (Requirement 3)

Depth to groundwater is expressed as the elevation of the groundwater above sea level. Figure 2.3-1 is the groundwater elevation map, and Table 2.3-1 provides the quarterly groundwater elevation measurements. An explanation of how the groundwater elevation map was generated is provided below. Quarterly groundwater analytical results from samples collected during 2021 Quarter 3 for the monitoring wells listed in Condition No. 14 are summarized in Table 2.3-2.

The regional aquifer beneath Los Alamos National Laboratory (LANL or the Laboratory) is a complex hydrogeological system. The shape of the regional water table beneath the Pajarito Plateau is predominantly controlled by the areas of recharge to the west (i.e., the flanks of the Sierra de los Valles and the Pajarito fault zone) and discharge to the east (i.e., the Rio Grande and the White Rock Canyon Springs). At a more local scale, such as the chromium plume area, the structure of the regional water table and groundwater flow is also expected to be influenced by

- local infiltration zones and recharge areas (e.g., beneath canyons),
- heterogeneity and anisotropy in the aquifer properties, and
- extraction and injection locations (municipal water-supply wells and chromium interim measure [IM] extraction/injection wells).

Long-term water-level data, contaminant transport observations (travel times and direction of migration), and calibrated model results are all lines of evidence that suggest that the water table was relatively flat in the area of the chromium plume before the implementation of CrEX extraction and CrIN injection wells. Steeper gradients are found to the west (far outside the boundary depicted in Figure 2.3-1) because of the mountain-front recharge and to the east toward the Rio Grande. The low ambient gradient in the chromium plume area could be related to the relatively high permeability of the Puye Formation and Miocene pumiceous sediments; anisotropy of the regional aquifer; localized recharge along the canyons above the regional aquifer, faults, or other lineaments that affect regional-scale hydraulic conductivity; and nearby water-supply pumping. Although it is difficult to infer absolute groundwater flow directions from the relatively flat contours in the chromium plume area, groundwater elevation data and contaminant transport observations indicate that groundwater flows generally toward the east-southeast.

Table 2.2-2
Treated Effluent Analytical Results Summary Table Related to Molasses and Sodium Dithionite Pilot Studies under NMED Conditional Approval – CY 2021 Quarter 3, DP-1835

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	90% of Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-229164	7/6/2021	Arsenic	2	µg/L	9	U[b]	N[c]	Y[d]	2
CTUA	CTUA-21-229165	7/13/2021	Arsenic	3.41	µg/L	9	J[e]	Y[f]	Y	2
CTUA	CTUA-21-229166	7/20/2021	Arsenic	3.33	µg/L	9	J	Y	Y	2
CTUA	CTUA-21-229167	7/26/2021	Arsenic	2	µg/L	9	U	N	Y	2
CTUA	CTUA-21-229168	8/3/2021	Arsenic	3.03	µg/L	9	J	Y	Y	2
CTUA	CTUA-21-229169	8/10/2021	Arsenic	3.94	µg/L	9	J	Y	Y	2
CTUA	CTUA-21-229161	8/17/2021	Arsenic	2.48	µg/L	9	J	Y	Y	2
CTUA	CTUA-21-229170	8/24/2021	Arsenic	2	µg/L	9	U	N	Y	2
CTUA	CTUA-21-229171	8/31/2021	Arsenic	2.13	µg/L	9	J	Y	Y	2
CTUA	CTUA-21-229172	9/7/2021	Arsenic	2.22	µg/L	9	J	Y	Y	2
CTUA	CTUA-21-229173	9/14/2021	Arsenic	2	µg/L	9	U	N	Y	2
CTUA	CTUA-21-229175	9/21/2021	Arsenic	2.03	µg/L	9	J	Y	Y	2
CTUC	CTUC-21-229261	7/6/2021	Arsenic	2	µg/L	9	U	N	Y	2
CTUC	CTUC-21-229262	7/13/2021	Arsenic	3.38	µg/L	9	J	Y	Y	2
CTUC	CTUC-21-229263	7/20/2021	Arsenic	3.4	µg/L	9	J	Y	Y	2
CTUC	CTUC-21-229264	7/26/2021	Arsenic	2	µg/L	9	U	N	Y	2
CTUC	CTUC-21-229265	8/3/2021	Arsenic	2.53	µg/L	9	J	Y	Y	2
CTUC	CTUC-21-229266	8/10/2021	Arsenic	3.27	µg/L	9	J	Y	Y	2
CTUC	CTUC-21-229267	8/17/2021	Arsenic	2.37	µg/L	9	J	Y	Y	2
CTUC	CTUC-21-229268	8/24/2021	Arsenic	2.53	µg/L	9	J	Y	Y	2
CTUC	CTUC-21-229269	8/31/2021	Arsenic	2.58	µg/L	9	J	Y	Y	2
CTUC	CTUC-21-229270	9/7/2021	Arsenic	2.32	µg/L	9	J	Y	Y	2
CTUC	CTUC-21-229271	9/14/2021	Arsenic	2	µg/L	9	U	N	Y	2
CTUC	CTUC-21-229273	9/21/2021	Arsenic	2.19	µg/L	9	J	Y	Y	2
CTUA	CTUA-21-229164	7/6/2021	Iron	30	µg/L	900	U	N	Y	30

Table 2.2-2 (continued)

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	90% of Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-229165	7/13/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229166	7/20/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229167	7/26/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229168	8/3/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229169	8/10/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229161	8/17/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229170	8/24/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229171	8/31/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229172	9/7/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229173	9/14/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229175	9/21/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229261	7/6/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229262	7/13/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229263	7/20/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229264	7/26/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229265	8/3/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229266	8/10/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229267	8/17/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229268	8/24/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229269	8/31/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229270	9/7/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229271	9/14/2021	Iron	30	µg/L	900	U	N	Y	30
CTUC	CTUC-21-229273	9/21/2021	Iron	30	µg/L	900	U	N	Y	30
CTUA	CTUA-21-229164	7/6/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUA	CTUA-21-229165	7/13/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUA	CTUA-21-229166	7/20/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUA	CTUA-21-229167	7/26/2021	Manganese	2	µg/L	180	U	N	Y	2

Table 2.2-2 (continued)

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	90% of Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-229168	8/3/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUA	CTUA-21-229169	8/10/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUA	CTUA-21-229161	8/17/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUA	CTUA-21-229170	8/24/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUA	CTUA-21-229171	8/31/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUA	CTUA-21-229172	9/7/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUA	CTUA-21-229173	9/14/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUA	CTUA-21-229175	9/21/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229261	7/6/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229262	7/13/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229263	7/20/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229264	7/26/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229265	8/3/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229266	8/10/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229267	8/17/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229268	8/24/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229269	8/31/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229270	9/7/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229271	9/14/2021	Manganese	2	µg/L	180	U	N	Y	2
CTUC	CTUC-21-229273	9/21/2021	Manganese	2	µg/L	180	U	N	Y	2

[a] In accordance with Condition No. 13 of DP-1835, analysis of the treated effluent from each IX unit is required only once every month for the CY 2021 Quarter 3 reporting period.

[b] U = Analyte is classified as not detected.

[c] N = No (not detected).

[d] In the Filtered column, Y= filtered.

[e] J = Analyte is classified as estimated.

[f] In the Detect Flag column, Y = detected.

Table 2.2-3
Treated Effluent Analytical Results Summary Table Annual Sample – CY 2021 Quarter 3, DP-1835

Location ID	Sample ID	Sample Date[a]	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-234713	9/28/21	Antimony	1	µg/L	U[b]	N[c]	Y[d]	1
CTUA	CTUA-21-234713	9/28/21	Arsenic	2	µg/L	U	N	Y	2
CTUA	CTUA-21-234713	9/28/21	Barium	51.5	µg/L	n/a[e]	Y[f]	Y	1
CTUA	CTUA-21-234713	9/28/21	Beryllium	1	µg/L	U	N	Y	1
CTUA	CTUA-21-234713	9/28/21	Cadmium	0.3	µg/L	U	N	Y	0.3
CTUA	CTUA-21-234713	9/28/21	Chromium	3	µg/L	U	N	Y	3
CTUA	CTUA-21-234714	9/28/21	Cyanide (Total)	0.00167	mg/L	U	N	N[g]	1.67
CTUA	CTUA-21-234713	9/28/21	Fluoride	0.426	mg/L	n/a	Y	Y	0.033
CTUA	CTUA-21-234713	9/28/21	Lead	0.5	µg/L	U	N	Y	0.5
CTUA	CTUA-21-234713	9/28/21	Mercury	0.067	µg/L	U	N	N	0.067
CTUA	CTUA-21-234714	9/28/21	Nitrate	3.48	mg/L	n/a	Y	N	0.033
CTUA	CTUA-21-234714	9/28/21	Nitrite	0.033	mg/L	U	N	N	0.033
CTUA	CTUA-21-234713	9/28/21	Selenium	1.5	µg/L	U	N	Y	1.5
CTUA	CTUA-21-234713	9/28/21	Silver	0.3	µg/L	U	N	Y	0.3
CTUA	CTUA-21-234713	9/28/21	Thallium	0.6	µg/L	U	N	Y	0.6
CTUA	CTUA-21-234713	9/28/21	Uranium	0.067	µg/L	U	N	Y	0.067
CTUA	CTUA-21-234714	9/28/21	Radium-226 and Radium-228	0.791	pCi/L	n/a	Y	N	0
CTUA	CTUA-21-234714	9/28/21	Benzene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Aroclor-1260	0.0344	µg/L	U	N	N	0.0344
CTUA	CTUA-21-234714	9/28/21	Aroclor-1254	0.0344	µg/L	U	N	N	0.0344
CTUA	CTUA-21-234714	9/28/21	Aroclor-1221	0.0344	µg/L	U	N	N	0.0344
CTUA	CTUA-21-234714	9/28/21	Aroclor-1232	0.0344	µg/L	U	N	N	0.0344
CTUA	CTUA-21-234714	9/28/21	Aroclor-1248	0.0344	µg/L	U	N	N	0.0344
CTUA	CTUA-21-234714	9/28/21	Aroclor-1016	0.0344	µg/L	U	N	N	0.0344
CTUA	CTUA-21-234714	9/28/21	Aroclor-1262	0.0344	µg/L	U	N	N	0.0344

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-234714	9/28/21	Aroclor-1242	0.0344	µg/L	U	N	N	0.0344
CTUA	CTUA-21-234714	9/28/21	Toluene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Carbon Tetrachloride	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloroethane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloroethene[1,1-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Tetrachloroethene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Trichloroethene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Ethylbenzene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Xylene[1,3-]+Xylene[1,4-]	0.5	µg/L	U	N	N	0.5
CTUA	CTUA-21-234714	9/28/21	Methylene Chloride	0.5	µg/L	U	N	N	0.5
CTUA	CTUA-21-234714	9/28/21	Chloroform	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloroethane[1,1-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dibromoethane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Trichloroethane[1,1,1-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Trichloroethane[1,1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Tetrachloroethane[1,1,2,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Vinyl Chloride	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Naphthalene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Benzo(a)pyrene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Dichloroethene[cis-1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloroethene[trans-1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloropropane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Styrene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichlorobenzene[1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichlorobenzene[1,4-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Trichlorobenzene[1,2,4-]	0.333	µg/L	U	N	N	0.333

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-234714	9/28/21	Pentachlorophenol	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Atrazine	3	µg/L	U	N	N	3
CTUA	CTUA-21-234713	9/28/21	Chloride	18.6	mg/L	n/a	Y	Y	0.335
CTUA	CTUA-21-234713	9/28/21	Copper	3	µg/L	U	N	Y	3
CTUA	CTUA-21-234713	9/28/21	Iron	30	µg/L	U	N	Y	30
CTUA	CTUA-21-234713	9/28/21	Manganese	2	µg/L	U	N	Y	2
CTUA	CTUA-21-234714	9/28/21	Phenol	3	µg/L	U	N	N	3
CTUA	CTUA-21-234713	9/28/21	Sulfate	27.6	mg/L	n/a	Y	Y	0.665
CTUA	CTUA-21-234713	9/28/21	Total Dissolved Solids	231	mg/L	n/a	Y	Y	3.4
CTUA	CTUA-21-234713	9/28/21	Zinc	31.2	µg/L	n/a	Y	Y	3.3
CTUA	CTUA-21-234713	9/28/21	Acidity or Alkalinity of a Solution	8.07	SU[h]	H[i]	Y	Y	0.01
CTUA	CTUA-21-234714	9/28/21	Methyl tert-Butyl Ether	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234713	9/28/21	Aluminum	68	µg/L	U	N	Y	68
CTUA	CTUA-21-234713	9/28/21	Boron	21.3	µg/L	J[j]	Y	Y	15
CTUA	CTUA-21-234713	9/28/21	Cobalt	1	µg/L	U	N	Y	1
CTUA	CTUA-21-234713	9/28/21	Molybdenum	1.02	µg/L	n/a	Y	Y	0.2
CTUA	CTUA-21-234713	9/28/21	Nickel	3.93	µg/L	n/a	Y	Y	0.6
CTUA	CTUA-21-234714	9/28/21	Acrolein	1.67	µg/L	U	N	N	1.67
CTUA	CTUA-21-234714	9/28/21	Acrylonitrile	1.67	µg/L	U	N	N	1.67
CTUA	CTUA-21-234714	9/28/21	Benzene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Toluene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Ethylbenzene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Xylene[1,3-]+Xylene[1,4-]	0.5	µg/L	U	N	N	0.5
CTUA	CTUA-21-234714	9/28/21	Styrene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Chlorobenzene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichlorobenzene[1,2-]	0.333	µg/L	U	N	N	0.333

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-234714	9/28/21	Dichlorobenzene[1,4-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Trichlorobenzene[1,2,4-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Tetrachlorobenzene[1,2,4,5]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Pentachlorobenzene	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Hexachlorobenzene	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Dichlorophenol[2,4-]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Trichlorophenol[2,4,5-]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Trichlorophenol[2,4,6-]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Pentachlorophenol	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Bis(2-chloroethyl)ether	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Oxybis(1-chloropropane)[2,2'-]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Dichloropropane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloropropene[cis-1,3-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloropropene[trans-1,3-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloropropene[1,1-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dioxane[1,4-]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Dibromoethane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloroethane[1,1-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloroethane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Trichloroethane[1,1,1-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Trichloroethane[1,1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Tetrachloroethane[1,1,2,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Hexachloroethane	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Vinyl Chloride	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloroethene[1,1-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichloroethene[cis-1,2-]	0.333	µg/L	U	N	N	0.333

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-234714	9/28/21	Dichloroethene[trans-1,2-]	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Trichloroethene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Tetrachloroethene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Bromodichloromethane	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Bromomethane	0.337	µg/L	U	N	N	0.337
CTUA	CTUA-21-234714	9/28/21	Chloromethane	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Dichlorodifluoromethane	0.355	µg/L	U	N	N	0.355
CTUA	CTUA-21-234714	9/28/21	Methylene Chloride	0.5	µg/L	U	N	N	0.5
CTUA	CTUA-21-234714	9/28/21	Bromoform	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Chloroform	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Carbon Tetrachloride	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Trichlorofluoromethane	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Hexachlorobutadiene	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Isophorone	3.5	µg/L	U	N	N	3.5
CTUA	CTUA-21-234714	9/28/21	Methyl tert-Butyl Ether	0.333	µg/L	U	N	N	0.333
CTUA	CTUA-21-234714	9/28/21	Nitrobenzene	0.0976	µg/L	U	N	N	0.0976
CTUA	CTUA-21-234714	9/28/21	Dinitrotoluene[2,4-]	0.0976	µg/L	U	N	N	0.0976
CTUA	CTUA-21-234714	9/28/21	Dinitrotoluene[2,6-]	0.0976	µg/L	U	N	N	0.0976
CTUA	CTUA-21-234714	9/28/21	HMX[k]	0.0976	µg/L	U	N	N	0.0976
CTUA	CTUA-21-234714	9/28/21	RDX[l]	0.0976	µg/L	U	N	N	0.0976
CTUA	CTUA-21-234714	9/28/21	Trinitrotoluene[2,4,6-]	0.0976	µg/L	U	N	N	0.0976
CTUA	CTUA-21-234714	9/28/21	Dinitro-2-methylphenol[4,6-]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Dinitrophenol[2,4-]	5	µg/L	U	N	N	5
CTUA	CTUA-21-234714	9/28/21	Nitrosodiethylamine[N-]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Nitrosodimethylamine[N-]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Nitroso-di-n-butylamine[N-]	3	µg/L	U	N	N	3

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-234714	9/28/21	Nitrosopyrrolidine[N-]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234713	9/28/21	Perchlorate	0.38	µg/L	n/a	Y	Y	0.05
CTUA	CTUA-21-234714	9/28/21	Perfluorohexanesulfonic acid	0.68	ng/L	U	N	N	0.68
CTUA	CTUA-21-234714	9/28/21	Perfluorooctanesulfonic acid	0.824	ng/L	U	N	N	0.824
CTUA	CTUA-21-234714	9/28/21	Perfluorooctanoic acid	0.824	ng/L	U	N	N	0.824
CTUA	CTUA-21-234714	9/28/21	Aldrin	0.00807	µg/L	U	N	N	0.00807
CTUA	CTUA-21-234714	9/28/21	Atrazine	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Chlordane[alpha-]	0.00807	µg/L	U	N	N	0.00807
CTUA	CTUA-21-234714	9/28/21	Chlordane[gamma-]	0.00807	µg/L	U	N	N	0.00807
CTUA	CTUA-21-234714	9/28/21	DDT[4,4'-]^{m}	0.0121	µg/L	U	N	N	0.0121
CTUA	CTUA-21-234714	9/28/21	Dieldrin	0.0121	µg/L	U	N	N	0.0121
CTUA	CTUA-21-234714	9/28/21	Endosulfan II	0.0121	µg/L	U	N	N	0.0121
CTUA	CTUA-21-234714	9/28/21	Endosulfan I	0.00807	µg/L	U	N	N	0.00807
CTUA	CTUA-21-234714	9/28/21	Endrin	0.0121	µg/L	U	N	N	0.0121
CTUA	CTUA-21-234714	9/28/21	Heptachlor	0.00807	µg/L	U	N	N	0.00807
CTUA	CTUA-21-234714	9/28/21	BHC^{n}[alpha-]	0.00807	µg/L	U	N	N	0.00807
CTUA	CTUA-21-234714	9/28/21	BHC[beta-]	0.00807	µg/L	U	N	N	0.00807
CTUA	CTUA-21-234714	9/28/21	BHC[gamma-]	0.00807	µg/L	U	N	N	0.00807
CTUA	CTUA-21-234714	9/28/21	BHC[delta-]	0.00807	µg/L	U	N	N	0.00807
CTUA	CTUA-21-234714	9/28/21	Hexachlorocyclopentadiene	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Prometon	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Toxaphene (Technical Grade)	0.182	µg/L	U	N	N	0.182
CTUA	CTUA-21-234714	9/28/21	Phenol	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Di-n-butylphthalate	0.3	µg/L	U	N	N	0.3
CTUA	CTUA-21-234714	9/28/21	Bis(2-ethylhexyl)phthalate	0.3	µg/L	U	N	N	0.3
CTUA	CTUA-21-234714	9/28/21	Diethylphthalate	0.3	µg/L	U	N	N	0.3

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUA	CTUA-21-234714	9/28/21	Dimethyl Phthalate	0.3	µg/L	U	N	N	0.3
CTUA	CTUA-21-234714	9/28/21	Benzidine	3.9	µg/L	U	N	N	3.9
CTUA	CTUA-21-234714	9/28/21	Dichlorobenzidine[3,3'-]	3	µg/L	U	N	N	3
CTUA	CTUA-21-234714	9/28/21	Anthracene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Benzo(a)pyrene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Benzo(b)fluoranthene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Benzo(k)fluoranthene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Fluoranthene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Fluorene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Naphthalene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Methylnaphthalene[1-]	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Methylnaphthalene[2-]	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Phenanthrene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Pyrene	0.03	µg/L	U	N	N	0.03
CTUA	CTUA-21-234714	9/28/21	Sulfolane	3	µg/L	U	N	N	3
CTUC	CTUC-21-234711	9/28/21	Antimony	1	µg/L	U	N	Y	1
CTUC	CTUC-21-234711	9/28/21	Arsenic	3.38	µg/L	J	Y	Y	2
CTUC	CTUC-21-234711	9/28/21	Barium	52.3	µg/L	n/a	Y	Y	1
CTUC	CTUC-21-234711	9/28/21	Beryllium	1	µg/L	U	N	Y	1
CTUC	CTUC-21-234711	9/28/21	Cadmium	0.3	µg/L	U	N	Y	0.3
CTUC	CTUC-21-234711	9/28/21	Chromium	3	µg/L	U	N	Y	3
CTUC	CTUC-21-234712	9/28/21	Cyanide (Total)	0.00167	mg/L	U	N	N	1.67
CTUC	CTUC-21-234711	9/28/21	Fluoride	0.44	mg/L	n/a	Y	Y	0.033
CTUC	CTUC-21-234711	9/28/21	Lead	0.5	µg/L	U	N	Y	0.5
CTUC	CTUC-21-234711	9/28/21	Mercury	0.067	µg/L	U	N	N	0.067
CTUC	CTUC-21-234712	9/28/21	Nitrate	4.07	mg/L	n/a	Y	N	0.033

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUC	CTUC-21-234712	9/28/21	Nitrite	0.033	mg/L	U	N	N	0.033
CTUC	CTUC-21-234711	9/28/21	Selenium	1.5	µg/L	U	N	Y	1.5
CTUC	CTUC-21-234711	9/28/21	Silver	0.3	µg/L	U	N	Y	0.3
CTUC	CTUC-21-234711	9/28/21	Thallium	0.6	µg/L	U	N	Y	0.6
CTUC	CTUC-21-234711	9/28/21	Uranium	0.067	µg/L	U	N	Y	0.067
CTUC	CTUC-21-234712	9/28/21	Radium-226 and Radium-228	1.06	pCi/L	n/a	Y	N	0
CTUC	CTUC-21-234712	9/28/21	Benzene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Aroclor-1260	0.0345	µg/L	U	N	N	0.0345
CTUC	CTUC-21-234712	9/28/21	Aroclor-1254	0.0345	µg/L	U	N	N	0.0345
CTUC	CTUC-21-234712	9/28/21	Aroclor-1221	0.0345	µg/L	U	N	N	0.0345
CTUC	CTUC-21-234712	9/28/21	Aroclor-1232	0.0345	µg/L	U	N	N	0.0345
CTUC	CTUC-21-234712	9/28/21	Aroclor-1248	0.0345	µg/L	U	N	N	0.0345
CTUC	CTUC-21-234712	9/28/21	Aroclor-1016	0.0345	µg/L	U	N	N	0.0345
CTUC	CTUC-21-234712	9/28/21	Aroclor-1262	0.0345	µg/L	U	N	N	0.0345
CTUC	CTUC-21-234712	9/28/21	Aroclor-1242	0.0345	µg/L	U	N	N	0.0345
CTUC	CTUC-21-234712	9/28/21	Toluene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Carbon Tetrachloride	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloroethane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloroethene[1,1-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Tetrachloroethene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Trichloroethene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Ethylbenzene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Xylene[1,3-]+Xylene[1,4-]	0.5	µg/L	U	N	N	0.5
CTUC	CTUC-21-234712	9/28/21	Methylene Chloride	0.5	µg/L	U	N	N	0.5
CTUC	CTUC-21-234712	9/28/21	Chloroform	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloroethane[1,1-]	0.333	µg/L	U	N	N	0.333

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUC	CTUC-21-234712	9/28/21	Dibromoethane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Trichloroethane[1,1,1-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Trichloroethane[1,1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Tetrachloroethane[1,1,2,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Vinyl Chloride	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Naphthalene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Benzo(a)pyrene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Dichloroethene[cis-1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloroethene[trans-1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloropropane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Styrene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichlorobenzene[1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichlorobenzene[1,4-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Trichlorobenzene[1,2,4-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Pentachlorophenol	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Atrazine	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234711	9/28/21	Chloride	19.5	mg/L	n/a	Y	Y	0.335
CTUC	CTUC-21-234711	9/28/21	Copper	3	µg/L	U	N	Y	3
CTUC	CTUC-21-234711	9/28/21	Iron	30	µg/L	U	N	Y	30
CTUC	CTUC-21-234711	9/28/21	Manganese	2	µg/L	U	N	Y	2
CTUC	CTUC-21-234712	9/28/21	Phenol	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234711	9/28/21	Sulfate	19.6	mg/L	n/a	Y	Y	0.665
CTUC	CTUC-21-234711	9/28/21	Total Dissolved Solids	250	mg/L	n/a	Y	Y	3.4
CTUC	CTUC-21-234711	9/28/21	Zinc	50.5	µg/L	n/a	Y	Y	3.3
CTUC	CTUC-21-234711	9/28/21	Acidity or Alkalinity of a solution	8.51	SU	H	Y	Y	0.01
CTUC	CTUC-21-234712	9/28/21	Methyl tert-Butyl Ether	0.333	µg/L	U	N	N	0.333

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUC	CTUC-21-234711	9/28/21	Aluminum	68	µg/L	U	N	Y	68
CTUC	CTUC-21-234711	9/28/21	Boron	22.5	µg/L	J	Y	Y	15
CTUC	CTUC-21-234711	9/28/21	Cobalt	1	µg/L	U	N	Y	1
CTUC	CTUC-21-234711	9/28/21	Molybdenum	0.2	µg/L	U	N	Y	0.2
CTUC	CTUC-21-234711	9/28/21	Nickel	8	µg/L	n/a	Y	Y	0.6
CTUC	CTUC-21-234712	9/28/21	Acrolein	1.67	µg/L	U	N	N	1.67
CTUC	CTUC-21-234712	9/28/21	Acrylonitrile	1.67	µg/L	U	N	N	1.67
CTUC	CTUC-21-234712	9/28/21	Benzene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Toluene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Ethylbenzene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Xylene[1,3-]+Xylene[1,4-]	0.5	µg/L	U	N	N	0.5
CTUC	CTUC-21-234712	9/28/21	Styrene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Chlorobenzene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichlorobenzene[1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichlorobenzene[1,4-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Trichlorobenzene[1,2,4-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Tetrachlorobenzene[1,2,4,5]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Pentachlorobenzene	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Hexachlorobenzene	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Dichlorophenol[2,4-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Trichlorophenol[2,4,5-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Trichlorophenol[2,4,6-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Pentachlorophenol	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Bis(2-chloroethyl)ether	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Oxybis(1-chloropropane)[2,2'-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Dichloropropane[1,2-]	0.333	µg/L	U	N	N	0.333

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUC	CTUC-21-234712	9/28/21	Dichloropropene[cis-1,3-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloropropene[trans-1,3-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloropropene[1,1-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dioxane[1,4-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Dibromoethane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloroethane[1,1-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloroethane[1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Trichloroethane[1,1,1-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Trichloroethane[1,1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Tetrachloroethane[1,1,2,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Hexachloroethane	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Vinyl Chloride	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloroethene[1,1-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloroethene[cis-1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichloroethene[trans-1,2-]	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Trichloroethene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Tetrachloroethene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Bromodichloromethane	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Bromomethane	0.337	µg/L	U	N	N	0.337
CTUC	CTUC-21-234712	9/28/21	Chloromethane	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Dichlorodifluoromethane	0.355	µg/L	U	N	N	0.355
CTUC	CTUC-21-234712	9/28/21	Methylene Chloride	0.5	µg/L	U	N	N	0.5
CTUC	CTUC-21-234712	9/28/21	Bromoform	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Chloroform	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Carbon Tetrachloride	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Trichlorofluoromethane	0.333	µg/L	U	N	N	0.333

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUC	CTUC-21-234712	9/28/21	Hexachlorobutadiene	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Isophorone	3.67	µg/L	U	N	N	3.67
CTUC	CTUC-21-234712	9/28/21	Methyl tert-Butyl Ether	0.333	µg/L	U	N	N	0.333
CTUC	CTUC-21-234712	9/28/21	Nitrobenzene	0.0835	µg/L	U	N	N	0.0835
CTUC	CTUC-21-234712	9/28/21	Dinitrotoluene[2,4-]	0.0835	µg/L	U	N	N	0.0835
CTUC	CTUC-21-234712	9/28/21	Dinitrotoluene[2,6-]	0.0835	µg/L	U	N	N	0.0835
CTUC	CTUC-21-234712	9/28/21	HMX	0.0835	µg/L	U	N	N	0.0835
CTUC	CTUC-21-234712	9/28/21	RDX	0.0835	µg/L	U	N	N	0.0835
CTUC	CTUC-21-234712	9/28/21	Trinitrotoluene[2,4,6-]	0.0835	µg/L	U	N	N	0.0835
CTUC	CTUC-21-234712	9/28/21	Dinitro-2-methylphenol[4,6-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Dinitrophenol[2,4-]	5.24	µg/L	U	N	N	5.24
CTUC	CTUC-21-234712	9/28/21	Nitrosodiethylamine[N-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Nitrosodimethylamine[N-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Nitroso-di-n-butylamine[N-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Nitrosopyrrolidine[N-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234711	9/28/21	Perchlorate	0.609	µg/L	n/a	Y	Y	0.05
CTUC	CTUC-21-234712	9/28/21	Perfluorohexanesulfonic acid	0.648	ng/L	U	N	N	0.648
CTUC	CTUC-21-234712	9/28/21	Perfluorooctanesulfonic acid	0.785	ng/L	U	N	N	0.785
CTUC	CTUC-21-234712	9/28/21	Perfluorooctanoic acid	0.785	ng/L	U	N	N	0.785
CTUC	CTUC-21-234712	9/28/21	Aldrin	0.00665	µg/L	U	N	N	0.00665
CTUC	CTUC-21-234712	9/28/21	Atrazine	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Chlordane[alpha-]	0.00665	µg/L	U	N	N	0.00665
CTUC	CTUC-21-234712	9/28/21	Chlordane[gamma-]	0.00665	µg/L	U	N	N	0.00665
CTUC	CTUC-21-234712	9/28/21	DDT[4,4'-]	0.01	µg/L	U	N	N	0.01
CTUC	CTUC-21-234712	9/28/21	Dieldrin	0.01	µg/L	U	N	N	0.01
CTUC	CTUC-21-234712	9/28/21	Endosulfan II	0.01	µg/L	U	N	N	0.01

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUC	CTUC-21-234712	9/28/21	Endosulfan I	0.00665	µg/L	U	N	N	0.00665
CTUC	CTUC-21-234712	9/28/21	Endrin	0.01	µg/L	U	N	N	0.01
CTUC	CTUC-21-234712	9/28/21	Heptachlor	0.00665	µg/L	U	N	N	0.00665
CTUC	CTUC-21-234712	9/28/21	BHC[alpha-]	0.00665	µg/L	U	N	N	0.00665
CTUC	CTUC-21-234712	9/28/21	BHC[beta-]	0.00665	µg/L	U	N	N	0.00665
CTUC	CTUC-21-234712	9/28/21	BHC[gamma-]	0.00665	µg/L	U	N	N	0.00665
CTUC	CTUC-21-234712	9/28/21	BHC[delta-]	0.00665	µg/L	U	N	N	0.00665
CTUC	CTUC-21-234712	9/28/21	Hexachlorocyclopentadiene	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Prometon	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Toxaphene (Technical Grade)	0.15	µg/L	U	N	N	0.15
CTUC	CTUC-21-234712	9/28/21	Phenol	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Di-n-butylphthalate	0.314	µg/L	U	N	N	0.314
CTUC	CTUC-21-234712	9/28/21	Bis(2-ethylhexyl)phthalate	0.314	µg/L	U	N	N	0.314
CTUC	CTUC-21-234712	9/28/21	Diethylphthalate	0.314	µg/L	U	N	N	0.314
CTUC	CTUC-21-234712	9/28/21	Dimethyl Phthalate	0.314	µg/L	U	N	N	0.314
CTUC	CTUC-21-234712	9/28/21	Benzidine	4.08	µg/L	U	N	N	4.08
CTUC	CTUC-21-234712	9/28/21	Dichlorobenzidine[3,3'-]	3.14	µg/L	U	N	N	3.14
CTUC	CTUC-21-234712	9/28/21	Anthracene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Benzo(a)pyrene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Benzo(b)fluoranthene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Benzo(k)fluoranthene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Fluoranthene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Fluorene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Naphthalene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Methylnaphthalene[1-]	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Methylnaphthalene[2-]	0.0314	µg/L	U	N	N	0.0314

Table 2.2-3 (continued)

Location ID	Sample ID	Sample Date	Parameter Name	Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CTUC	CTUC-21-234712	9/28/21	Phenanthrene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Pyrene	0.0314	µg/L	U	N	N	0.0314
CTUC	CTUC-21-234712	9/28/21	Sulfolane	3.14	µg/L	U	N	N	3.14

[a] In accordance with condition 13 of DP-1835, analysis of the treated effluent from each IX unit is required only once every month for the CY 2021 Quarter 3 reporting period.

[b] U = Analyte is classified as not detected.

[c] In the Detect Flag column, N = not detected.

[d] In the Filtered column, Y = filtered.

[e] n/a = Not applicable: no qualifiers applied.

[f] In the Detect Flag column, Y = detected.

[g] In the Filtered column, N = not filtered.

[h] SU= Standard unit.

[i] H = The required extraction or analysis holding time for this result was exceeded.

[j] J = Analyte is classified as estimated.

[k] HMX = Her Majesty's Explosive (octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine).

[l] RDX = Royal Demolition Explosive (hexahydro-1,3,5-trinitro-1,3,5-triazine).

[m] DDT[4,4'-] = Dichlorodiphenyltrichloroethane.

[n] BHC = Benzene hexachloride.

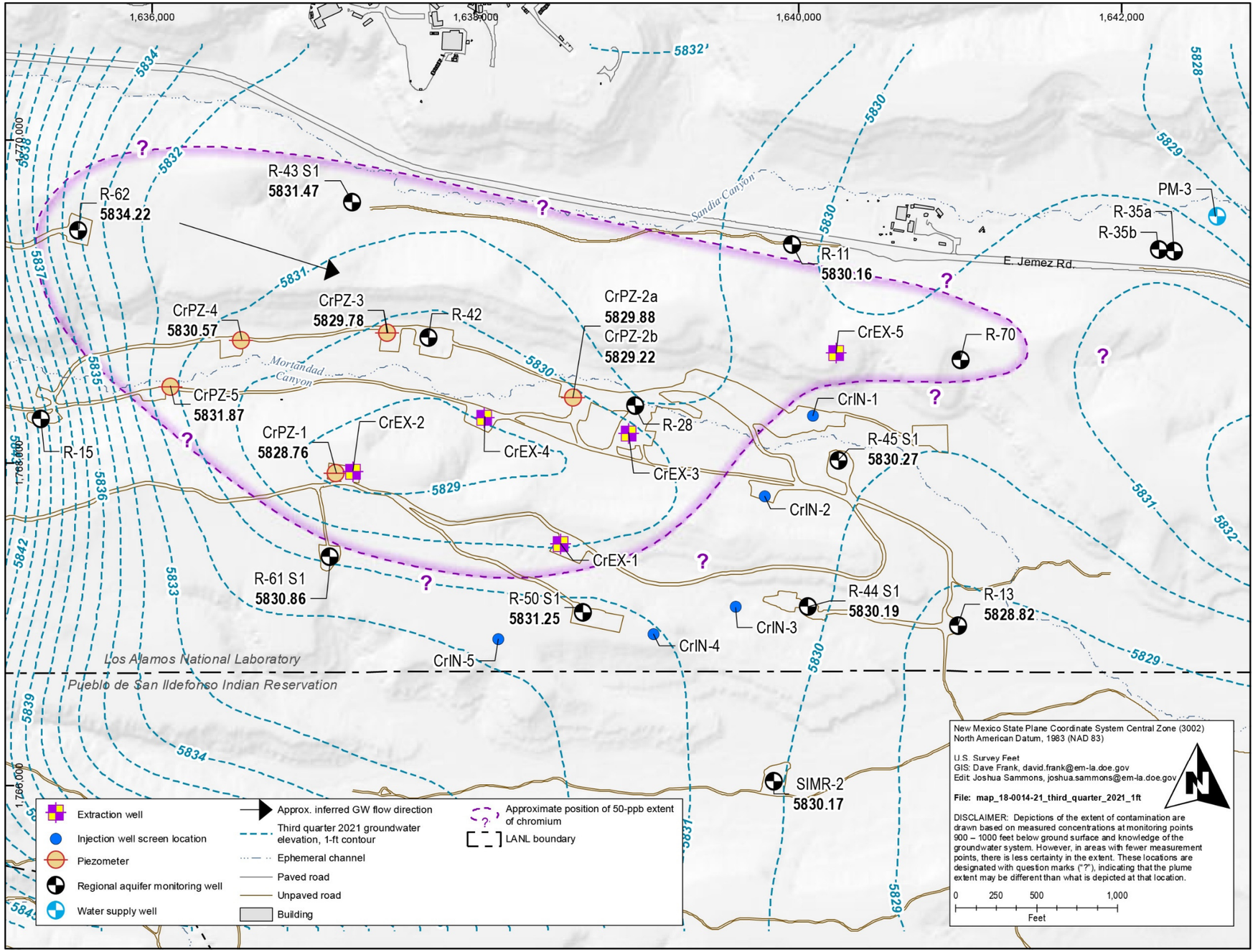

Figure 2.3-1 Groundwater elevation contour map – CY 2021 Quarter 3, DP-1835

Table 2.3-1
Groundwater Elevations Summary for
Groundwater Monitoring Wells – CY 2021 Quarter 3, DP-1835

Monitoring Well	Groundwater Elevation[a] (ft)
CrPZ-1 (CrCH-1)	5828.76
CrPZ-2a (CrCH-2a)	5829.88
CrPZ-2b (CrCH-2b)	5829.22
CrPZ-3 (CrCH-3)	5829.78
CrPZ-4 (CrCH-4)	5830.57
CrPZ-5 (CrCH-5)	5831.87
R-11	5830.16
R-13	5828.82
R-43 S1[b]	5831.47
R-43 S2[c]	5830.79
R-44 S1	5830.19
R-44 S2	5829.63
R-45 S1	5830.27
R-45 S2	5829.53
R-50 S1	5831.25
R-50 S2	5830.04
R-61 S1	5830.86
R-61 S2	5830.63
R-62	5834.22
SIMR-2[d]	5830.17

[a] Groundwater elevations provided are based on average July 2021 values from transducers.

[b] S1 = Screen 1.

[c] S2 = Screen 2.

[d] Second-quarter average May 2021 SIMR-2 data are reported here in accordance with the DP-1835 2021 Quarter 2 report (N3B 2021). Data were unavailable at the time of that report's preparation and are included in this report in accordance with the memorandum of agreement between San Ildefonso Pueblo and DOE. Data from the current quarter are not available at this time and will be presented in the next quarterly report.

Table 2.3-2
Groundwater Monitoring Wells Analytical Results Summary Table – CY 2021 Quarter 3, DP-1835

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CASA-21-231050	R-11	07/21/2021	Chloride	3.97	mg/L	n/a[a]	Y[b]	Y[c]	0.200
CASA-21-231050	R-11	07/21/2021	Perchlorate	0.759	µg/L	n/a	Y	Y	0.200
CASA-21-231050	R-11	07/21/2021	Chromium	12.3	µg/L	n/a	Y	Y	10.0
CASA-21-231050	R-11	07/21/2021	Fluoride	0.444	mg/L	n/a	Y	Y	0.100
CASA-21-231050	R-11	07/21/2021	Nitrate-Nitrite as Nitrogen	5.73	mg/L	n/a	Y	Y	0.500
CASA-21-231050	R-11	07/21/2021	Sulfate	9.47	mg/L	n/a	Y	Y	0.400
CASA-21-231050	R-11	07/21/2021	Total Dissolved Solids	201	mg/L	n/a	Y	Y	14.3
CASA-21-231428	R-11	08/17/2021	Chloride	3.80	mg/L	n/a	Y	Y	0.200
CASA-21-231428	R-11	08/17/2021	Perchlorate	0.769	µg/L	n/a	Y	Y	0.200
CASA-21-231428	R-11	08/17/2021	Chromium	12.4	µg/L	n/a	Y	Y	10.0
CASA-21-231428	R-11	08/17/2021	Fluoride	0.354	mg/L	n/a	Y	Y	0.100
CASA-21-231428	R-11	08/17/2021	Nitrate-Nitrite as Nitrogen	5.95	mg/L	n/a	Y	Y	0.500
CASA-21-231428	R-11	08/17/2021	Sulfate	9.08	mg/L	n/a	Y	Y	0.400
CASA-21-231428	R-11	08/17/2021	Total Dissolved Solids	191	mg/L	n/a	Y	Y	14.3
CASA-21-234048	R-11	09/14/2021	Chloride	3.64	mg/L	n/a	Y	Y	0.200
CASA-21-234048	R-11	09/14/2021	Perchlorate	0.799	µg/L	n/a	Y	Y	0.200
CASA-21-234048	R-11	09/14/2021	Chromium	10.6	µg/L	n/a	Y	Y	10.0
CASA-21-234048	R-11	09/14/2021	Fluoride	0.416	mg/L	n/a	Y	Y	0.100
CASA-21-234048	R-11	09/14/2021	Nitrate-Nitrite as Nitrogen	5.76	mg/L	n/a	Y	Y	0.500
CASA-21-234048	R-11	09/14/2021	Sulfate	9.07	mg/L	n/a	Y	Y	0.400
CASA-21-234048	R-11	09/14/2021	Total Dissolved Solids	190	mg/L	n/a	Y	Y	14.3
CASA-21-234057	R-11	09/14/2021	Chloride	3.64	mg/L	n/a	Y	Y	0.200
CASA-21-234057	R-11	09/14/2021	Perchlorate	0.780	µg/L	n/a	Y	Y	0.200
CASA-21-234057	R-11	09/14/2021	Chromium	10.9	µg/L	n/a	Y	Y	10.0
CASA-21-234057	R-11	09/14/2021	Fluoride	0.413	mg/L	n/a	Y	Y	0.100

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CASA-21-234057	R-11	09/14/2021	Nitrate-Nitrite as Nitrogen	5.77	mg/L	n/a	Y	Y	0.500
CASA-21-234057	R-11	09/14/2021	Sulfate	9.07	mg/L	n/a	Y	Y	0.400
CASA-21-234057	R-11	09/14/2021	Total Dissolved Solids	187	mg/L	n/a	Y	Y	14.3
CASA-21-234058	R-11	09/14/2021	Chloride	0.174	mg/L	J[d]	Y	N[e]	0.200
CASA-21-234058	R-11	09/14/2021	Perchlorate	0.0500	µg/L	U[f]	N[g]	N	0.200
CASA-21-234058	R-11	09/14/2021	Chromium	3.00	µg/L	U	N	N	10.0
CASA-21-234058	R-11	09/14/2021	Fluoride	0.0330	mg/L	U	N	N	0.100
CASA-21-234058	R-11	09/14/2021	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	U	N	N	0.0500
CASA-21-234058	R-11	09/14/2021	Sulfate	0.133	mg/L	U	N	N	0.400
CASA-21-234058	R-11	09/14/2021	Total Dissolved Solids	3.40	mg/L	U	N	N	14.3
CASA-21-234059	R-11	09/14/2021	Chloride	0.0670	mg/L	U	N	N	0.200
CASA-21-234059	R-11	09/14/2021	Perchlorate	0.0500	µg/L	U	N	N	0.200
CASA-21-234059	R-11	09/14/2021	Chromium	3.00	µg/L	U	N	N	10.0
CASA-21-234059	R-11	09/14/2021	Fluoride	0.0330	mg/L	U	N	N	0.100
CASA-21-234059	R-11	09/14/2021	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	U	N	N	0.0500
CASA-21-234059	R-11	09/14/2021	Sulfate	0.133	mg/L	U	N	N	0.400
CASA-21-234059	R-11	09/14/2021	Total Dissolved Solids	3.40	mg/L	U	N	N	14.3
CAMO-21-230995	R-13	07/20/2021	Chloride	2.74	mg/L	n/a	Y	Y	0.200
CAMO-21-230995	R-13	07/20/2021	Perchlorate	0.452	µg/L	n/a	Y	Y	0.200
CAMO-21-230995	R-13	07/20/2021	Chromium	3.89	µg/L	J	Y	Y	10.0
CAMO-21-230995	R-13	07/20/2021	Fluoride	0.340	mg/L	n/a	Y	Y	0.100
CAMO-21-230995	R-13	07/20/2021	Nitrate-Nitrite as Nitrogen	0.832	mg/L	n/a	Y	Y	0.0500
CAMO-21-230995	R-13	07/20/2021	Sulfate	3.51	mg/L	n/a	Y	Y	0.400
CAMO-21-230995	R-13	07/20/2021	Total Dissolved Solids	149	mg/L	n/a	Y	Y	14.3
CASA-21-231061	R-43 S1[h]	07/19/2021	Chloride	8.05	mg/L	n/a	Y	Y	0.200
CASA-21-231061	R-43 S1	07/19/2021	Chromium	188	µg/L	n/a	Y	Y	10.0
CASA-21-231061	R-43 S1	07/19/2021	Fluoride	0.311	mg/L	n/a	Y	Y	0.100

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CASA-21-231061	R-43 S1	07/19/2021	Nitrate-Nitrite as Nitrogen	5.33	mg/L	n/a	Y	Y	0.500
CASA-21-231061	R-43 S1	07/19/2021	Sulfate	17.2	mg/L	n/a	Y	Y	0.400
CASA-21-231061	R-43 S1	07/19/2021	Total Dissolved Solids	173	mg/L	n/a	Y	Y	14.3
CASA-21-231092	R-43 S1	07/19/2021	Chloride	0.0670	mg/L	U	N	N	0.200
CASA-21-231092	R-43 S1	07/19/2021	Perchlorate	0.0500	µg/L	U	N	N	0.200
CASA-21-231092	R-43 S1	07/19/2021	Chromium	3.00	µg/L	U	N	N	10.0
CASA-21-231092	R-43 S1	07/19/2021	Fluoride	0.0330	mg/L	U	N	N	0.100
CASA-21-231092	R-43 S1	07/19/2021	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	U	N	N	0.0500
CASA-21-231092	R-43 S1	07/19/2021	Sulfate	0.133	mg/L	U	N	N	0.400
CASA-21-231092	R-43 S1	07/19/2021	Total Dissolved Solids	3.40	mg/L	U	N	N	14.3
CASA-21-231063	R-43 S2[i]	07/19/2021	Chloride	7.21	mg/L	n/a	Y	Y	0.200
CASA-21-231063	R-43 S2	07/19/2021	Perchlorate	0.924	µg/L	n/a	Y	Y	0.200
CASA-21-231063	R-43 S2	07/19/2021	Chromium	37.8	µg/L	n/a	Y	Y	10.0
CASA-21-231063	R-43 S2	07/19/2021	Fluoride	0.314	mg/L	n/a	Y	Y	0.100
CASA-21-231063	R-43 S2	07/19/2021	Nitrate-Nitrite as Nitrogen	4.23	mg/L	n/a	Y	Y	0.500
CASA-21-231063	R-43 S2	07/19/2021	Sulfate	10.9	mg/L	n/a	Y	Y	0.400
CASA-21-231063	R-43 S2	07/19/2021	Total Dissolved Solids	183	mg/L	n/a	Y	Y	14.3
CAMO-21-231003	R-44 S1	07/14/2021	Chloride	21.0	mg/L	n/a	Y	Y	1.00
CAMO-21-231003	R-44 S1	07/14/2021	Perchlorate	0.431	µg/L	n/a	Y	Y	0.200
CAMO-21-231003	R-44 S1	07/14/2021	Chromium	4.16	µg/L	J	Y	Y	10.0
CAMO-21-231003	R-44 S1	07/14/2021	Fluoride	0.201	mg/L	n/a	Y	Y	0.100
CAMO-21-231003	R-44 S1	07/14/2021	Nitrate-Nitrite as Nitrogen	2.99	mg/L	n/a	Y	Y	0.250
CAMO-21-231003	R-44 S1	07/14/2021	Sulfate	20.9	mg/L	n/a	Y	Y	2.00
CAMO-21-231003	R-44 S1	07/14/2021	Total Dissolved Solids	210	mg/L	n/a	Y	Y	14.3
CAMO-21-231440	R-44 S1	08/11/2021	Chloride	21.0	mg/L	n/a	Y	Y	1.00
CAMO-21-231440	R-44 S1	08/11/2021	Perchlorate	0.412	µg/L	n/a	Y	Y	0.200
CAMO-21-231440	R-44 S1	08/11/2021	Chromium	3.00	µg/L	J	Y	Y	10.0

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-21-231440	R-44 S1	08/11/2021	Fluoride	0.195	mg/L	n/a	Y	Y	0.100
CAMO-21-231440	R-44 S1	08/11/2021	Nitrate-Nitrite as Nitrogen	2.96	mg/L	n/a	Y	Y	0.250
CAMO-21-231440	R-44 S1	08/11/2021	Sulfate	21.1	mg/L	n/a	Y	Y	2.00
CAMO-21-231440	R-44 S1	08/11/2021	Total Dissolved Solids	211	mg/L	n/a	Y	Y	14.3
CAMO-21-234063	R-44 S1	09/08/2021	Chloride	19.9	mg/L	n/a	Y	Y	1.00
CAMO-21-234063	R-44 S1	09/08/2021	Perchlorate	0.406	µg/L	n/a	Y	Y	0.200
CAMO-21-234063	R-44 S1	09/08/2021	Chromium	3.07	µg/L	J	Y	Y	10.0
CAMO-21-234063	R-44 S1	09/08/2021	Fluoride	0.262	mg/L	n/a	Y	Y	0.100
CAMO-21-234063	R-44 S1	09/08/2021	Nitrate-Nitrite as Nitrogen	3.86	mg/L	n/a	Y	Y	0.500
CAMO-21-234063	R-44 S1	09/08/2021	Sulfate	20.1	mg/L	n/a	Y	Y	2.00
CAMO-21-234063	R-44 S1	09/08/2021	Total Dissolved Solids	190	mg/L	n/a	Y	Y	14.3
CAMO-21-231006	R-44 S2	07/14/2021	Chloride	2.44	mg/L	n/a	Y	Y	0.200
CAMO-21-231006	R-44 S2	07/14/2021	Perchlorate	0.340	µg/L	n/a	Y	Y	0.200
CAMO-21-231006	R-44 S2	07/14/2021	Chromium	7.18	µg/L	J	Y	Y	10.0
CAMO-21-231006	R-44 S2	07/14/2021	Fluoride	0.421	mg/L	n/a	Y	Y	0.100
CAMO-21-231006	R-44 S2	07/14/2021	Nitrate-Nitrite as Nitrogen	0.818	mg/L	n/a	Y	Y	0.0500
CAMO-21-231006	R-44 S2	07/14/2021	Sulfate	2.77	mg/L	n/a	Y	Y	0.400
CAMO-21-231006	R-44 S2	07/14/2021	Total Dissolved Solids	151	mg/L	n/a	Y	Y	14.3
CAMO-21-231448	R-44 S2	08/11/2021	Chloride	2.48	mg/L	n/a	Y	Y	0.200
CAMO-21-231448	R-44 S2	08/11/2021	Perchlorate	0.329	µg/L	n/a	Y	Y	0.200
CAMO-21-231448	R-44 S2	08/11/2021	Chromium	7.18	µg/L	J	Y	Y	10.0
CAMO-21-231448	R-44 S2	08/11/2021	Fluoride	0.415	mg/L	n/a	Y	Y	0.100
CAMO-21-231448	R-44 S2	08/11/2021	Nitrate-Nitrite as Nitrogen	0.843	mg/L	n/a	Y	Y	0.0500
CAMO-21-231448	R-44 S2	08/11/2021	Sulfate	2.92	mg/L	n/a	Y	Y	0.400
CAMO-21-231448	R-44 S2	08/11/2021	Total Dissolved Solids	144	mg/L	n/a	Y	Y	14.3
CAMO-21-231451	R-44 S2	08/11/2021	Chloride	2.48	mg/L	n/a	Y	Y	0.200
CAMO-21-231451	R-44 S2	08/11/2021	Perchlorate	0.334	µg/L	n/a	Y	Y	0.200

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-21-231451	R-44 S2	08/11/2021	Chromium	7.10	µg/L	J	Y	Y	10.0
CAMO-21-231451	R-44 S2	08/11/2021	Fluoride	0.414	mg/L	n/a	Y	Y	0.100
CAMO-21-231451	R-44 S2	08/11/2021	Nitrate-Nitrite as Nitrogen	0.841	mg/L	n/a	Y	Y	0.0500
CAMO-21-231451	R-44 S2	08/11/2021	Sulfate	2.92	mg/L	n/a	Y	Y	0.400
CAMO-21-231451	R-44 S2	08/11/2021	Total Dissolved Solids	143	mg/L	n/a	Y	Y	14.3
CAMO-21-231452	R-44 S2	08/11/2021	Chloride	0.0670	mg/L	U	N	N	0.200
CAMO-21-231452	R-44 S2	08/11/2021	Perchlorate	0.0500	µg/L	U	N	N	0.200
CAMO-21-231452	R-44 S2	08/11/2021	Chromium	3.00	µg/L	U	N	N	10.0
CAMO-21-231452	R-44 S2	08/11/2021	Fluoride	0.0330	mg/L	U	N	N	0.100
CAMO-21-231452	R-44 S2	08/11/2021	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	U	N	N	0.0500
CAMO-21-231452	R-44 S2	08/11/2021	Sulfate	0.133	mg/L	U	N	N	0.400
CAMO-21-231452	R-44 S2	08/11/2021	Total Dissolved Solids	3.40	mg/L	U	N	N	14.3
CAMO-21-231453	R-44 S2	08/11/2021	Chloride	0.127	mg/L	J	Y	N	0.200
CAMO-21-231453	R-44 S2	08/11/2021	Perchlorate	0.0500	µg/L	U	N	N	0.200
CAMO-21-231453	R-44 S2	08/11/2021	Chromium	3.00	µg/L	U	N	N	10.0
CAMO-21-231453	R-44 S2	08/11/2021	Fluoride	0.0330	mg/L	U	N	N	0.100
CAMO-21-231453	R-44 S2	08/11/2021	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	U	N	N	0.0500
CAMO-21-231453	R-44 S2	08/11/2021	Sulfate	0.133	mg/L	U	N	N	0.400
CAMO-21-231453	R-44 S2	08/11/2021	Total Dissolved Solids	3.40	mg/L	U	N	N	14.3
CAMO-21-234069	R-44 S2	09/08/2021	Chloride	2.36	mg/L	n/a	Y	Y	0.200
CAMO-21-234069	R-44 S2	09/08/2021	Perchlorate	0.339	µg/L	n/a	Y	Y	0.200
CAMO-21-234069	R-44 S2	09/08/2021	Chromium	7.89	µg/L	J	Y	Y	10.0
CAMO-21-234069	R-44 S2	09/08/2021	Fluoride	0.475	mg/L	n/a	Y	Y	0.100
CAMO-21-234069	R-44 S2	09/08/2021	Nitrate-Nitrite as Nitrogen	0.818	mg/L	n/a	Y	Y	0.0500
CAMO-21-234069	R-44 S2	09/08/2021	Sulfate	2.85	mg/L	n/a	Y	Y	0.400
CAMO-21-234069	R-44 S2	09/08/2021	Total Dissolved Solids	143	mg/L	n/a	Y	Y	14.3
CAMO-21-231009	R-45 S1	07/14/2021	Chloride	19.6	mg/L	n/a	Y	Y	1.00

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-21-231009	R-45 S1	07/14/2021	Perchlorate	0.500	µg/L	n/a	Y	Y	0.200
CAMO-21-231009	R-45 S1	07/14/2021	Chromium	6.98	µg/L	J	Y	Y	10.0
CAMO-21-231009	R-45 S1	07/14/2021	Fluoride	0.247	mg/L	n/a	Y	Y	0.100
CAMO-21-231009	R-45 S1	07/14/2021	Nitrate-Nitrite as Nitrogen	3.18	mg/L	n/a	Y	Y	0.250
CAMO-21-231009	R-45 S1	07/14/2021	Sulfate	20.0	mg/L	n/a	Y	Y	2.00
CAMO-21-231009	R-45 S1	07/14/2021	Total Dissolved Solids	221	mg/L	n/a	Y	Y	14.3
CAMO-21-231455	R-45 S1	08/12/2021	Chloride	19.6	mg/L	n/a	Y	Y	1.00
CAMO-21-231455	R-45 S1	08/12/2021	Perchlorate	0.478	µg/L	n/a	Y	Y	0.200
CAMO-21-231455	R-45 S1	08/12/2021	Chromium	4.73	µg/L	J	Y	Y	10.0
CAMO-21-231455	R-45 S1	08/12/2021	Fluoride	0.235	mg/L	n/a	Y	Y	0.100
CAMO-21-231455	R-45 S1	08/12/2021	Nitrate-Nitrite as Nitrogen	3.17	mg/L	n/a	Y	Y	0.500
CAMO-21-231455	R-45 S1	08/12/2021	Sulfate	19.7	mg/L	n/a	Y	Y	2.00
CAMO-21-231455	R-45 S1	08/12/2021	Total Dissolved Solids	229	mg/L	n/a	Y	Y	14.3
CAMO-21-234083	R-45 S1	09/09/2021	Chloride	18.3	mg/L	n/a	Y	Y	1.00
CAMO-21-234083	R-45 S1	09/09/2021	Perchlorate	0.469	µg/L	n/a	Y	Y	0.200
CAMO-21-234083	R-45 S1	09/09/2021	Chromium	5.30	µg/L	J	Y	Y	10.0
CAMO-21-234083	R-45 S1	09/09/2021	Fluoride	0.222	mg/L	n/a	Y	Y	0.100
CAMO-21-234083	R-45 S1	09/09/2021	Nitrate-Nitrite as Nitrogen	2.74	mg/L	n/a	Y	Y	0.500
CAMO-21-234083	R-45 S1	09/09/2021	Sulfate	19.3	mg/L	n/a	Y	Y	2.00
CAMO-21-234083	R-45 S1	09/09/2021	Total Dissolved Solids	347	mg/L	n/a	Y	Y	14.3
CAMO-21-234169	R-45 S1	09/09/2021	Chloride	17.9	mg/L	n/a	Y	Y	1.00
CAMO-21-234169	R-45 S1	09/09/2021	Perchlorate	0.468	µg/L	n/a	Y	Y	0.200
CAMO-21-234169	R-45 S1	09/09/2021	Chromium	5.04	µg/L	J	Y	Y	10.0
CAMO-21-234169	R-45 S1	09/09/2021	Fluoride	0.219	mg/L	n/a	Y	Y	0.100
CAMO-21-234169	R-45 S1	09/09/2021	Nitrate-Nitrite as Nitrogen	2.98	mg/L	n/a	Y	Y	0.500
CAMO-21-234169	R-45 S1	09/09/2021	Sulfate	18.9	mg/L	n/a	Y	Y	2.00
CAMO-21-234169	R-45 S1	09/09/2021	Total Dissolved Solids	189	mg/L	n/a	Y	Y	14.3

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-21-234170	R-45 S1	09/09/2021	Chloride	0.0670	mg/L	U	N	N	0.200
CAMO-21-234170	R-45 S1	09/09/2021	Perchlorate	0.0500	µg/L	U	N	N	0.200
CAMO-21-234170	R-45 S1	09/09/2021	Chromium	3.00	µg/L	U	N	N	10.0
CAMO-21-234170	R-45 S1	09/09/2021	Fluoride	0.0330	mg/L	U	N	N	0.100
CAMO-21-234170	R-45 S1	09/09/2021	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	U	N	N	0.0500
CAMO-21-234170	R-45 S1	09/09/2021	Sulfate	0.133	mg/L	U	N	N	0.400
CAMO-21-234170	R-45 S1	09/09/2021	Total Dissolved Solids	3.40	mg/L	U	N	N	14.3
CAMO-21-231012	R-45 S2	07/14/2021	Chloride	7.11	mg/L	n/a	Y	Y	0.200
CAMO-21-231012	R-45 S2	07/14/2021	Perchlorate	0.486	µg/L	n/a	Y	Y	0.200
CAMO-21-231012	R-45 S2	07/14/2021	Chromium	57.7	µg/L	n/a	Y	Y	10.0
CAMO-21-231012	R-45 S2	07/14/2021	Fluoride	0.444	mg/L	n/a	Y	Y	0.100
CAMO-21-231012	R-45 S2	07/14/2021	Nitrate-Nitrite as Nitrogen	1.43	mg/L	n/a	Y	Y	0.0500
CAMO-21-231012	R-45 S2	07/14/2021	Sulfate	8.95	mg/L	n/a	Y	Y	0.400
CAMO-21-231012	R-45 S2	07/14/2021	Total Dissolved Solids	170	mg/L	n/a	Y	Y	14.3
CAMO-21-231458	R-45 S2	08/12/2021	Chloride	7.09	mg/L	n/a	Y	Y	0.200
CAMO-21-231458	R-45 S2	08/12/2021	Perchlorate	0.466	µg/L	n/a	Y	Y	0.200
CAMO-21-231458	R-45 S2	08/12/2021	Chromium	52.7	µg/L	n/a	Y	Y	10.0
CAMO-21-231458	R-45 S2	08/12/2021	Fluoride	0.401	mg/L	n/a	Y	Y	0.100
CAMO-21-231458	R-45 S2	08/12/2021	Nitrate-Nitrite as Nitrogen	1.47	mg/L	n/a	Y	Y	0.250
CAMO-21-231458	R-45 S2	08/12/2021	Sulfate	8.84	mg/L	n/a	Y	Y	0.400
CAMO-21-231458	R-45 S2	08/12/2021	Total Dissolved Solids	174	mg/L	n/a	Y	Y	14.3
CAMO-21-234166	R-45 S2	09/09/2021	Chloride	6.70	mg/L	n/a	Y	Y	0.200
CAMO-21-234166	R-45 S2	09/09/2021	Perchlorate	0.468	µg/L	n/a	Y	Y	0.200
CAMO-21-234166	R-45 S2	09/09/2021	Chromium	50.4	µg/L	n/a	Y	Y	10.0
CAMO-21-234166	R-45 S2	09/09/2021	Fluoride	0.382	mg/L	n/a	Y	Y	0.100
CAMO-21-234166	R-45 S2	09/09/2021	Nitrate-Nitrite as Nitrogen	1.34	mg/L	n/a	Y	Y	0.250
CAMO-21-234166	R-45 S2	09/09/2021	Sulfate	8.55	mg/L	n/a	Y	Y	0.400

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-21-234166	R-45 S2	09/09/2021	Total Dissolved Solids	169	mg/L	n/a	Y	Y	14.3
CAMO-21-231015	R-50 S1	07/16/2021	Chloride	20.9	mg/L	n/a	Y	Y	1.00
CAMO-21-231015	R-50 S1	07/16/2021	Perchlorate	0.422	µg/L	n/a	Y	Y	0.200
CAMO-21-231015	R-50 S1	07/16/2021	Chromium	15.2	µg/L	n/a	Y	Y	10.0
CAMO-21-231015	R-50 S1	07/16/2021	Fluoride	0.204	mg/L	n/a	Y	Y	0.100
CAMO-21-231015	R-50 S1	07/16/2021	Nitrate-Nitrite as Nitrogen	2.87	mg/L	n/a	Y	Y	0.250
CAMO-21-231015	R-50 S1	07/16/2021	Sulfate	20.3	mg/L	n/a	Y	Y	2.00
CAMO-21-231015	R-50 S1	07/16/2021	Total Dissolved Solids	229	mg/L	n/a	Y	Y	14.3
CAMO-21-231461	R-50 S1	08/24/2021	Chloride	21.9	mg/L	n/a	Y	Y	1.00
CAMO-21-231461	R-50 S1	08/24/2021	Perchlorate	0.423	µg/L	n/a	Y	Y	0.200
CAMO-21-231461	R-50 S1	08/24/2021	Chromium	12.5	µg/L	n/a	Y	Y	10.0
CAMO-21-231461	R-50 S1	08/24/2021	Fluoride	0.213	mg/L	n/a	Y	Y	0.100
CAMO-21-231461	R-50 S1	08/24/2021	Nitrate-Nitrite as Nitrogen	2.97	mg/L	n/a	Y	Y	0.500
CAMO-21-231461	R-50 S1	08/24/2021	Sulfate	21.1	mg/L	n/a	Y	Y	2.00
CAMO-21-231461	R-50 S1	08/24/2021	Total Dissolved Solids	209	mg/L	n/a	Y	Y	14.3
CAMO-21-234172	R-50 S1	09/20/2021	Chloride	21.3	mg/L	n/a	Y	Y	1.00
CAMO-21-234172	R-50 S1	09/20/2021	Perchlorate	0.431	µg/L	n/a	Y	Y	0.200
CAMO-21-234172	R-50 S1	09/20/2021	Chromium	11.5	µg/L	n/a	Y	Y	10.0
CAMO-21-234172	R-50 S1	09/20/2021	Fluoride	0.369	mg/L	n/a	Y	Y	0.100
CAMO-21-234172	R-50 S1	09/20/2021	Nitrate-Nitrite as Nitrogen	2.89	mg/L	n/a	Y	Y	0.250
CAMO-21-234172	R-50 S1	09/20/2021	Sulfate	20.4	mg/L	n/a	Y	Y	2.00
CAMO-21-234172	R-50 S1	09/20/2021	Total Dissolved Solids	239	mg/L	n/a	Y	Y	14.3
CAMO-21-231018	R-50 S2	07/15/2021	Chromium	4.10	µg/L	J	Y	Y	10.0
CAMO-21-231018	R-50 S2	07/15/2021	Nitrate-Nitrite as Nitrogen	0.620	mg/L	n/a	Y	Y	0.250
CAMO-21-231464	R-50 S2	08/24/2021	Chloride	2.23	mg/L	n/a	Y	Y	0.200
CAMO-21-231464	R-50 S2	08/24/2021	Perchlorate	0.347	µg/L	n/a	Y	Y	0.200
CAMO-21-231464	R-50 S2	08/24/2021	Chromium	3.84	µg/L	J	Y	Y	10.0

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-21-231464	R-50 S2	08/24/2021	Fluoride	0.433	mg/L	n/a	Y	Y	0.100
CAMO-21-231464	R-50 S2	08/24/2021	Nitrate-Nitrite as Nitrogen	0.590	mg/L	n/a	Y	Y	0.0500
CAMO-21-231464	R-50 S2	08/24/2021	Sulfate	2.63	mg/L	n/a	Y	Y	0.400
CAMO-21-231464	R-50 S2	08/24/2021	Total Dissolved Solids	130	mg/L	n/a	Y	Y	14.3
CAMO-21-234176	R-50 S2	09/20/2021	Chloride	2.08	mg/L	n/a	Y	Y	0.200
CAMO-21-234176	R-50 S2	09/20/2021	Perchlorate	0.331	µg/L	n/a	Y	Y	0.200
CAMO-21-234176	R-50 S2	09/20/2021	Chromium	3.76	µg/L	J	Y	Y	10.0
CAMO-21-234176	R-50 S2	09/20/2021	Fluoride	0.686	mg/L	n/a	Y	Y	0.100
CAMO-21-234176	R-50 S2	09/20/2021	Nitrate-Nitrite as Nitrogen	0.593	mg/L	n/a	Y	Y	0.0500
CAMO-21-234176	R-50 S2	09/20/2021	Sulfate	2.44	mg/L	n/a	Y	Y	0.400
CAMO-21-234176	R-50 S2	09/20/2021	Total Dissolved Solids	157	mg/L	n/a	Y	Y	14.3
CAMO-21-231023	R-62	07/23/2021	Chloride	18.2	mg/L	n/a	Y	Y	1.00
CAMO-21-231023	R-62	07/23/2021	Perchlorate	0.901	µg/L	n/a	Y	Y	0.200
CAMO-21-231023	R-62	07/23/2021	Chromium	271	µg/L	n/a	Y	Y	10.0
CAMO-21-231023	R-62	07/23/2021	Fluoride	0.146	mg/L	n/a	Y	Y	0.100
CAMO-21-231023	R-62	07/23/2021	Nitrate-Nitrite as Nitrogen	2.10	mg/L	n/a	Y	Y	0.250
CAMO-21-231023	R-62	07/23/2021	Sulfate	31.7	mg/L	n/a	Y	Y	2.00
CAMO-21-231023	R-62	07/23/2021	Total Dissolved Solids	221	mg/L	n/a	Y	Y	14.3
CAMO-21-231103	R-62	07/23/2021	Chloride	17.9	mg/L	n/a	Y	Y	1.00
CAMO-21-231103	R-62	07/23/2021	Perchlorate	0.887	µg/L	n/a	Y	Y	0.200
CAMO-21-231103	R-62	07/23/2021	Chromium	264	µg/L	n/a	Y	Y	10.0
CAMO-21-231103	R-62	07/23/2021	Fluoride	0.147	mg/L	n/a	Y	Y	0.100
CAMO-21-231103	R-62	07/23/2021	Nitrate-Nitrite as Nitrogen	2.05	mg/L	n/a	Y	Y	0.250
CAMO-21-231103	R-62	07/23/2021	Sulfate	31.4	mg/L	n/a	Y	Y	2.00
CAMO-21-231103	R-62	07/23/2021	Total Dissolved Solids	220	mg/L	n/a	Y	Y	14.3
CAMO-21-222143	SIMR-2[j]	04/21/2021	Chloride	2.23	mg/L	n/a	Y	Y	0.200
CAMO-21-222143	SIMR-2	04/21/2021	Perchlorate	0.503	µg/L	n/a	Y	Y	0.200

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-21-222143	SIMR-2	04/21/2021	Chromium	4.89	µg/L	J	Y	Y	10.0
CAMO-21-222143	SIMR-2	04/21/2021	Fluoride	0.263	mg/L	n/a	Y	Y	0.100
CAMO-21-222143	SIMR-2	04/21/2021	Nitrate-Nitrite as Nitrogen	0.775	mg/L	n/a	Y	Y	0.0500
CAMO-21-222143	SIMR-2	04/21/2021	Sulfate	2.83	mg/L	n/a	Y	Y	0.400
CAMO-21-222143	SIMR-2	04/21/2021	Total Dissolved Solids	149	mg/L	n/a	Y	Y	14.3
CAMO-21-222146	SIMR-2	04/21/2021	Chloride	2.32	mg/L	n/a	Y	Y	0.200
CAMO-21-222146	SIMR-2	04/21/2021	Perchlorate	0.506	µg/L	n/a	Y	Y	0.200
CAMO-21-222146	SIMR-2	04/21/2021	Chromium	4.67	µg/L	J	Y	Y	10.0
CAMO-21-222146	SIMR-2	04/21/2021	Fluoride	0.259	mg/L	n/a	Y	Y	0.100
CAMO-21-222146	SIMR-2	04/21/2021	Nitrate-Nitrite as Nitrogen	0.767	mg/L	n/a	Y	Y	0.0500
CAMO-21-222146	SIMR-2	04/21/2021	Sulfate	2.82	mg/L	n/a	Y	Y	0.400
CAMO-21-222146	SIMR-2	04/21/2021	Total Dissolved Solids	136	mg/L	n/a	Y	Y	14.3
CAMO-21-222147	SIMR-2	04/21/2021	Chloride	0.219	mg/L	n/a	Y	N	0.200
CAMO-21-222147	SIMR-2	04/21/2021	Perchlorate	0.0500	µg/L	U	N	N	0.200
CAMO-21-222147	SIMR-2	04/21/2021	Chromium	3.00	µg/L	U	N	N	10.0
CAMO-21-222147	SIMR-2	04/21/2021	Fluoride	0.0330	mg/L	U	N	N	0.100
CAMO-21-222147	SIMR-2	04/21/2021	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	U	N	N	0.0500
CAMO-21-222147	SIMR-2	04/21/2021	Sulfate	0.133	mg/L	U	N	N	0.400
CAMO-21-222147	SIMR-2	04/21/2021	Total Dissolved Solids	3.40	mg/L	U	N	N	14.3
CAMO-21-222148	SIMR-2	04/21/2021	Total Dissolved Solids	3.40	mg/L	U	N	N	14.3
CAMO-21-222148	SIMR-2	04/21/2021	Sulfate	0.133	mg/L	U	N	N	0.400
CAMO-21-222148	SIMR-2	04/21/2021	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	U	N	N	0.0500
CAMO-21-222148	SIMR-2	04/21/2021	Fluoride	0.0330	mg/L	U	N	N	0.100
CAMO-21-222148	SIMR-2	04/21/2021	Chromium	3.00	µg/L	U	N	N	10.0
CAMO-21-222148	SIMR-2	04/21/2021	Perchlorate	0.0500	µg/L	U	N	N	0.200
CAMO-21-222148	SIMR-2	04/21/2021	Chloride	0.150	mg/L	J	Y	N	0.200
CAMO-21-224136	SIMR-2	05/18/2021	Chloride	2.20	mg/L	n/a	Y	Y	0.200

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-21-224136	SIMR-2	05/18/2021	Perchlorate	0.469	µg/L	n/a	Y	Y	0.200
CAMO-21-224136	SIMR-2	05/18/2021	Chromium	5.19	µg/L	J	Y	Y	10.0
CAMO-21-224136	SIMR-2	05/18/2021	Fluoride	0.252	mg/L	n/a	Y	Y	0.100
CAMO-21-224136	SIMR-2	05/18/2021	Nitrate-Nitrite as Nitrogen	0.780	mg/L	n/a	Y	Y	0.250
CAMO-21-224136	SIMR-2	05/18/2021	Sulfate	2.79	mg/L	n/a	Y	Y	0.400
CAMO-21-224136	SIMR-2	05/18/2021	Total Dissolved Solids	133	mg/L	n/a	Y	Y	14.3
CAMO-21-229377	SIMR-2	06/17/2021	Chloride	2.22	mg/L	n/a	Y	Y	0.200
CAMO-21-229377	SIMR-2	06/17/2021	Perchlorate	0.453	µg/L	n/a	Y	Y	0.200
CAMO-21-229377	SIMR-2	06/17/2021	Chromium	5.16	µg/L	J	Y	Y	10.0
CAMO-21-229377	SIMR-2	06/17/2021	Fluoride	0.261	mg/L	n/a	Y	Y	0.100
CAMO-21-229377	SIMR-2	06/17/2021	Nitrate-Nitrite as Nitrogen	0.798	mg/L	n/a	Y	Y	0.0500
CAMO-21-229377	SIMR-2	06/17/2021	Sulfate	2.76	mg/L	n/a	Y	Y	0.400
CAMO-21-229377	SIMR-2	06/17/2021	Total Dissolved Solids	140	mg/L	n/a	Y	Y	14.3

[a] n/a = Not applicable: no qualifiers applied.

[b] In the Detect Flag column, y = detected.

[c] In the Filtered column, Y = filtered.

[d] J = Analyte is classified as estimated.

[e] In the Filtered column, N = not filtered.

[f] U = Analyte is classified as not detected.

[g] In the Detect Flag column, N = not detected.

[h] S1 = Screen 1.

[i] S2 = Screen 2.

[j] SIMR-2 data are reported here in accordance with the memorandum of agreement and protocol agreement between San Ildefonso Pueblo and DOE.

Water table elevations in the chromium plume area can vary temporally as a result of transient effects that include injection into and extraction from the chromium IM infrastructure wells and pumping of Los Alamos County's water-supply wells. This is discussed for the case of 2021 Quarter 3 below.

Effects on flow direction from water-supply pumping are small compared with the local effects of extraction and injection at chromium IM wells. Transience in the water levels observed at the monitoring wells within the plume area does not appear to be substantially affected by the water-supply pumping at the nearby production wells (PM-2, PM-3, PM-4, PM-5, and O-4) (LANL 2009).

A long-term decline of approximately 0.5 to 1 ft/yr has been observed in the regional water levels throughout the aquifer beneath the Pajarito Plateau. The decline could be caused by long-term changes in the aquifer recharge and discharge conditions. Because of the long-term declines and pumping transience described above, the water-level data and the respective water table contour maps are variable over time; each map therefore represents a specific period of time. Figure 2.3-1 depicts the average water-level data and water table contours for July 2021. General flow direction is indicated by the vector.

To generate this quarterly contour map, average water levels are calculated using values from the middle month of the 3-month reporting period. Monitoring wells within and surrounding the plume are used, including wells not presented on the map (e.g., R-21, R-31, R-32, R-37, and R-40) or in Table 2.3-1. Water levels in wells surrounding the plume provide useful control points for contouring along the edges of the area of interest for this report. Only well screens near the water table are used for contouring.

Regular pumping at wells CrEX-1, CrEX-2, CrEX-3, CrIN-4, and CrIN-5 began on May 23, 2018, and therefore may have started to have a minor influence upon water levels as early as 2018 Quarter 2. During 2018 Quarter 3, an influence was readily recognized as demonstrated by a cone of depression in the area of the extraction wells. In 2018 Quarter 4, the trend continued, with the cone of depression expanding slightly over the previous quarter. The cone of depression continued to expand in northerly and westerly (upstream) directions, possibly in response to pumping at CrEX-2; and in southerly and easterly (downstream) directions, likely because of pumping at CrEX-1. In addition, comparing 2018 Quarter 4 with 2018 Quarter 3, increased water levels were observed to the southwest of the cone of depression, possibly in response to injection at CrIN-4 and CrIN-5. In 2019 Quarter 3, regular injection occurred at CrIN-3, CrIN-4, and CrIN-5, with regular extraction occurring at CrEX-1 and CrEX-2. The water table elevation appeared to respond strongly to extraction activities with a decrease in the center of the cone of depression near CrEX-2 and an extension of the cone further downstream from CrEX-1 as compared with the previous quarter. During 2019 Quarter 4, the cone of depression continued to expand, likely in response to regular pumping at CrEX-1 and CrEX-2 (N3B 2020). The largest injection rates in 2019 Quarter 4 occurred at CrIN-4 and CrIN-5, and an increase in water level at the nearest monitoring well (R-50) was observed. CrEX-5 (which was converted from CrIN-6), CrIN-1, and CrIN-2 began sustained operation in November 2019, and effects on water levels were not yet detectable in 2019 Quarter 4.

In 2020 Quarter 1, injection occurred regularly at CrIN-2, CrIN-4, and CrIN-5. A northward shift in the 5832-ft contour near CrIN-4 and CrIN-5 was evident, as was a westward shift in the 5831-ft contour around the cone of depression west of CrIN-2. The water table also appears to have responded to extraction at CrEX-1, CrEX-2, and CrEX-5. The cone of depression expanded toward CrEX-2, and the 5832-ft contour migrated toward CrEX-5. Consistent injection at CrIN-2, CrIN-4, and CrIN-5 and extraction at CrEX-1, CrEX-2, and CrEX-5 continued until late March 2020, when injection and extraction activities ceased because of the transition to essential mission critical activity (EMCA) status in response to the COVID-19 pandemic (DOE 2020). In 2020 Quarter 2, changes in the water-level elevations appeared to be influenced more by seasonal variations than by injection/extraction, with the cone of depression

shifting slightly downgradient toward the east/southeast. In the 2020 Quarter 3 reporting period, water levels declined across the area of the chromium plume, with multiple wells indicating a decline of approximately 1 ft since the previous quarter, likely due in part to seasonal variations and regional drought conditions. Also, pumping recommenced in July 2020 after shutdown in March 2020 due to the EMCA status (DOE 2020). Extraction at CrEX-2 appeared to have a strong impact, with the cone of depression becoming deeper and translating toward CrEX-2. In 2020 Quarter 4, the upstream (western) edge of the central depression appeared less pronounced than in prior periods. The change in the upstream edge of the depression may be a lingering effect of the EMCA shutoff and/or related in particular to the lack of extraction at CrEX-2 and CrEX-4. This interpretation is supported by the observed increase in water level at CrPZ-1, which is close to CrEX-2, and could be expected to exhibit decreased water levels if pumping at CrEX-2 was strongly impacting water levels, as noted in prior quarters.

In 2021 Quarter 1, a slight increase in average water levels was apparent across the site, as compared with 2020 Quarter 4, likely due to seasonal trends in water table elevation. An exception is the decrease in water level recorded at CrPZ-2, which caused the contour for the central depression to expand northward as compared with the previous quarters, and which is likely linked to extraction at CrEX-3 during February 2021.

In 2021 Quarter 2, pumping occurred at all extraction wells with intermittent extraction at CrEX-3 and regular pumping at the other four extraction wells. Injection occurred at all CrIN wells. The apparent response in the water table was a large increase in the area of the central 5830-ft contour relative to the prior quarter, to encompass CrEX-4 and CrEX-2 and approach CrEX-1.

In the current reporting period of 2021 Quarter 3, monthly average data from August 2021 would normally be used for water table map generation since August is the middle month of the third quarter. However, a lightning storm caused a power outage that disrupted data acquisition at the CrIN and CrEX wells from August 2 to August 26. Therefore, in the current report, a water table map for July 2021 is presented instead of August 2021 to allow interpretation of the map with recorded IM pumping data (Figure 2.3-1). In July 2021, regular extraction occurred at CrEX-1, CrEX-2, CrEX-4, and CrEX-5. Regular injection occurred at CrIN-2, CrIN-4, and CrIN-5 for the full month of July and at CrIN-1 and CrIN-3 until near the end of the month. In apparent response, a 5829-ft contour formed in the area of the central depression, encompassing CrPZ-1 and CrEX-2 and approaching CrEX-4. Also, the 5830-ft contour grew to encompass CrPZ-3 and CrPZ-2.

Simple interpolation methods for water table data from a complex heterogeneous site could produce maps that do not represent physically realistic hydrological systems. This water table map is contoured by incorporating process knowledge of groundwater hydraulics (e.g., flownet conformity rules) as well as conceptual models of groundwater flow in the project area as described above. Key inputs to the conceptual model include knowledge of long-term operations of extraction and injection wells, water-level elevations in monitoring wells near extraction and injection points, and cross-hole tracer data between injection wells and monitoring wells.

Because of the spatial coverage of wells and piezometers and the regional structure of significantly steeper gradients to the east and west of the chromium plume area, surrounding wells (e.g., R-21, R-31, R-32, R-37, and R-40) and control points based on expert opinion are used to provide estimated water-level elevations in areas that do not have sufficient data to provide constraints. As additional analysis is performed using historical and developing data sets from existing wells and data from proposed wells, the use of these control points is being reanalyzed, adjusted, or discontinued based on additional supporting data and contouring methods.

2.4 Any Operations/Maintenance Activities Performed (Requirement 4)

Extraction, treatment, and injection operations continued during 2021 Quarter 3. Operations and maintenance activities completed during 2021 Quarter 3 are listed in Table 2.4-1 for the extraction, treatment, and injection system.

Table 2.4-1
Operations and Maintenance Activity Summary Table – CY 2021 Quarter 3, DP-1835

Maintenance Date	Elements Impacted	Operation/Maintenance Description
7/1/21 through 7/21/21	CrEX-1, CrEX-2, CrEX-4, CrEX-5, CTUA, CTUC, CrIN-1, CrIN-2, CrIN-3, CrIN-4, CrIN-5 CrEX-3	Extraction, treatment, and injection of treated groundwater occurred per operational plan. CrEX-3 turned off after wellhead sampling on 6/30/21.
7/21/21	CTUA	IX vessel exchanges were completed as follows because of an increase in the amount of hexavalent chromium at the primary IX vessel effluent as determined via Hach instrument analysis: • Treatment train A – replaced primary IX vessel with the secondary IX vessel; new secondary IX vessel installed. • Treatment train B – replaced primary IX vessel with the secondary IX vessel; new secondary IX vessel installed. • Treatment train C – replaced primary IX vessel with the secondary IX vessel; new secondary IX vessel installed. Replaced both influent bags and all three effluent filter bags.
7/21/21 through 7/29/21	CrEX-2, CrEX-3, , CrEX-5, CTUA, CTUC, CrIN-2, CrIN-3, CrIN-4, CrIN-5 CrEX-1, CrIN-1	Extraction, treatment, and injection of treated groundwater occurred per operational plan. CrEX-1 would not come back on after vessel swap. CrEX-1 would remain off for the remainder of Quarter 3 2021. CrIN-1 turned off to balance system.
7/25/21	CTUC	IX vessel exchanges were completed as follows because of an increase in the amount of hexavalent chromium at the primary IX vessel effluent as determined via Hach instrument analysis: • Treatment train A – replaced primary IX vessel with the secondary IX vessel; new secondary IX vessel installed. • Treatment train B – replaced primary IX vessel with the secondary IX vessel; new secondary IX vessel installed. Replaced both influent bags.
7/29/21	CrIN-1, CrIN-3	Turned off CrIN-3 and turned on CrIN-1 for system balancing.
7/29/21 through 8/16/21	CrEX-2, CrEX-3, CrEX-4, CrEX-5, CTUA, CTUC, CrIN-1, CrIN-2, CrIN-4, CrIN-5	Extraction, treatment, and injection of treated groundwater occurred per operational plan.
8/15/21 through 8/16/21	CrEX-2, CrEX-3, CrEX-4, CrEX-5, CTUA, CTUC, CrIN-1, CrIN-2, CrIN-4, CrIN-5	Lightning storm and power outage to Mortandad Canyon on evening of 8/15/21. Entire system down overnight. Restarted system on 8/16/21. CrIN-5 offline due to uninterrupted power supply failure related to lightning.

Table 2.4-1 (continued)

Maintenance Date	Elements Impacted	Operation/Maintenance Description
8/16/21 through 8/24/21	CrEX-2, CrEX-3, CrEX-4, CrEX-5, CTUA, CTUC, CrIN-1, CrIN-2, CrIN-4	Extraction, treatment, and injection of treated groundwater occurred per operational plan.
8/20/21	CTUA	IX vessel exchanges were completed as follows because of an increase in the amount of hexavalent chromium at the primary IX vessel effluent as determined via Hach instrument analysis: • Treatment train A – replaced primary IX vessel with the secondary IX vessel; installed new secondary IX vessel. • Treatment train B – replaced primary IX vessel with the secondary IX vessel; installed new secondary IX vessel. • Treatment train C – replaced primary IX vessel with the secondary IX vessel; installed new secondary IX vessel. Replaced both influent bags and all three effluent filter bags.
8/24/21	CrIN-5	Repaired CrIN-5 electrical issue and turned well back on.
8/25/21	CTUC	IX vessel exchanges were completed as follows because of an increase in the amount of hexavalent chromium at the primary IX vessel effluent as determined via Hach instrument analysis: • Treatment train A – replaced primary IX vessel with the secondary IX vessel; installed new secondary IX vessel. • Treatment train B – replaced primary IX vessel with the secondary IX vessel; installed new secondary IX vessel. Replaced both influent bags and both effluent filter bags.
8/26/21 through 8/27/21	CrEX-2, CrEX-3, CrEX-4, CrEX-5, CTUA, CTUC, CrIN-1, CrIN-2, CrIN-4, CrIN-5	Lightning storm and power outage to Mortandad Canyon on evening of 8/26/21. Entire system down overnight. Restarted system on 8/27/21.
8/27/21 through 9/22/21	CrEX-2, CrEX-3, CrEX-4, CrEX-5, CTUA, CTUC, CrIN-1, CrIN-2, CrIN-4, CrIN-5	Extraction, treatment, and injection of treated groundwater occurred per operational plan.
9/22/21	CTUC	IX vessel exchanges were completed as follows because of an increase in the amount of hexavalent chromium at the primary IX vessel effluent as determined via Hach instrument analysis: • Treatment train A – replaced primary IX vessel with the secondary IX vessel; installed new secondary IX vessel. • Treatment train B – replaced primary IX vessel with the secondary IX vessel; installed new secondary IX vessel. Replaced both influent bags and both effluent filter bags.
9/22/21 through 9/29/21	CrEX-2, CrEX-3, CrEX-4, CrEX-5, CTUA, CTUC, CrIN-1, CrIN-2, CrIN-4, CrIN-5	Extraction, treatment, and injection of treated groundwater occurred per operational plan.

Table 2.4-1 (continued)

Maintenance Date	Elements Impacted	Operation/Maintenance Description
9/29/21	CTUA	IX vessel exchanges were completed as follows because of an increase in the amount of hexavalent chromium at the primary IX vessel effluent as determined via Hach instrument analysis: • Treatment train A – replaced primary IX vessel with the secondary IX vessel; installed new secondary IX vessel. • Treatment train B – replaced primary IX vessel with the secondary IX vessel; installed new secondary IX vessel. • Treatment train C – replaced primary IX vessel with the secondary IX vessel; installed new secondary IX vessel. Replaced both influent bags and all three effluent filter bags.
9/29/21 through 9/30/21	CrEX-2, CrEX-3, CrEX-4, CrEX-5, CTUA, CTUC, CrIN-1, CrIN-2, CrIN-4, CrIN-5	Extraction, treatment, and injection of treated groundwater occurred per operational plan.

2.5 Any Periodic Test of Mechanical Integrity Conducted (Requirement 5)

Periodic testing of mechanical integrity was not conducted or reported to NMED during 2021 Quarter 3. Mechanical integrity testing was performed and reported to NMED during the 2019 Quarter 2 reporting period. In accordance with Condition No. 3, mechanical integrity testing will occur at least once every five yr unless a UIC well is reconfigured. Under this scenario, a mechanical integrity test before reinjection of treated effluent at a specific reconfigured well will be completed pursuant to Condition No. 3.

2.6 Any Replacement of Primary or Secondary IX Vessels or Associated Treatment System Infrastructure (Requirement 6)

New primary and secondary IX vessels were installed at various times for treatment unit CTUA (all three treatment trains) and at CTUC (both treatment trains) during the reporting period, as cited in section 2.4.

2.7 Any Well Workovers Conducted (Requirement 7)

No well workovers were conducted during 2021 Quarter 3.

2.8 Any Additional Operational Changes with the Potential to Markedly Affect the Discharge (Requirement 8)

During the reporting period, the pilot-scale molasses amendment and sodium dithionite amendment studies continued. In accordance with NMED's conditional approval of these studies, analytical results from iron, manganese, and arsenic testing of the treated water from the extraction wells during the study are being provided in the quarterly monitoring reports under DP-1835. These results for 2021 Quarter 3 are provided in Table 2.2-2.

No results for arsenic, iron, or manganese exceeded 90% of the numeric standards of 20.6.2.3103 NMAC or 90% of the numeric standards established for tap water in Table A-1 of the 2019 NMED risk assessment guidance (NMED 2019) for constituents not listed in 20.6.2.3103 NMAC. The 90% values for arsenic, iron, and manganese are 9 µg/L, 900 µg/L, and 180 µg/L, respectively.

Other than the activities cited in section 2.4, no additional operational changes occurred during the reporting period.

2.9 Monthly Average, Maximum, and Minimum Values for Flow Rate and Volume of Treated Effluent Transferred to Each UIC Well (Requirement 9)

Table 2.9-1 provides the monthly average, maximum, and minimum values for flow rate and volume of treated effluent transferred to each well in 2021 Quarter 3.

Table 2.9-1
Flows and Volumes of Treated Effluent Injected – CY 2021 Quarter 3, DP-1835

Injection Well	Flow rate (gpm[a])			Daily Volume (gal.)			Total Volume (gal.)
	Average[b]	Maximum	Minimum[c]	Average	Maximum	Minimum	
July 2021							
CrIN-1	57.3	62.0	27.4	82,572	89,266	39,519	1,981,737
CrIN-2	62.4	66.0	56.5	89,906	94,995	81,372	2,787,083
CrIN-3	26.2	33.9	21.3	37,738	48,745	30,635	1,074,644
CrIN-4	55.0	57.0	50.7	79,175	82,024	72,969	2,454,432
CrIN-5	54.8	58.2	51.0	78,949	83,863	73,412	2,447,404
August 2021							
CrIN-1	55.0	65.1	28.5	79,202	93,771	41,041	2,455,261
CrIN-2	58.0	66.5	33.0	83,531	95,743	47,451	2,589,470
CrIN-3	0.1	0.1	0.1	120	120	120	120
CrIN-4	51.2	64.5	30.4	73,684	92,890	43,711	2,284,216
CrIN-5	48.2	55.4	19.4	69,383	79,846	27,999	1,595,800
September 2021							
CrIN-1	52.8	58.0	47.3	76,005	83,524	68,153	2,280,162
CrIN-2	55.7	61.3	51.6	80,220	88,313	74,341	2,406,612
CrIN-3	0.0	0.0	0.0	0	0	0	0
CrIN-4	49.3	51.6	48.0	70,948	74,340	69,179	2,128,431
CrIN-5	50.0	51.4	48.2	71,992	74,077	69,441	2,159,769

[a] gpm = Gallons per minute.

[b] Average flow rate and daily volume represent arithmetic mean values of results provided during periods when treated groundwater was being injected.

[c] Minimum values represent the minimum daily value recorded during days when pumping occurred.

2.10 Total Monthly Volume of Treated Effluent Transferred to Each UIC Well (Requirement 10)

Table 2.9-1 provides total monthly volumes of treated effluent transferred to each well. As previously identified, injection occurred at UIC wells CrIN-1, CrIN-2, CrIN-3, CrIN-4, and CrIN-5 during 2021 Quarter 3.

2.11 Monthly Average, Maximum, and Minimum Values of Injection Water Level (Pressure Head) Above Static Level for Each UIC Well (Requirement 11)

Table 2.11-1 provides the monthly average, maximum, and minimum values for injection water level above static level for each UIC well.

Table 2.11-1
Water-Level Values Above Static Level by UIC Well – CY 2021 Quarter 3, DP-1835

UIC Well	July 2021			August 2021			September 2021		
	Average* (ft)	Maximum (ft)	Minimum (ft)	Average (ft)	Maximum (ft)	Minimum (ft)	Average (ft)	Maximum (ft)	Minimum (ft)
CrIN-1	20.6	24.2	2.1	19.4	23.3	17.4	18.9	24.2	15.3
CrIN-2	9.8	11.7	6.9	9.9	11.4	7.8	9.4	10.6	7.8
CrIN-3	8.4	13.1	0.5	0	0	0	0	0	0
CrIN-4	9.2	10.2	7.4	9.3	11.9	7.2	9.3	10.4	3.0
CrIN-5	17.2	18.9	6.2	17.1	19.6	10.6	17.2	19.4	9.9

* Average values provided represent arithmetic mean values of maximum daily values during periods when treated groundwater was being injected.

2.12 Daily Volume Injected at Each UIC Well (Requirement 12)

Daily volumes of groundwater injected (following treatment) during 2021 Quarter 3 are presented in Table 2.12-1.

Table 2.12-1
Daily Injection Summary Table – CY 2021 Quarter 3, DP-1835

Date	CrIN-1 (gal.)	CrIN-2 (gal.)	CrIN-3 (gal.)	CrIN-4 (gal.)	CrIN-5 (gal.)	Total (gal.)
7/1/2021	84,947	86,647	37,768	78,095	81,977	369,434
7/2/2021	87,048	93,031	39,657	80,487	81,261	381,484
7/3/2021	85,430	91,830	41,657	81,003	81,056	380,976
7/4/2021	85,746	90,439	39,990	80,897	78,223	375,295
7/5/2021	89,266	88,675	40,303	80,685	76,392	375,322
7/6/2021	87,038	92,558	40,243	80,622	76,336	376,796
7/7/2021	86,977	92,567	39,075	80,464	76,309	375,392
7/8/2021	87,116	92,714	37,352	80,876	76,899	374,957
7/9/2021	87,826	93,414	34,548	80,899	77,742	374,429
7/10/2021	85,442	91,803	37,263	81,073	77,403	372,984
7/11/2021	88,340	91,678	41,730	79,165	78,566	379,479
7/12/2021	86,461	91,013	41,760	81,290	82,022	382,544
7/13/2021	85,994	89,495	38,703	81,914	82,564	378,669
7/14/2021	86,372	89,578	34,863	81,885	83,863	376,561
7/15/2021	86,366	92,118	34,708	81,821	83,763	378,776
7/16/2021	86,386	94,504	34,626	81,333	83,518	380,367
7/17/2021	86,397	94,626	34,563	81,276	83,495	380,357

Table 2.12-1 (continued)

Date	CrIN-1 (gal.)	CrIN-2 (gal.)	CrIN-3 (gal.)	CrIN-4 (gal.)	CrIN-5 (gal.)	Total (gal.)
7/18/2021	86,389	93,931	34,565	80,974	83,611	379,470
7/19/2021	86,414	94,392	34,571	80,924	83,476	379,777
7/20/2021	86,394	94,995	30,635	82,024	82,239	376,287
7/21/2021	53,615	92,957	32,022	80,078	80,376	339,048
7/22/2021	0	87,804	33,117	78,073	76,950	275,943
7/23/2021	0	88,105	32,975	76,237	75,966	273,283
7/24/2021	0	85,093	32,466	73,417	73,412	264,388
7/25/2021	0	85,052	42,091	73,433	73,435	274,012
7/26/2021	0	85,141	48,745	73,402	73,979	281,267
7/27/2021	0	86,207	43,478	72,969	73,476	276,130
7/28/2021	0	86,901	43,193	77,430	77,348	284,872
7/29/2021	39,519	81,372	17,977	80,248	80,092	299,208
7/30/2021	77,738	82,239	0	76,470	75,923	312,370
7/31/2021	78,517	86,205	0	74,967	75,736	315,426
8/1/2021	78,902	87,057	0	72,426	74,869	313,253
8/2/2021	78,952	86,381	0	72,872	74,634	312,839
8/3/2021	78,364	85,169	0	73,354	74,642	311,527
8/4/2021	78,604	85,680	0	73,878	74,661	312,822
8/5/2021	78,408	86,902	0	73,523	74,426	313,260
8/6/2021	78,378	87,437	0	73,504	76,424	315,743
8/7/2021	78,960	88,635	0	74,554	75,698	317,846
8/8/2021	79,438	86,815	0	74,774	79,846	320,873
8/9/2021	79,286	84,540	0	74,428	76,509	314,762
8/10/2021	78,653	84,424	0	74,640	79,803	317,520
8/11/2021	78,347	84,527	0	74,592	73,777	311,243
8/12/2021	78,216	86,376	0	74,273	68,861	307,727
8/13/2021	81,058	85,553	0	74,012	73,163	313,787
8/14/2021	82,395	84,346	0	73,596	74,957	315,294
8/15/2021	54,850	55,237	0	49,272	49,986	209,345
8/16/2021	54,314	51,391	0	45,226	0	150,931
8/17/2021	93,771	88,436	0	78,542	0	260,749
8/18/2021	92,912	88,856	0	79,575	0	261,342
8/19/2021	92,226	88,133	0	80,326	0	260,685
8/20/2021	92,668	88,266	0	82,206	0	263,140
8/21/2021	92,565	93,776	0	88,863	0	275,204
8/22/2021	92,535	95,743	0	92,890	0	281,167
8/23/2021	92,097	94,701	0	90,926	0	277,724
8/24/2021	91,646	95,601	0	88,894	27,999	304,140

Table 2.12-1 (continued)

Date	CrIN-1 (gal.)	CrIN-2 (gal.)	CrIN-3 (gal.)	CrIN-4 (gal.)	CrIN-5 (gal.)	Total (gal.)
8/25/2021	84,321	92,677	0	80,964	74,664	332,626
8/26/2021	52,616	57,693	0	50,322	49,762	210,392
8/27/2021	41,041	47,451	120	43,711	44,127	176,451
8/28/2021	77,207	85,094	0	74,850	73,448	310,600
8/29/2021	79,213	87,458	0	74,246	72,195	313,111
8/30/2021	79,820	87,702	0	74,429	74,792	316,743
8/31/2021	83,498	87,414	0	74,550	76,558	322,020
9/1/2021	82,809	85,145	0	72,395	74,077	314,426
9/2/2021	76,400	86,013	0	72,960	73,562	308,935
9/3/2021	77,598	86,570	0	72,724	72,727	309,620
9/4/2021	77,718	88,313	0	72,386	72,598	311,014
9/5/2021	79,959	85,457	0	72,123	72,217	309,756
9/6/2021	76,685	84,931	0	72,001	73,651	307,269
9/7/2021	71,604	85,752	0	69,533	72,608	299,498
9/8/2021	78,845	81,999	0	69,531	72,075	302,450
9/9/2021	79,966	79,195	0	72,550	72,525	304,236
9/10/2021	75,771	79,600	0	74,340	71,697	301,408
9/11/2021	74,877	74,341	0	71,813	71,179	292,211
9/12/2021	73,677	74,871	0	70,891	73,332	292,771
9/13/2021	73,452	74,686	0	70,567	73,236	291,941
9/14/2021	74,315	77,295	0	70,593	72,896	295,099
9/15/2021	83,524	79,150	0	70,627	73,439	306,740
9/16/2021	76,858	79,050	0	70,745	72,232	298,886
9/17/2021	74,916	77,191	0	70,202	69,441	291,751
9/18/2021	77,407	77,811	0	69,179	70,063	294,460
9/19/2021	76,399	80,072	0	71,657	71,421	299,549
9/20/2021	76,318	82,769	0	70,671	71,050	300,809
9/21/2021	76,218	80,935	0	70,330	70,345	297,827
9/22/2021	74,847	82,678	0	71,571	70,627	299,723
9/23/2021	74,892	78,697	0	69,755	70,798	294,142
9/24/2021	74,882	77,564	0	70,129	72,520	295,095
9/25/2021	75,823	77,969	0	69,452	71,756	294,999
9/26/2021	73,621	77,782	0	69,313	71,568	292,283
9/27/2021	72,395	77,302	0	69,660	71,937	291,294
9/28/2021	68,153	77,788	0	70,534	71,986	288,461
9/29/2021	73,213	77,679	0	69,935	72,178	293,005
9/30/2021	77,015	78,008	0	70,267	70,027	295,317
Total 28,645,141						

2.13 Daily Volume Pumped from Each Extraction Well (Requirement 13)

Daily volumes of groundwater pumped from extraction wells during 2021 Quarter 3 are presented in Table 2.13-1.

Table 2.13-1
Daily Extraction Summary Table – CY 2021 Quarter 3, DP-1835

Date	CrEX-1 (gal.)	CrEX-2 (gal.)	CrEX-3 (gal.)	CrEX-4 (gal.)	CrEX-5 (gal.)	Total (gal.)
7/1/2021	106,373	92,131	0	81,652	93,513	373,669
7/2/2021	105,606	91,929	0	82,116	93,642	373,293
7/3/2021	105,431	92,260	0	82,131	93,644	373,466
7/4/2021	102,176	92,006	0	84,925	98,318	377,425
7/5/2021	97,973	93,279	0	82,846	98,256	372,355
7/6/2021	99,757	92,626	0	85,254	100,074	377,711
7/7/2021	98,589	93,199	0	82,731	98,084	372,602
7/8/2021	101,778	92,594	0	82,037	98,123	374,532
7/9/2021	103,684	92,235	0	82,152	97,911	375,983
7/10/2021	102,084	92,628	0	82,049	98,066	374,828
7/11/2021	97,116	93,505	0	84,563	98,224	373,408
7/12/2021	98,137	92,862	0	85,496	101,305	377,800
7/13/2021	96,433	92,979	0	86,383	102,207	378,002
7/14/2021	96,522	93,006	0	86,375	102,210	378,113
7/15/2021	96,421	93,031	0	86,454	102,303	378,209
7/16/2021	97,382	93,032	0	83,622	99,654	373,690
7/17/2021	97,968	93,210	0	82,092	98,376	371,647
7/18/2021	96,357	92,447	0	86,453	100,748	376,005
7/19/2021	94,982	92,107	0	90,745	102,171	380,005
7/20/2021	95,027	92,158	0	90,790	102,183	380,157
7/21/2021	43,819	83,823	0	88,068	102,972	318,681
7/22/2021	9	90,866	0	89,884	100,381	281,140
7/23/2021	0	94,018	0	87,438	97,182	278,638
7/24/2021	0	94,004	0	86,363	98,059	278,426
7/25/2021	0	94,221	0	89,247	97,914	281,383
7/26/2021	0	94,355	0	92,119	99,593	286,068
7/27/2021	0	94,156	0	92,165	99,741	286,063
7/28/2021	0	93,929	0	91,771	101,435	287,135
7/29/2021	0	93,872	19,421	85,656	102,992	301,941
7/30/2021	0	94,024	39,282	79,861	102,121	315,287
7/31/2021	0	93,994	42,090	79,189	102,106	317,380
8/1/2021	0	94,010	41,774	79,218	102,101	317,103

Table 2.13-1 (continued)

Date	CrEX-1 (gal.)	CrEX-2 (gal.)	CrEX-3 (gal.)	CrEX-4 (gal.)	CrEX-5 (gal.)	Total (gal.)
8/2/2021	0	94,054	41,697	79,168	102,017	316,937
8/3/2021	0	93,713	42,178	78,839	101,943	316,673
8/4/2021	0	94,309	42,618	78,154	101,416	316,498
8/5/2021	0	93,980	38,812	80,654	98,328	311,774
8/6/2021	0	93,880	39,551	80,875	98,689	312,995
8/7/2021	0	93,954	40,932	84,392	100,176	319,454
8/8/2021	0	94,426	41,389	81,244	101,003	318,062
8/9/2021	0	93,797	44,461	79,056	100,614	317,928
8/10/2021	0	93,720	44,747	80,883	99,964	319,314
8/11/2021	0	93,515	43,141	80,951	96,536	314,143
8/12/2021	0	93,684	40,626	78,032	96,012	308,354
8/13/2021	0	93,261	40,995	78,639	103,214	316,110
8/14/2021	0	94,006	42,085	78,509	103,910	318,510
8/15/2021	0	62,478	27,742	51,538	68,053	209,811
8/16/2021	0	55,709	0	38,917	49,627	144,253
8/17/2021	0	94,985	0	67,469	85,481	247,936
8/18/2021	0	91,959	26,065	69,631	81,114	268,769
8/19/2021	0	87,768	38,322	70,772	78,355	275,218
8/20/2021	0	85,994	37,172	68,218	79,952	271,335
8/21/2021	0	92,173	38,257	67,200	54,995	252,624
8/22/2021	0	92,374	38,387	71,795	71,167	273,723
8/23/2021	0	90,905	34,656	74,752	85,784	286,096
8/24/2021	0	86,601	33,668	71,491	83,369	275,129
8/25/2021	0	89,746	41,978	78,996	90,360	301,080
8/26/2021	0	61,699	30,766	54,693	64,421	211,580
8/27/2021	0	52,048	27,010	44,472	55,177	178,707
8/28/2021	0	94,285	45,898	78,238	100,118	318,538
8/29/2021	0	94,413	41,834	78,537	100,452	315,235
8/30/2021	0	94,099	41,754	79,246	101,140	316,239
8/31/2021	0	93,891	41,893	82,840	101,648	320,273
9/1/2021	0	93,401	41,538	85,977	100,496	321,412
9/2/2021	0	93,683	39,546	83,248	97,799	314,277
9/3/2021	0	94,111	38,950	81,288	99,198	313,547
9/4/2021	0	94,086	38,751	79,804	98,087	310,727
9/5/2021	0	93,955	37,466	80,908	99,657	311,985
9/6/2021	0	92,373	36,745	77,286	101,541	307,945
9/7/2021	0	91,729	31,498	81,325	98,214	302,767
9/8/2021	0	93,154	27,356	84,872	101,484	306,866

Table 2.13-1 (continued)

Date	CrEX-1 (gal.)	CrEX-2 (gal.)	CrEX-3 (gal.)	CrEX-4 (gal.)	CrEX-5 (gal.)	Total (gal.)
9/9/2021	0	93,429	26,993	81,339	104,473	306,234
9/10/2021	0	93,610	26,651	77,459	102,171	299,892
9/11/2021	0	93,546	24,046	79,768	103,106	300,467
9/12/2021	0	93,025	21,842	76,816	96,842	288,524
9/13/2021	0	92,986	24,918	80,281	99,513	297,698
9/14/2021	0	94,114	28,092	83,522	97,125	302,853
9/15/2021	0	94,145	26,456	81,726	101,780	304,108
9/16/2021	0	93,860	24,777	80,599	103,492	302,727
9/17/2021	0	93,808	22,394	78,616	102,729	297,547
9/18/2021	0	93,239	23,363	78,178	101,328	296,108
9/19/2021	0	93,418	26,260	76,931	101,503	298,112
9/20/2021	0	93,884	28,881	77,199	101,139	301,103
9/21/2021	0	93,712	30,404	77,548	100,764	302,428
9/22/2021	0	92,685	28,699	77,016	99,510	297,910
9/23/2021	0	93,451	24,317	80,451	103,835	302,054
9/24/2021	0	97,262	20,554	80,889	104,696	303,402
9/25/2021	0	90,088	21,260	78,887	103,235	293,471
9/26/2021	0	94,192	20,167	77,941	106,571	298,871
9/27/2021	0	94,270	21,554	76,994	106,579	299,397
9/28/2021	0	90,526	22,488	78,602	102,055	293,671
9/29/2021	0	87,667	19,634	74,415	100,027	281,743
9/30/2021	0	99,163	22,428	80,035	102,550	304,176
Total 28,697,465						

2.14 Facility Layout Map (Requirement 14)

Figure 2.14-1 is the facility layout map for 2021 Quarter 3, showing the location and number of each well.

2.15 Groundwater Elevation Contour Map (Requirement 15)

Figure 2.3-1 provides the groundwater elevation contour map and section 2.3 provides an explanation of how this map was generated.

3.0 REFERENCES

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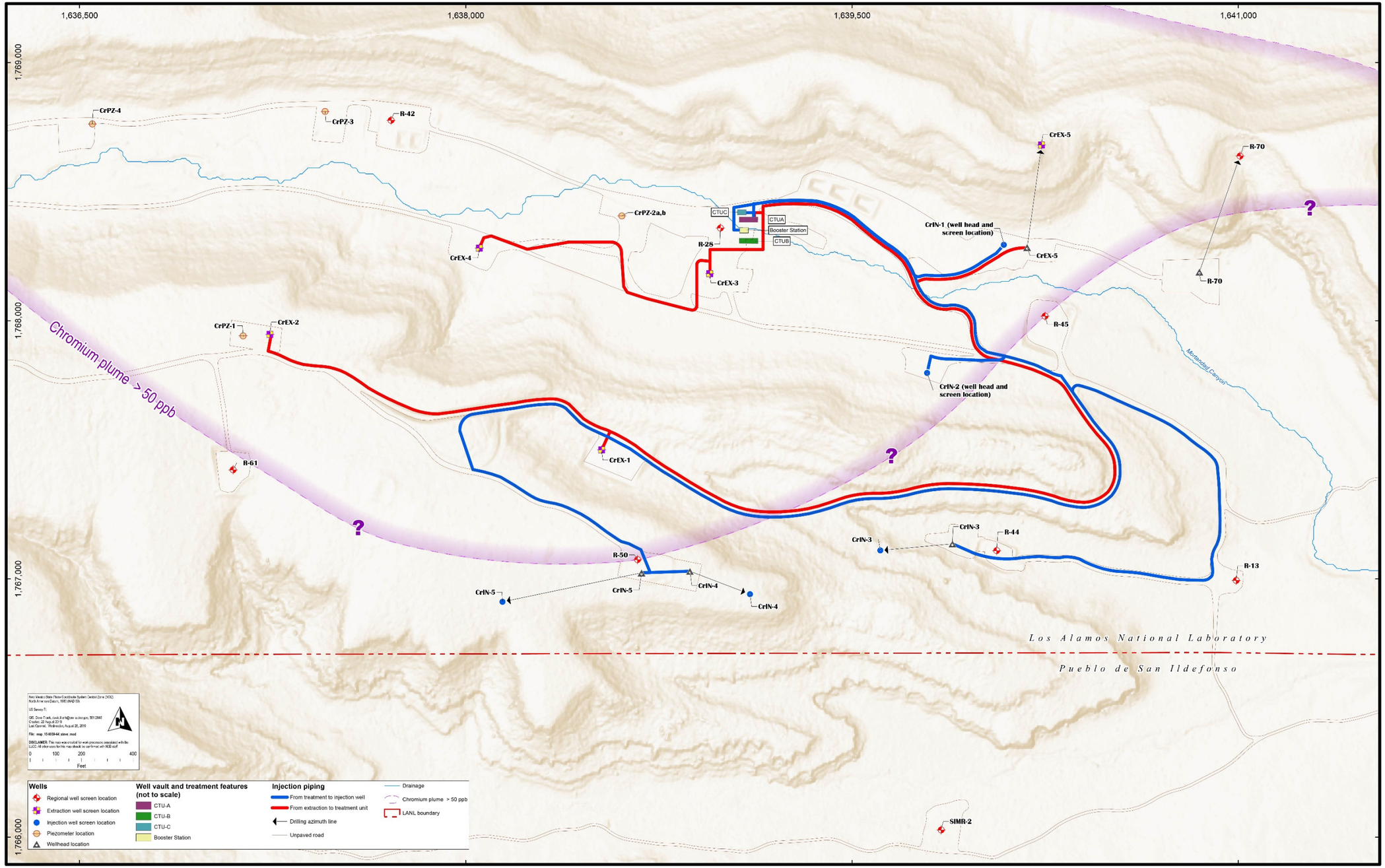

Figure 2.14-1 Facility layout map – CY 2021 Quarter 3, DP-1835