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GROUND WATER
QUALITY BUREAU

Environmental Management
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Date: June 5, 2023
Refer To: N3B-2023-0173

Justin Ball, Chief
Ground Water Quality Bureau
New Mexico Environment Department
1190 S. St. Francis Drive
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 2023 Quarter 1, 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 from LANS to Newport News Nuclear BWXT-Los Alamos, LLC (N3B). Pursuant to Condition Number 10 of the above-referenced discharge permit, DOE/N3B are required to submit quarterly reports 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 Condition Numbers 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 Number 10 requires submission of a quarterly report to NMED by June 1, 2023, for the January 1 through March 31, 2023, discharge period.

During the CY 2023 Quarter 1 reporting period for DP-1835, discharge of treated groundwater to the regional aquifer occurred at two UIC wells: CrIN-4 and CrIN-5. Groundwater originated from two extraction wells: CrEX-4 and CrEX-5. The groundwater was treated by chromium treatment unit A (CTUA) 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 2023 Quarter 1," 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,



Robert Macfarlane
Program Manager
Environment, Safety, Health and Quality
N3B-Los Alamos

Sincerely,

For M Lee Bishop

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For M Lee Bishop
Date: 2023.06.01
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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 2023 Quarter 1 (EM2023-0338)

cc (letter and enclosure[s] emailed):

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**Quarterly Report for the
Discharge of Treated
Groundwater to the
Regional Aquifer under
Discharge Permit 1835,
Calendar Year 2023 Quarter 1**

Newport News Nuclear BWXT-Los Alamos, LLC (N3B), under the U.S. Department of Energy Office of Environmental Management Contract No. 89303318CEM000007 (the Los Alamos Legacy Cleanup Contract), has prepared this document. The public may copy and use this document without charge, provided that this notice and any statement of authorship are reproduced on all copies.

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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 4 of calendar year (CY) 2018, ownership of the discharge permit transferred from LANS to Newport News Nuclear BWXT-Los Alamos, LLC (N3B).

During the CY 2023 Quarter 1 reporting period for DP-1835, groundwater was extracted for treatment from two extraction wells, CrEX-4 and CrEX-5. The groundwater was treated by ion exchange (IX) in Chromium Treatment Unit A (CTUA). Discharge of treated groundwater to the regional aquifer occurred at two UIC wells, CrIN-4 and CrIN-5.

Condition No. 10 of DP-1835 requires submission of a quarterly report to NMED by June 1 for the January 1 through March 31 discharge period. Several conditions within the permit identify information to be submitted in the quarterly report. These conditions are addressed in this report in the following requirements:

1. Influent and discharge volumes for the 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.a)
6. Any replacement of primary or secondary IX vessels or associated treatment system infrastructure (Condition No. 11.b)
7. Any well workovers conducted (Condition No. 11.c)
8. Any additional operational changes with the potential to markedly affect the discharge (Condition No. 11.d)
9. Monthly average, maximum, and minimum values for flow rate and volume of treated effluent transferred to each UIC well (Condition No. 12.a)
10. Total monthly volume of treated effluent transferred to each UIC well (Condition No. 12.b)
11. Monthly average, maximum, and minimum values of injection water level (pressure head) above static level for each UIC well (Condition No. 12.c)
12. Daily volume injected at each UIC well (Condition No. 12.d)
13. Daily volume pumped from each extraction well (Condition No. 12.e)
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 total influent volume to the IX system, and the discharge volumes from IX treatment systems CTUA, during CY 2023 Quarter 1 for activities completed under DP-1835.

Table 2.1-1
Total Influent and Discharge Volumes
for IX Treatment Systems – CY 2023 Quarter 1, DP-1835

Treatment Unit	Influent Volume ^a (gal.)	Effluent Volume ^b (gal.)
CTUA	17,703,171	17,713,533

Note: Individual flow meter accurate to $\pm 5\%$.

^a Influent volume based on predominantly CrEX-4 and CrEX-5 extraction volumes.

^b Effluent volume based on CTUA flow-meter readings.

2.2 Quarterly Treated Effluent Sampling Results from Each Ion-Exchange Treatment System (Requirement 2)

Analytical results from samples of treated effluent collected during CY 2023 Quarter 1 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 2022 NMED “Risk Assessment Guidance for Site Investigations and Remediation Volume 1, Soil Screening Guidance for Human Health Risk Assessments” (NMED 2022). The values representing 90% of the applicable standards or screening levels for these seven analytes follow:

- Chloride 225 mg/L
- Chromium 45 $\mu\text{g/L}$
- Fluoride 1.44 mg/L
- Nitrate 9 mg/L
- Perchlorate 12.4 $\mu\text{g/L}$
- Sulfate 540 mg/L
- Total dissolved solids 900 mg/L

Table 2.2-1
Treated Effluent Analytical Results Summary Table – CY 2023 Quarter 1, 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	CrTMT-23-259619	1/4/2023	Chloride	68.3	mg/L	225	n/a ^b	Y ^c	Y ^d	1.34
CTUA	CrTMT-23-259620	1/10/2023	Chloride	17.4	mg/L	225	n/a	Y	Y	0.335
CTUA	CrTMT-23-259621	1/19/2023	Chloride	18.0	mg/L	225	n/a	Y	Y	0.335
CTUA	CrTMT-23-259622	1/23/2023	Chloride	18.1	mg/L	225	n/a	Y	Y	0.335
CTUA	CrTMT-23-259623	1/30/2023	Chloride	16.9	mg/L	225	n/a	Y	Y	0.335
CTUA	CrTMT-23-259624	2/8/2023	Chloride	72.8	mg/L	225	n/a	Y	Y	1.34
CTUA	CrTMT-23-259625	2/14/2023	Chloride	18.0	mg/L	225	n/a	Y	Y	0.335
CTUA	CrTMT-23-259626	2/21/2023	Chloride	16.3	mg/L	225	n/a	Y	Y	0.335
CTUA	CrTMT-23-259627	3/1/2023	Chloride	17.2	mg/L	225	n/a	Y	Y	0.335
CTUA	CrTMT-23-259628	3/6/2023	Chloride	17.9	mg/L	225	n/a	Y	Y	0.335
CTUA	CrTMT-23-259629	3/15/2023	Chloride	73.0	mg/L	225	n/a	Y	Y	0.67
CTUA	CrTMT-23-259630	3/20/2023	Chloride	18.2	mg/L	225	n/a	Y	Y	0.335
CTUA	CrTMT-23-259631	3/27/2023	Chloride	17.4	mg/L	225	n/a	Y	Y	0.335
CTUA	CrTMT-23-259619	1/4/2023	Chromium	3.0	µg/L	45	U ^e	N ^f	Y	3.00
CTUA	CrTMT-23-259620	1/10/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259621	1/19/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259622	1/23/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259623	1/30/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259624	2/8/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259625	2/14/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259626	2/21/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259627	3/1/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259628	3/6/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259629	3/15/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00

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	CrTMT-23-259630	3/20/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259631	3/27/2023	Chromium	3.0	µg/L	45	U	N	Y	3.00
CTUA	CrTMT-23-259619	1/4/2023	Fluoride	0.4	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259620	1/10/2023	Fluoride	0.35	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259621	1/19/2023	Fluoride	0.50	mg/L	1.44	U	N	Y	0.033
CTUA	CrTMT-23-259622	1/23/2023	Fluoride	0.48	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259623	1/30/2023	Fluoride	0.39	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259624	2/8/2023	Fluoride	0.37	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259625	2/14/2023	Fluoride	0.39	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259626	2/21/2023	Fluoride	0.24	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259627	3/1/2023	Fluoride	0.33	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259628	3/6/2023	Fluoride	0.45	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259629	3/15/2023	Fluoride	0.33	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259630	3/20/2023	Fluoride	0.45	mg/L	1.44	n/a	Y	Y	0.033
CTUA	CrTMT-23-259631	3/27/2023	Fluoride	0.368	mg/L	9	n/a	Y	Y	0.033
CTUA	CrTMT-23-259619	1/4/2023	Nitrate-Nitrite as Nitrogen	0.02	mg/L	9	U	N	Y	0.017
CTUA	CrTMT-23-259620	1/10/2023	Nitrate-Nitrite as Nitrogen	3.79	mg/L	9	n/a	Y	Y	0.17
CTUA	CrTMT-23-259621	1/19/2023	Nitrate-Nitrite as Nitrogen	3.66	mg/L	9	n/a	Y	Y	0.17
CTUA	CrTMT-23-259622	1/23/2023	Nitrate-Nitrite as Nitrogen	3.48	mg/L	9	n/a	Y	Y	0.17
CTUA	CrTMT-23-259623	1/30/2023	Nitrate-Nitrite as Nitrogen	3.67	mg/L	9	n/a	Y	Y	0.17
CTUA	CrTMT-23-259624	2/8/2023	Nitrate-Nitrite as Nitrogen	0.02	mg/L	9	J ^g	Y	Y	0.017
CTUA	CrTMT-23-259625	2/14/2023	Nitrate-Nitrite as Nitrogen	5.20	mg/L	9	n/a	Y	Y	0.085
CTUA	CrTMT-23-259626	2/21/2023	Nitrate-Nitrite as Nitrogen	3.50	mg/L	9	n/a	Y	Y	0.085
CTUA	CrTMT-23-259627	3/1/2023	Nitrate-Nitrite as Nitrogen	3.62	mg/L	9	n/a	Y	Y	0.17
CTUA	CrTMT-23-259628	3/6/2023	Nitrate-Nitrite as Nitrogen	3.66	mg/L	9	n/a	Y	Y	0.17
CTUA	CrTMT-23-259629	3/15/2023	Nitrate-Nitrite as Nitrogen	0.05	mg/L	9	n/a	Y	Y	0.017

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	CrTMT-23-259630	3/20/2023	Nitrate-Nitrite as Nitrogen	4.60	mg/L	9	n/a	Y	Y	0.17
CTUA	CrTMT-23-259631	3/27/2023	Nitrate-Nitrite as Nitrogen	3.62	mg/L	9	n/a	Y	Y	0.17
CTUA	CrTMT-23-259619	1/4/2023	Perchlorate	0.09	µg/L	12.4	J	Y	Y	0.05
CTUA	CrTMT-23-259620	1/10/2023	Perchlorate	0.327	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CrTMT-23-259621	1/19/2023	Perchlorate	0.376	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CrTMT-23-259622	1/23/2023	Perchlorate	0.375	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CrTMT-23-259623	1/30/2023	Perchlorate	0.362	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CrTMT-23-259624	2/8/2023	Perchlorate	0.147	µg/L	12.4	J	Y	Y	0.05
CTUA	CrTMT-23-259625	2/14/2023	Perchlorate	0.487	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CrTMT-23-259626	2/21/2023	Perchlorate	0.585	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CrTMT-23-259627	3/1/2023	Perchlorate	0.687	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CrTMT-23-259628	3/6/2023	Perchlorate	0.843	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CrTMT-23-259629	3/15/2023	Perchlorate	0.191	µg/L	12.4	J	Y	Y	0.05
CTUA	CrTMT-23-259630	3/20/2023	Perchlorate	0.665	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CrTMT-23-259631	3/27/2023	Perchlorate	0.773	µg/L	12.4	n/a	Y	Y	0.05
CTUA	CrTMT-23-259619	1/4/2023	Sulfate	0.133	mg/L	540	U	N	Y	0.133
CTUA	CrTMT-23-259620	1/10/2023	Sulfate	19.800	mg/L	540	n/a	Y	Y	0.665
CTUA	CrTMT-23-259621	1/19/2023	Sulfate	25.700	mg/L	540	n/a	Y	Y	0.665
CTUA	CrTMT-23-259622	1/23/2023	Sulfate	25.700	mg/L	540	n/a	Y	Y	0.665
CTUA	CrTMT-23-259623	1/30/2023	Sulfate	24.900	mg/L	540	n/a	Y	Y	0.665
CTUA	CrTMT-23-259624	2/8/2023	Sulfate	0.133	mg/L	540	U	N	Y	0.133
CTUA	CrTMT-23-259625	2/14/2023	Sulfate	19.300	mg/L	540	n/a	Y	Y	0.133
CTUA	CrTMT-23-259626	2/21/2023	Sulfate	24.200	mg/L	540	n/a	Y	Y	0.665
CTUA	CrTMT-23-259627	3/1/2023	Sulfate	25.200	mg/L	540	n/a	Y	Y	0.665
CTUA	CrTMT-23-259628	3/6/2023	Sulfate	25.500	mg/L	540	n/a	Y	Y	0.665
CTUA	CrTMT-23-259629	3/15/2023	Sulfate	0.133	mg/L	540	U	N	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	CrTMT-23-259630	3/20/2023	Sulfate	9.880	mg/L	540	n/a	Y	Y	0.133
CTUA	CrTMT-23-259631	3/27/2023	Sulfate	25.0	mg/L	540	n/a	Y	Y	0.665
CTUA	CrTMT-23-259619	1/4/2023	Total Dissolved Solids	201	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259620	1/10/2023	Total Dissolved Solids	238	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259621	1/19/2023	Total Dissolved Solids	211	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259622	1/23/2023	Total Dissolved Solids	209	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259623	1/30/2023	Total Dissolved Solids	221	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259624	2/8/2023	Total Dissolved Solids	217	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259625	2/14/2023	Total Dissolved Solids	221	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259626	2/21/2023	Total Dissolved Solids	205	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259627	3/1/2023	Total Dissolved Solids	216	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259628	3/6/2023	Total Dissolved Solids	206	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259629	3/15/2023	Total Dissolved Solids	243	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259630	3/20/2023	Total Dissolved Solids	203	mg/L	900	n/a	Y	Y	2.38
CTUA	CrTMT-23-259631	3/27/2023	Total Dissolved Solids	194	mg/L	900	n/a	Y	Y	2.38

^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 2023 Quarter 1 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, that began with NMED conditional approvals during CY 2017 Quarter 4 (NMED 2017a, NMED 2017b), continued during CY 2023 Quarter 1. NMED determined that no permit was required for the deployment of these amendments. 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 CY 2023 Quarter 1 are provided in Table 2.2-2. No results for iron, manganese, or arsenic exceeded 90% of the numeric standards (900 µg/L, 180 µg/L, and 9 µg/L, respectively) as specified in 20.6.2.3103 NMAC.

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 for a nonexhaustive selection of wells. An explanation of how the groundwater elevation map was generated is provided below. Quarterly groundwater analytical results from samples collected during CY 2023 Quarter 1 for the monitoring wells listed in Condition No. 14 are summarized in Table 2.3-2. Note that some analytes reported in this table exceed their corresponding groundwater standard or screening level.

Sample results for total chromium, nitrate, perchlorate, sulfate, fluoride, chloride, and total dissolved solids are compared with numeric standards of 20.6.2.3103 NMAC or, for constituents not listed in 20.6.2.3103 NMAC, the numeric screening levels established for tap water in Table A-1 of the 2022 NMED “Risk Assessment Guidance for Site Investigations and Remediation Volume 1, Soil Screening Guidance for Human Health Risk Assessments” (NMED 2022). The values of the applicable standards or screening levels for these seven analytes follow:

- Chloride 250 mg/L
- Perchlorate 13.8 µg/L
- Chromium 50 µg/L
- Fluoride 1.6 mg/L
- Nitrate 10 mg/L
- Sulfate 600 mg/L
- Total dissolved solids 1000 mg/L

The regional aquifer beneath the Pajarito Plateau, on which Los Alamos National Laboratory (LANL or the Laboratory) is situated, is a complex hydrogeological system. The shape of the regional water table is predominantly controlled by the areas of recharge to the west (the flanks of the Sierra de los Valles and the Pajarito fault zone) and discharge to the east (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).

Table 2.2-2

**Treated Effluent Analytical Results Summary Table Related to Molasses and
Sodium Dithionite Pilot Studies under NMED Conditional Approval – CY 2023 Quarter 1, 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	CrTMT-23-259619	1/4/2023	Arsenic	2.00	µg/L	9	U ^b	N ^c	Y ^d	2.00
CTUA	CrTMT-23-259620	1/10/2023	Arsenic	4.05	µg/L	9	J ^e	Y ^f	Y	2.00
CTUA	CrTMT-23-259621	1/19/2023	Arsenic	3.93	µg/L	9	J	Y	Y	2.00
CTUA	CrTMT-23-259622	1/23/2023	Arsenic	2.74	µg/L	9	J	Y	Y	2.00
CTUA	CrTMT-23-259623	1/30/2023	Arsenic	2.07	µg/L	9	J	Y	Y	2.00
CTUA	CrTMT-23-259624	2/8/2023	Arsenic	2.00	µg/L	9	U ^g	N	Y	2.00
CTUA	CrTMT-23-259625	2/14/2023	Arsenic	3.48	µg/L	9	J	Y	Y	2.00
CTUA	CrTMT-23-259626	2/21/2023	Arsenic	2.02	µg/L	9	J	Y	Y	2.00
CTUA	CrTMT-23-259627	3/1/2023	Arsenic	2.00	µg/L	9	U	N	Y	2.00
CTUA	CrTMT-23-259628	3/6/2023	Arsenic	3.75	µg/L	9	J	Y	Y	2.00
CTUA	CrTMT-23-259629	3/15/2023	Arsenic	2.00	µg/L	9	U	N	Y	2.00
CTUA	CrTMT-23-259630	3/20/2023	Arsenic	2.85	µg/L	9	J	Y	Y	2.00
CTUA	CrTMT-23-259631	3/27/2023	Arsenic	2.00	µg/L	9	U	N	Y	2.00
CTUA	CrTMT-23-259619	1/4/2023	Iron	30.00	µg/L	9	U	N	Y	2.00
CTUA	CrTMT-23-259620	1/10/2023	Iron	30.00	µg/L	9	U	N	Y	2.00
CTUA	CrTMT-23-259621	1/19/2023	Iron	30.00	µg/L	9	U	N	Y	2.00
CTUA	CrTMT-23-259622	1/23/2023	Iron	30.00	µg/L	9	U	N	Y	2.00
CTUA	CrTMT-23-259623	1/30/2023	Iron	30.00	µg/L	9	U	N	Y	2.00
CTUA	CrTMT-23-259624	2/8/2023	Iron	30.00	µg/L	9	U	N	Y	2.00
CTUA	CrTMT-23-259625	2/14/2023	Iron	30.00	µg/L	900	U	N	Y	30.0
CTUA	CrTMT-23-259626	2/21/2023	Iron	30.00	µg/L	900	U	N	Y	30.0
CTUA	CrTMT-23-259627	3/1/2023	Iron	30.00	µg/L	900	U	N	Y	30.0
CTUA	CrTMT-23-259628	3/6/2023	Iron	30.00	µg/L	900	U	N	Y	30.0
CTUA	CrTMT-23-259629	3/15/2023	Iron	30.00	µg/L	900	U	N	Y	30.0

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	CrTMT-23-259630	3/20/2023	Iron	30.00	µg/L	900	U	N	Y	30.0
CTUA	CrTMT-23-259631	3/27/2023	Iron	30.00	µg/L	900	U	N	Y	30.0
CTUA	CrTMT-23-259619	1/4/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259620	1/10/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259621	1/19/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259622	1/23/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259623	1/30/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259624	2/8/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259625	2/14/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259626	2/21/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259627	3/1/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259628	3/6/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259629	3/15/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259630	3/20/2023	Manganese	2.0	µg/L	180	U	N	Y	2
CTUA	CrTMT-23-259631	3/27/2023	Manganese	2.0	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 2023 Quarter 1 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.

^g U = Analyte is classified as not detected.

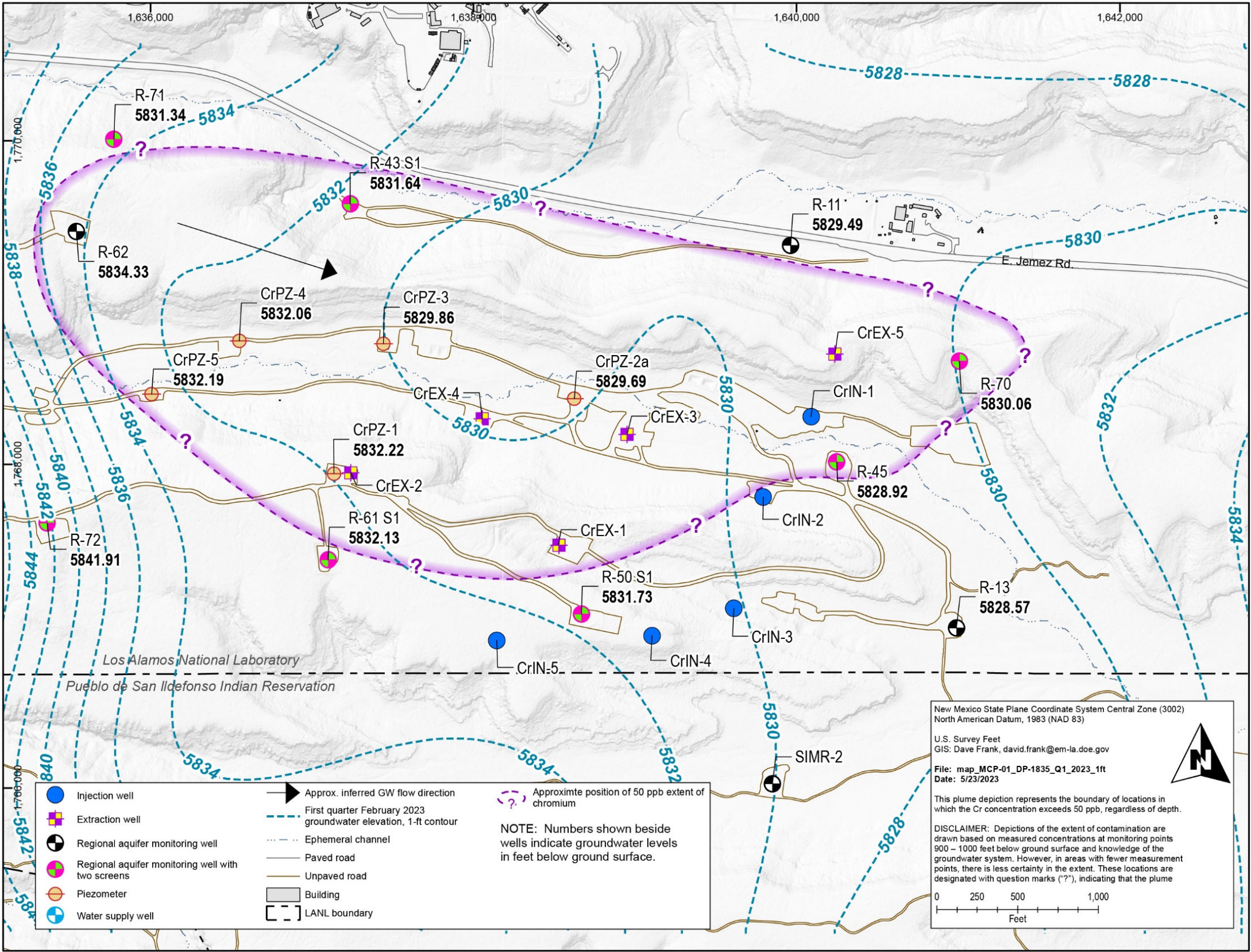


Figure 2.3-1 Groundwater elevation contour map – CY 2023 Quarter 1, DP-1835

Table 2.3-1
Groundwater Elevations Summary for
Groundwater Monitoring Wells – CY 2023 Quarter 1, DP-1835

Monitoring Well	Groundwater Elevation ^a (ft)
CrPZ-1 (CrCH-1)	5832.22
CrPZ-2a (CrCH-2a)	5829.69
CrPZ-2b (CrCH-2b)	5829.10
CrPZ-3 (CrCH-3)	5829.86
CrPZ-4 (CrCH-4)	5832.06
CrPZ-5 (CrCH-5)	5832.19
R-11	5829.49
R-13	5828.57
R-43 S1 ^b	5831.64
R-43 S2 ^c	5831.18
R-44 S1	5829.61
R-44 S2	5829.28
R-45 S1	5828.92
R-45 S2	5828.84
R-50 S1	5831.73
R-50 S2	5830.55
R-61 S1	5832.13
R-61 S2	5832.20
R-62	5834.33
R-70 S1	5830.06
R-71 S1	5831.34
R-72 S1	5841.91
SIMR-2 ^d	5830.09

^a Groundwater elevations provided are based on average February 2023 values from transducers.

^b S1 = Screen 1.

^c S2 = Screen 2.

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

Table 2.3-2
Groundwater Monitoring Wells Analytical Results Summary Table – CY 2023 Quarter 1, DP-1835

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CASA-23-265084	R-11	1/4/2023	Chloride	3.71	mg/L	250	No	n/a ^a	Y ^b	Y ^c	0.0670
CASA-23-265084	R-11	1/4/2023	Perchlorate	0.862	µg/L	13.8	No	n/a	Y	Y	0.0500
CASA-23-265084	R-11	1/4/2023	Chromium	10.6	µg/L	50	No	n/a	Y	Y	3.00
CASA-23-265084	R-11	1/4/2023	Fluoride	0.489	mg/L	1.6	No	n/a	Y	Y	0.0330
CASA-23-265084	R-11	1/4/2023	Nitrate-Nitrite as Nitrogen	8.25	mg/L	10	No	n/a	Y	Y	0.425
CASA-23-265084	R-11	1/4/2023	Sulfate	10.9	mg/L	600	No	n/a	Y	Y	0.133
CASA-23-265084	R-11	1/4/2023	Total Dissolved Solids	196	mg/L	1000	No	n/a	Y	Y	2.38
CASA-23-267975	R-11	2/3/2023	Chloride	3.58	mg/L	250	No	n/a	Y	Y	0.0670
CASA-23-267975	R-11	2/3/2023	Perchlorate	0.869	µg/L	13.8	No	n/a	Y	Y	0.0500
CASA-23-267975	R-11	2/3/2023	Chromium	9.49	µg/L	50	No	J ^d	Y	Y	3.00
CASA-23-267975	R-11	2/3/2023	Fluoride	0.407	mg/L	1.6	No	n/a	Y	Y	0.0330
CASA-23-267975	R-11	2/3/2023	Nitrate-Nitrite as Nitrogen	8.30	mg/L	10	No	n/a	Y	Y	0.850
CASA-23-267975	R-11	2/3/2023	Sulfate	10.7	mg/L	600	No	n/a	Y	Y	0.133
CASA-23-267975	R-11	2/3/2023	Total Dissolved Solids	198	mg/L	1000	No	n/a	Y	Y	2.38
CASA-23-267979	R-11	2/3/2023	Chloride	3.57	mg/L	250	No	n/a	Y	Y	0.0670
CASA-23-267979	R-11	2/3/2023	Perchlorate	0.859	µg/L	13.8	No	n/a	Y	Y	0.0500
CASA-23-267979	R-11	2/3/2023	Chromium	9.39	µg/L	50	No	J	Y	Y	3.00
CASA-23-267979	R-11	2/3/2023	Fluoride	0.409	mg/L	1.6	No	n/a	Y	Y	0.0330
CASA-23-267979	R-11	2/3/2023	Nitrate-Nitrite as Nitrogen	8.20	mg/L	10	No	n/a	Y	Y	0.850
CASA-23-267979	R-11	2/3/2023	Sulfate	10.7	mg/L	600	No	n/a	Y	Y	0.133
CASA-23-267979	R-11	2/3/2023	Total Dissolved Solids	192	mg/L	1000	No	n/a	Y	Y	2.38
CASA-23-267980	R-11	2/3/2023	Chloride	0.0670	mg/L	250	No	U ^e	N ^f	N ^g	0.0670
CASA-23-267980	R-11	2/3/2023	Perchlorate	0.0500	µg/L	13.8	No	U	N	N	0.0500
CASA-23-267980	R-11	2/3/2023	Chromium	3.00	µg/L	50	No	U	N	N	3.00
CASA-23-267980	R-11	2/3/2023	Fluoride	0.0330	mg/L	1.6	No	U	N	N	0.0330

CY 2023 Quarter 1, Discharge of Treated Groundwater to the Regional Aquifer under DP-1835

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CASA-23-267980	R-11	2/3/2023	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	10	No	U	N	N	0.0170
CASA-23-267980	R-11	2/3/2023	Sulfate	0.133	mg/L	600	No	U	N	N	0.133
CASA-23-267980	R-11	2/3/2023	Total Dissolved Solids	2.38	mg/L	1000	No	U	N	N	2.38
CASA-23-267981	R-11	2/3/2023	Chloride	0.0670	mg/L	250	No	U	N	N	0.0670
CASA-23-267981	R-11	2/3/2023	Perchlorate	0.0500	µg/L	13.8	No	U	N	N	0.0500
CASA-23-267981	R-11	2/3/2023	Chromium	3.00	µg/L	50	No	U	N	N	3.00
CASA-23-267981	R-11	2/3/2023	Fluoride	0.0330	mg/L	1.6	No	U	N	N	0.0330
CASA-23-267981	R-11	2/3/2023	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	10	No	U	N	N	0.0170
CASA-23-267981	R-11	2/3/2023	Sulfate	0.133	mg/L	600	No	U	N	N	0.133
CASA-23-267981	R-11	2/3/2023	Total Dissolved Solids	2.38	mg/L	1000	No	U	N	N	2.38
CASA-23-270305	R-11	3/9/2023	Chloride	3.79	mg/L	250	No	n/a	Y	Y	0.0670
CASA-23-270305	R-11	3/9/2023	Perchlorate	0.926	µg/L	13.8	No	n/a	Y	Y	0.0500
CASA-23-270305	R-11	3/9/2023	Chromium	9.67	µg/L	50	No	J	Y	Y	3.00
CASA-23-270305	R-11	3/9/2023	Fluoride	0.419	mg/L	1.6	No	n/a	Y	Y	0.0330
CASA-23-270305	R-11	3/9/2023	Nitrate-Nitrite as Nitrogen	8.48	mg/L	10	No	n/a	Y	Y	0.425
CASA-23-270305	R-11	3/9/2023	Sulfate	11.2	mg/L	600	No	n/a	Y	Y	0.133
CASA-23-270305	R-11	3/9/2023	Total Dissolved Solids	196	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-264836	R-15	1/10/2023	Chloride	3.87	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-264836	R-15	1/10/2023	Perchlorate	11.0	µg/L	13.8	No	n/a	Y	Y	0.250
CAMO-23-264836	R-15	1/10/2023	Chromium	14.8	µg/L	50	No	n/a	Y	Y	3.00
CAMO-23-264836	R-15	1/10/2023	Fluoride	0.308	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-264836	R-15	1/10/2023	Nitrate-Nitrite as Nitrogen	2.05	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-264836	R-15	1/10/2023	Sulfate	5.99	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-264836	R-15	1/10/2023	Total Dissolved Solids	158	mg/L	1000	No	n/a	Y	Y	2.38
CASA-23-265097	R-43 S1 ^h	1/4/2023	Chloride	6.94	mg/L	250	No	n/a	Y	Y	0.0670
CASA-23-265097	R-43 S1	1/4/2023	Perchlorate	0.699	µg/L	13.8	No	n/a	Y	Y	0.0500

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CASA-23-265097	R-43 S1	1/4/2023	Chromium	168	µg/L	50	Yes	n/a	Y	Y	3.00
CASA-23-265097	R-43 S1	1/4/2023	Fluoride	0.383	mg/L	1.6	No	n/a	Y	Y	0.0330
CASA-23-265097	R-43 S1	1/4/2023	Nitrate-Nitrite as Nitrogen	4.95	mg/L	10	No	n/a	Y	Y	0.170
CASA-23-265097	R-43 S1	1/4/2023	Sulfate	15.1	mg/L	600	No	n/a	Y	Y	0.133
CASA-23-265097	R-43 S1	1/4/2023	Total Dissolved Solids	160	mg/L	1000	No	n/a	Y	Y	2.38
CASA-23-265099	R-43 S2 ⁱ	1/4/2023	Chloride	6.57	mg/L	250	No	n/a	Y	Y	0.0670
CASA-23-265099	R-43 S2	1/4/2023	Perchlorate	0.866	µg/L	13.8	No	n/a	Y	Y	0.0500
CASA-23-265099	R-43 S2	1/4/2023	Chromium	28.3	µg/L	50	No	n/a	Y	Y	3.00
CASA-23-265099	R-43 S2	1/4/2023	Fluoride	0.432	mg/L	1.6	No	n/a	Y	Y	0.0330
CASA-23-265099	R-43 S2	1/4/2023	Nitrate-Nitrite as Nitrogen	3.71	mg/L	10	No	n/a	Y	Y	0.170
CASA-23-265099	R-43 S2	1/4/2023	Sulfate	9.51	mg/L	600	No	n/a	Y	Y	0.133
CASA-23-265099	R-43 S2	1/4/2023	Total Dissolved Solids	169	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270321	R-44 S1	3/7/2023	Chloride	19.8	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-270321	R-44 S1	3/7/2023	Perchlorate	0.403	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270321	R-44 S1	3/7/2023	Chromium	3.00	µg/L	50	No	U	N	Y	3.00
CAMO-23-270321	R-44 S1	3/7/2023	Fluoride	0.245	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270321	R-44 S1	3/7/2023	Nitrate-Nitrite as Nitrogen	2.82	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-270321	R-44 S1	3/7/2023	Sulfate	18.5	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-270321	R-44 S1	3/7/2023	Total Dissolved Solids	194	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270326	R-44 S2	3/7/2023	Chloride	4.22	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-270326	R-44 S2	3/7/2023	Perchlorate	0.328	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270326	R-44 S2	3/7/2023	Chromium	6.46	µg/L	50	No	J	Y	Y	3.00
CAMO-23-270326	R-44 S2	3/7/2023	Fluoride	0.319	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270326	R-44 S2	3/7/2023	Nitrate-Nitrite as Nitrogen	0.999	mg/L	10	No	n/a	Y	Y	0.0170
CAMO-23-270326	R-44 S2	3/7/2023	Sulfate	4.38	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-270326	R-44 S2	3/7/2023	Total Dissolved Solids	127	mg/L	1000	No	n/a	Y	Y	2.38

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-23-264855	R-45 S1	1/5/2023	Chloride	20.7	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-264855	R-45 S1	1/5/2023	Perchlorate	0.364	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-264855	R-45 S1	1/5/2023	Chromium	3.00	µg/L	50	No	U	N	Y	3.00
CAMO-23-264855	R-45 S1	1/5/2023	Fluoride	0.397	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-264855	R-45 S1	1/5/2023	Nitrate-Nitrite as Nitrogen	2.95	mg/L	10	No	n/a	Y	Y	0.170
CAMO-23-264855	R-45 S1	1/5/2023	Sulfate	19.5	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-264855	R-45 S1	1/5/2023	Total Dissolved Solids	215	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-267995	R-45 S1	2/2/2023	Chloride	20.2	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-267995	R-45 S1	2/2/2023	Perchlorate	0.384	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-267995	R-45 S1	2/2/2023	Chromium	3.00	µg/L	50	No	U	N	Y	3.00
CAMO-23-267995	R-45 S1	2/2/2023	Fluoride	0.187	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-267995	R-45 S1	2/2/2023	Nitrate-Nitrite as Nitrogen	3.02	mg/L	10	No	n/a	Y	Y	0.170
CAMO-23-267995	R-45 S1	2/2/2023	Sulfate	19.5	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-267995	R-45 S1	2/2/2023	Total Dissolved Solids	221	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270329	R-45 S1	3/8/2023	Chloride	19.2	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-270329	R-45 S1	3/8/2023	Perchlorate	0.398	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270329	R-45 S1	3/8/2023	Chromium	3.00	µg/L	50	No	U	N	Y	3.00
CAMO-23-270329	R-45 S1	3/8/2023	Fluoride	0.192	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270329	R-45 S1	3/8/2023	Nitrate-Nitrite as Nitrogen	3.15	mg/L	10	No	n/a	Y	Y	0.170
CAMO-23-270329	R-45 S1	3/8/2023	Sulfate	19.9	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-270329	R-45 S1	3/8/2023	Total Dissolved Solids	192	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-264858	R-45 S2	1/5/2023	Chloride	7.07	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-264858	R-45 S2	1/5/2023	Perchlorate	0.458	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-264858	R-45 S2	1/5/2023	Chromium	63.1	µg/L	50	Yes	n/a	Y	Y	3.00
CAMO-23-264858	R-45 S2	1/5/2023	Fluoride	0.512	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-264858	R-45 S2	1/5/2023	Nitrate-Nitrite as Nitrogen	1.30	mg/L	10	No	n/a	Y	Y	0.0850

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-23-264858	R-45 S2	1/5/2023	Sulfate	8.67	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-264858	R-45 S2	1/5/2023	Total Dissolved Solids	155	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-264861	R-45 S2	1/5/2023	Chloride	7.10	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-264861	R-45 S2	1/5/2023	Perchlorate	0.452	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-264861	R-45 S2	1/5/2023	Chromium	58.0	µg/L	50	Yes	n/a	Y	Y	3.00
CAMO-23-264861	R-45 S2	1/5/2023	Fluoride	0.511	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-264861	R-45 S2	1/5/2023	Nitrate-Nitrite as Nitrogen	1.34	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-264861	R-45 S2	1/5/2023	Sulfate	8.72	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-264861	R-45 S2	1/5/2023	Total Dissolved Solids	166	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-264862	R-45 S2	1/5/2023	Chloride	0.247	mg/L	250	No	n/a	Y	N	0.0670
CAMO-23-264862	R-45 S2	1/5/2023	Perchlorate	0.0500	µg/L	13.8	No	U	N	N	0.0500
CAMO-23-264862	R-45 S2	1/5/2023	Chromium	3.00	µg/L	50	No	U	N	N	3.00
CAMO-23-264862	R-45 S2	1/5/2023	Fluoride	0.0330	mg/L	1.6	No	U	N	N	0.0330
CAMO-23-264862	R-45 S2	1/5/2023	Nitrate-Nitrite as Nitrogen	0.0850	mg/L	10	No	U	N	N	0.0850
CAMO-23-264862	R-45 S2	1/5/2023	Sulfate	0.133	mg/L	600	No	U	N	N	0.133
CAMO-23-264862	R-45 S2	1/5/2023	Total Dissolved Solids	2.38	mg/L	1000	No	U	N	N	2.38
CAMO-23-267998	R-45 S2	2/2/2023	Chloride	6.46	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-267998	R-45 S2	2/2/2023	Perchlorate	0.441	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-267998	R-45 S2	2/2/2023	Chromium	49.1	µg/L	50	No	n/a	Y	Y	3.00
CAMO-23-267998	R-45 S2	2/2/2023	Fluoride	0.397	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-267998	R-45 S2	2/2/2023	Nitrate-Nitrite as Nitrogen	1.25	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-267998	R-45 S2	2/2/2023	Sulfate	8.00	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-267998	R-45 S2	2/2/2023	Total Dissolved Solids	152	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270332	R-45 S2	3/8/2023	Chloride	5.67	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-270332	R-45 S2	3/8/2023	Perchlorate	0.446	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270332	R-45 S2	3/8/2023	Chromium	43.5	µg/L	50	No	n/a	Y	Y	3.00

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-23-270332	R-45 S2	3/8/2023	Fluoride	0.391	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270332	R-45 S2	3/8/2023	Nitrate-Nitrite as Nitrogen	1.17	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-270332	R-45 S2	3/8/2023	Sulfate	7.01	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-270332	R-45 S2	3/8/2023	Total Dissolved Solids	155	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270335	R-45 S2	3/8/2023	Chloride	5.58	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-270335	R-45 S2	3/8/2023	Perchlorate	0.449	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270335	R-45 S2	3/8/2023	Chromium	46.7	µg/L	50	No	n/a	Y	Y	3.00
CAMO-23-270336	R-45 S2	3/8/2023	Fluoride	0.0330	mg/L	1.6	No	U	N	N	0.0330
CAMO-23-270337	R-45 S2	3/8/2023	Nitrate-Nitrite as Nitrogen	0.0170	mg/L	10	No	U	N	N	0.0170
CAMO-23-270337	R-45 S2	3/8/2023	Sulfate	0.133	mg/L	600	No	U	N	N	0.133
CAMO-23-270337	R-45 S2	3/8/2023	Total Dissolved Solids	2.38	mg/L	1000	No	U	N	N	2.38
CAMO-23-264930	R-50 S1	1/3/2023	Chloride	20.6	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-264930	R-50 S1	1/3/2023	Perchlorate	0.463	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-264930	R-50 S1	1/3/2023	Chromium	6.08	µg/L	50	No	J	Y	Y	3.00
CAMO-23-264930	R-50 S1	1/3/2023	Fluoride	0.175	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-264930	R-50 S1	1/3/2023	Nitrate-Nitrite as Nitrogen	2.93	mg/L	10	No	n/a	Y	Y	0.170
CAMO-23-264930	R-50 S1	1/3/2023	Sulfate	20.0	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-264930	R-50 S1	1/3/2023	Total Dissolved Solids	198	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-268001	R-50 S1	1/31/2023	Chloride	21.7	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-268001	R-50 S1	1/31/2023	Perchlorate	0.458	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-268001	R-50 S1	1/31/2023	Chromium	5.94	µg/L	50	No	J	Y	Y	3.00
CAMO-23-268001	R-50 S1	1/31/2023	Fluoride	0.261	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-268001	R-50 S1	1/31/2023	Nitrate-Nitrite as Nitrogen	3.05	mg/L	10	No	n/a	Y	Y	0.170
CAMO-23-268001	R-50 S1	1/31/2023	Sulfate	19.8	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-268001	R-50 S1	1/31/2023	Total Dissolved Solids	194	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270339	R-50 S1	3/7/2023	Chloride	20.7	mg/L	250	No	n/a	Y	Y	0.335

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-23-270339	R-50 S1	3/7/2023	Perchlorate	0.432	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270339	R-50 S1	3/7/2023	Chromium	5.80	µg/L	50	No	J	Y	Y	3.00
CAMO-23-270339	R-50 S1	3/7/2023	Fluoride	0.267	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270339	R-50 S1	3/7/2023	Nitrate-Nitrite as Nitrogen	3.05	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-270339	R-50 S1	3/7/2023	Sulfate	19.3	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-270339	R-50 S1	3/7/2023	Total Dissolved Solids	179	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-264933	R-50 S2	1/3/2023	Chloride	2.18	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-264933	R-50 S2	1/3/2023	Perchlorate	0.338	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-264933	R-50 S2	1/3/2023	Chromium	4.01	µg/L	50	No	J	Y	Y	3.00
CAMO-23-264933	R-50 S2	1/3/2023	Fluoride	0.425	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-264933	R-50 S2	1/3/2023	Nitrate-Nitrite as Nitrogen	0.570	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-264933	R-50 S2	1/3/2023	Sulfate	2.50	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-264933	R-50 S2	1/3/2023	Total Dissolved Solids	136	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-268004	R-50 S2	1/31/2023	Chloride	2.12	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-268004	R-50 S2	1/31/2023	Perchlorate	0.319	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-268004	R-50 S2	1/31/2023	Chromium	4.14	µg/L	50	No	J	Y	Y	3.00
CAMO-23-268004	R-50 S2	1/31/2023	Fluoride	0.473	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-268004	R-50 S2	1/31/2023	Nitrate-Nitrite as Nitrogen	0.621	mg/L	10	No	n/a	Y	Y	0.0170
CAMO-23-268004	R-50 S2	1/31/2023	Sulfate	2.47	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-268004	R-50 S2	1/31/2023	Total Dissolved Solids	120	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270343	R-50 S2	3/6/2023	Chloride	2.19	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-270343	R-50 S2	3/6/2023	Perchlorate	0.324	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270343	R-50 S2	3/6/2023	Chromium	4.11	µg/L	50	No	J	Y	Y	3.00
CAMO-23-270343	R-50 S2	3/6/2023	Fluoride	0.512	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270343	R-50 S2	3/6/2023	Nitrate-Nitrite as Nitrogen	0.645	mg/L	10	No	n/a	Y	Y	0.0170
CAMO-23-270343	R-50 S2	3/6/2023	Sulfate	2.52	mg/L	600	No	n/a	Y	Y	0.133

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-23-270343	R-50 S2	3/6/2023	Total Dissolved Solids	124	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-264938	R-62	1/12/2023	Chloride	16.4	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-264938	R-62	1/12/2023	Perchlorate	0.890	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-264938	R-62	1/12/2023	Chromium	289	µg/L	50	Yes	n/a	Y	Y	3.00
CAMO-23-264938	R-62	1/12/2023	Fluoride	0.144	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-264938	R-62	1/12/2023	Nitrate-Nitrite as Nitrogen	2.18	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-264938	R-62	1/12/2023	Sulfate	28.9	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-264938	R-62	1/12/2023	Total Dissolved Solids	187	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-265201	R-62	1/12/2023	Chloride	17.7	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-265201	R-62	1/12/2023	Perchlorate	0.908	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-265201	R-62	1/12/2023	Chromium	315	µg/L	50	Yes	n/a	Y	Y	3.00
CAMO-23-265201	R-62	1/12/2023	Fluoride	0.141	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-265201	R-62	1/12/2023	Nitrate-Nitrite as Nitrogen	2.39	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-265201	R-62	1/12/2023	Sulfate	31.0	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-265201	R-62	1/12/2023	Total Dissolved Solids	196	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-265202	R-62	1/12/2023	Chloride	18.6	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-265202	R-62	1/12/2023	Perchlorate	0.921	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-265202	R-62	1/12/2023	Chromium	326	µg/L	50	Yes	n/a	Y	Y	3.00
CAMO-23-265202	R-62	1/12/2023	Fluoride	0.137	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-265202	R-62	1/12/2023	Nitrate-Nitrite as Nitrogen	2.51	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-265202	R-62	1/12/2023	Sulfate	32.7	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-265202	R-62	1/12/2023	Total Dissolved Solids	213	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-265203	R-62	1/12/2023	Chloride	19.1	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-265203	R-62	1/12/2023	Perchlorate	0.979	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-265203	R-62	1/12/2023	Chromium	342	µg/L	50	Yes	n/a	Y	Y	3.00
CAMO-23-265203	R-62	1/12/2023	Fluoride	0.133	mg/L	1.6	No	n/a	Y	Y	0.0330

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-23-265203	R-62	1/12/2023	Nitrate-Nitrite as Nitrogen	2.63	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-265203	R-62	1/12/2023	Sulfate	33.4	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-265203	R-62	1/12/2023	Total Dissolved Solids	194	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-265204	R-62	1/12/2023	Chloride	19.4	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-265204	R-62	1/12/2023	Perchlorate	0.936	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-265204	R-62	1/12/2023	Chromium	344	µg/L	50	Yes	n/a	Y	Y	3.00
CAMO-23-265204	R-62	1/12/2023	Fluoride	0.135	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-265204	R-62	1/12/2023	Nitrate-Nitrite as Nitrogen	2.62	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-265204	R-62	1/12/2023	Sulfate	33.9	mg/L	600	No	n/a	Y	Y	0.665
CAMO-23-265204	R-62	1/12/2023	Total Dissolved Solids	186	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-264940	R-70 S1	1/9/2023	Chloride	4.67	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-264940	R-70 S1	1/9/2023	Perchlorate	0.513	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-264940	R-70 S1	1/9/2023	Chromium	16.7	µg/L	50	No	n/a	Y	Y	3.00
CAMO-23-264940	R-70 S1	1/9/2023	Fluoride	0.490	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-264940	R-70 S1	1/9/2023	Nitrate-Nitrite as Nitrogen	2.11	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-264940	R-70 S1	1/9/2023	Sulfate	5.55	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-264940	R-70 S1	1/9/2023	Total Dissolved Solids	142	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-268012	R-70 S1	2/1/2023	Chloride	4.11	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-268012	R-70 S1	2/1/2023	Perchlorate	0.504	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-268012	R-70 S1	2/1/2023	Chromium	10.0	µg/L	50	No	n/a	Y	Y	3.00
CAMO-23-268012	R-70 S1	2/1/2023	Fluoride	0.390	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-268012	R-70 S1	2/1/2023	Nitrate-Nitrite as Nitrogen	2.07	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-268012	R-70 S1	2/1/2023	Sulfate	4.89	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-268012	R-70 S1	2/1/2023	Total Dissolved Solids	163	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270349	R-70 S1	3/7/2023	Chloride	4.37	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-270349	R-70 S1	3/7/2023	Perchlorate	0.484	µg/L	13.8	No	n/a	Y	Y	0.0500

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-23-270349	R-70 S1	3/7/2023	Chromium	10.2	µg/L	50	No	n/a	Y	Y	3.00
CAMO-23-270349	R-70 S1	3/7/2023	Fluoride	0.377	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270349	R-70 S1	3/7/2023	Nitrate-Nitrite as Nitrogen	2.70	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-270349	R-70 S1	3/7/2023	Sulfate	5.01	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-270349	R-70 S1	3/7/2023	Total Dissolved Solids	139	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-264943	R-70 S2	1/9/2023	Chloride	12.3	mg/L	250	No	n/a	Y	Y	0.134
CAMO-23-264943	R-70 S2	1/9/2023	Perchlorate	0.734	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-264943	R-70 S2	1/9/2023	Chromium	155	µg/L	50	Yes	n/a	Y	Y	3.00
CAMO-23-264943	R-70 S2	1/9/2023	Fluoride	0.394	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-264943	R-70 S2	1/9/2023	Nitrate-Nitrite as Nitrogen	2.92	mg/L	10	No	n/a	Y	Y	0.170
CAMO-23-264943	R-70 S2	1/9/2023	Sulfate	19.2	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-264943	R-70 S2	1/9/2023	Total Dissolved Solids	183	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-268015	R-70 S2	2/1/2023	Chloride	11.3	mg/L	250	No	n/a	Y	Y	0.134
CAMO-23-268015	R-70 S2	2/1/2023	Perchlorate	0.701	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-268015	R-70 S2	2/1/2023	Chromium	148	µg/L	50	Yes	n/a	Y	Y	3.00
CAMO-23-268015	R-70 S2	2/1/2023	Fluoride	0.273	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-268015	R-70 S2	2/1/2023	Nitrate-Nitrite as Nitrogen	2.91	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-268015	R-70 S2	2/1/2023	Sulfate	17.6	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-268015	R-70 S2	2/1/2023	Total Dissolved Solids	200	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270352	R-70 S2	3/7/2023	Chloride	10.7	mg/L	250	No	n/a	Y	Y	0.335
CAMO-23-270352	R-70 S2	3/7/2023	Perchlorate	0.674	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270352	R-70 S2	3/7/2023	Chromium	140	µg/L	50	Yes	n/a	Y	Y	3.00
CAMO-23-270352	R-70 S2	3/7/2023	Fluoride	0.406	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270352	R-70 S2	3/7/2023	Nitrate-Nitrite as Nitrogen	2.86	mg/L	10	No	n/a	Y	Y	0.0850
CAMO-23-270352	R-70 S2	3/7/2023	Sulfate	17.9	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-270352	R-70 S2	3/7/2023	Total Dissolved Solids	183	mg/L	1000	No	n/a	Y	Y	2.38

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-23-270355	R-71 S1	3/14/2023	Chloride	3.32	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-270355	R-71 S1	3/14/2023	Perchlorate	0.672	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270355	R-71 S1	3/14/2023	Chromium	4.25	µg/L	50	No	J	Y	Y	3.00
CAMO-23-270355	R-71 S1	3/14/2023	Fluoride	0.228	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270355	R-71 S1	3/14/2023	Nitrate-Nitrite as Nitrogen	5.54	mg/L	10	No	n/a	Y	Y	0.170
CAMO-23-270355	R-71 S1	3/14/2023	Sulfate	11.0	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-270355	R-71 S1	3/14/2023	Total Dissolved Solids	173	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270359	R-71 S2	3/21/2023	Chloride	3.71	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-270359	R-71 S2	3/21/2023	Perchlorate	0.665	µg/L	13.8	No	J	Y	Y	0.250
CAMO-23-270359	R-71 S2	3/21/2023	Chromium	3.25	µg/L	50	No	J	Y	Y	3.00
CAMO-23-270359	R-71 S2	3/21/2023	Fluoride	0.260	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270359	R-71 S2	3/21/2023	Nitrate-Nitrite as Nitrogen	4.75	mg/L	10	No	n/a	Y	Y	0.170
CAMO-23-270359	R-71 S2	3/21/2023	Sulfate	7.14	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-270359	R-71 S2	3/21/2023	Total Dissolved Solids	137	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270364	R-72 S1	3/14/2023	Chloride	2.52	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-270364	R-72 S1	3/14/2023	Perchlorate	0.439	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270364	R-72 S1	3/14/2023	Chromium	6.01	µg/L	50	No	J	Y	Y	3.00
CAMO-23-270364	R-72 S1	3/14/2023	Fluoride	0.0493	mg/L	1.6	No	J	Y	Y	0.0330
CAMO-23-270364	R-72 S1	3/14/2023	Nitrate-Nitrite as Nitrogen	0.345	mg/L	10	No	n/a	Y	Y	0.0170
CAMO-23-270364	R-72 S1	3/14/2023	Sulfate	5.76	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-270364	R-72 S1	3/14/2023	Total Dissolved Solids	142	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-270368	R-72 S2	3/22/2023	Chloride	2.04	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-270368	R-72 S2	3/22/2023	Perchlorate	0.367	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-270368	R-72 S2	3/22/2023	Chromium	5.31	µg/L	50	No	J	Y	Y	3.00
CAMO-23-270368	R-72 S2	3/22/2023	Fluoride	0.164	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-270368	R-72 S2	3/22/2023	Nitrate-Nitrite as Nitrogen	0.388	mg/L	10	No	n/a	Y	Y	0.0170

Table 2.3-2 (continued)

Field Sample ID	Location ID	Sample Date	Parameter Name	Report Result	Report Unit	Standard or Screening Level	Exceeds Standard or Screening Level	Lab Qualifier	Detect Flag	Filtered	Method Detection Limit
CAMO-23-270368	R-72 S2	3/22/2023	Sulfate	3.82	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-270368	R-72 S2	3/22/2023	Total Dissolved Solids	117	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-264958	SIMR-2	1/13/2023	Chloride	2.07	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-264958	SIMR-2	1/13/2023	Perchlorate	0.578	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-264958	SIMR-2	1/13/2023	Chromium	5.19	µg/L	50	No	J	Y	Y	3.00
CAMO-23-264958	SIMR-2	1/13/2023	Fluoride	0.302	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-264958	SIMR-2	1/13/2023	Nitrate-Nitrite as Nitrogen	0.810	mg/L	10	No	n/a	Y	Y	0.0170
CAMO-23-264958	SIMR-2	1/13/2023	Sulfate	2.66	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-264958	SIMR-2	1/13/2023	Total Dissolved Solids	125	mg/L	1000	No	n/a	Y	Y	2.38
CAMO-23-268026	SIMR-2	2/9/2023	Chloride	2.14	mg/L	250	No	n/a	Y	Y	0.0670
CAMO-23-268026	SIMR-2	2/9/2023	Perchlorate	0.589	µg/L	13.8	No	n/a	Y	Y	0.0500
CAMO-23-268026	SIMR-2	2/9/2023	Chromium	5.18	µg/L	50	No	J	Y	Y	3.00
CAMO-23-268026	SIMR-2	2/9/2023	Fluoride	0.360	mg/L	1.6	No	n/a	Y	Y	0.0330
CAMO-23-268026	SIMR-2	2/9/2023	Nitrate-Nitrite as Nitrogen	0.798	mg/L	10	No	n/a	Y	Y	0.0170
CAMO-23-268026	SIMR-2	2/9/2023	Sulfate	2.66	mg/L	600	No	n/a	Y	Y	0.133
CAMO-23-268026	SIMR-2	2/9/2023	Total Dissolved Solids	129	mg/L	1000	No	n/a	Y	Y	2.38

^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 U =Analyte is classified as not detected.

^f In the Detect Flag column, N = not detected.

^g In the Filtered column, N = not filtered.

^h S1 = Screen 1.

ⁱ S2 = Screen 2.

Long-term water-level data, contaminant transport observations (travel times and direction of migration), and calibrated model results 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 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 any or all of the following:

- 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
- nearby water-supply pumping

Although it is difficult to infer absolute groundwater flow directions from the relatively flat contours in the chromium plume area, the general flow of groundwater can be determined. Groundwater elevation data and contaminant transport observations indicated that, before operation of the IM, the groundwater flowed generally toward the east-southeast. The current groundwater flows generally towards the southeast, with the influence of IM operations being seen mainly in the vicinity of the extraction wells. Local flow direction near these wells is inward because of the extraction-induced depression in potentiometric surface.

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 CY 2023 Quarter 1 below.

In the chromium plume area, 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 at time scales of hours to days 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). Impacts of production well pumping are observed over seasonal to yearly time scales and overall have led to a fairly uniform decline in the water table across the plume area, in contrast to more immediate IM extraction and injection impacts.

A long-term decline of approximately 0.2 to 0.5 ft/yr in the regional water levels has been observed 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 February 2023. General flow direction is indicated by the vector.

To generate this quarterly contour map, average water levels are calculated with a default of using values from the middle month of the three-month reporting period. In quarters where the middle month may not be representative, e.g., due to an IM well pumping hiatus, water-level values from times other than the middle month are selected. 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.

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.

In 2018 and 2019, water table maps for DP-1835 were generated using an interpolation method called Thin-Plate Spline (TPS) (e.g., <https://www.jstor.org/stable/2241837>). TPS is a special case of universal kriging. In 2020, an interpolation method called Bayesian Canonical Correlation Regression (BCCR) (Carson 2020) was implemented. BCCR increased efficiency of map-making by using prior knowledge of water levels to generate an initial water table map of the expected surface given quarterly water levels. Kriging was then used to update the map using residuals between the water levels and the expected surface for a given quarter. In CY 2023 Quarter 1, the interpolation method reverted to TPS. This change was made because of the greater representation of TPS in the scientific literature. Maps generated with the two methods are analogous because both methods use kriging-based interpolation; the primary difference between the two methods is the incorporation of prior information as an initial estimate of water levels.

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 (EPA 2008). As additional analysis is performed using historical and developing data sets from existing wells and data that will be collected from proposed wells, the use of these control points is being reanalyzed, adjusted, or discontinued based on additional supporting data and contouring methods.

Over the course of operating the chromium IM system, changes to water table elevation occur depending upon how the system has been operating. A quarter-by-quarter account of the water table elevations is not provided as part of this quarterly report. Each quarterly report previously submitted provides information of the water table elevation near the chromium IM wells along with possible causes for water-level variations for that specific quarter. Information on the quarterly depth to groundwater for CY 2023 Quarter 1 is provided below.

In the current reporting period of CY 2023 Quarter 1, IM pumping was conducted at less than capacity with only CrEX-4, CrEX-5, CrIN-4, and CrIN-5 active. On previous maps, the contour in the middle of the chromium plume area was closed, meaning water could not flow out. The open contour on the current map suggests a strong influence of IM well activity on water levels, especially extraction at CrEX-1, CrEX-2, and CrEX-3. The closed contour was also absent in the previous quarter, during most of which the IM wells were inactive (i.e., no extraction or injection). The decrease in IM pumping is likely the main cause of the inability of the IM to reestablish the closed contour.

2.4 Any Operations/Maintenance Activities Performed (Requirement 4)

Extraction, treatment, and injection operations continued during CY 2023 Quarter 1. Operations and maintenance activities completed during CY 2023 Quarter 1 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 2023 Quarter 1

Maintenance Date	Elements Impacted	Operation/Maintenance Description
1/1/2023 through 1/3/2023	CrEX-4, CrEX-5, CTUA, CrIN-4, CrIN-5	Extraction, treatment, and injection of treated groundwater occurred per operational plan.
1/3/2023	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. Both influent filter bags replaced.
1/3/2023 through 2/7/2023	CrEX-4, CrEX-5, CTUA, CrIN-4, CrIN-5	Extraction, treatment, and injection of treated groundwater occurred per operational plan.
2/7/2023	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. Both influent filter bags replaced.
2/7/2023 through 3/14/2023	CrEX-4, CrEX-5, CTUA, CrIN-4, CrIN-5	Extraction, treatment, and injection of treated groundwater occurred per operational plan.
3/8/2023 through 3/9/2023	CrEX-1, CrEX-2, and CrEX-3	Samples taken.
3/14/2023	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. Both influent filter bags replaced.
3/14/2023 through 3/31/2023	CrEX-4, CrEX-5, CTUA, 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 CY 2023 Quarter 1. Mechanical integrity testing was performed and reported to NMED during the CY 2019 Quarter 4 reporting period. In accordance with Condition No. 3, mechanical integrity testing will occur at least once every 5 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)

The primary IX vessels were replaced by the secondary IX vessels, and new secondary IX vessels were installed, at various times for all three treatment trains in CTUA during the reporting period, as cited in Table 2.4-1.

2.7 Any Well Workovers Conducted (Requirement 7)

No well workovers were conducted during CY 2023 Quarter 1.

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 provided in the quarterly monitoring reports under DP-1835. These results for CY 2023 Quarter 1 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 2022 NMED risk assessment guidance (NMED 2022) 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 CY 2023 Quarter 1.

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-4 and CrIN-5 during CY 2023 Quarter 1.

Table 2.9-1
Flows and Volumes of Treated Effluent Injected – CY 2023 Quarter 1, DP-1835

Injection Well	Flow rate (gpm ^a)			Daily Volume (gal.)			Total Volume (gal.)
	Average ^b	Maximum	Minimum ^c	Average	Maximum	Minimum	
January 2023							
CrIN-1	0.0	0.0	0.0	0	0	0	0
CrIN-2	0.0	0.0	0.0	0	0	0	0
CrIN-3	0.0	0.0	0.0	0	0	0	0
CrIN-4	71.1	74.8	65.5	102,349	107,748	94,359	3,172,806
CrIN-5	66.8	73.5	1.8	96,152	105,813	2,558	2,980,722
February 2023							
CrIN-1	0.0	0.0	0.0	0	0	0	0
CrIN-2	0.0	0.0	0.0	0	0	0	0
CrIN-3	0.0	0.0	0.0	0	0	0	0
CrIN-4	71.3	74.1	64.9	102,665	106,763	93,482	2,874,607
CrIN-5	69.7	76.0	62.4	100,297	109,480	89,807	2,808,322
March 2023							
CrIN-1	0.0	0.0	0.0	0	0	0	0
CrIN-2	0.0	0.0	0.0	0	0	0	0
CrIN-3	0.0	0.0	0.0	0	0	0	0
CrIN-4	67.3	72.8	32.3	96,898	104,847	46,516	3,003,832
CrIN-5	65.4	74.0	31.7	94,197	106,504	45,672	2,920,116

^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.

2.11 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 2023 Quarter 1, DP-1835

UIC Well	January 2023			February 2023			March 2023		
	Average ^a (ft)	Maximum (ft)	Minimum (ft)	Average (ft)	Maximum (ft)	Minimum (ft)	Average (ft)	Maximum (ft)	Minimum (ft)
CrIN-1	n/a ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CrIN-2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CrIN-3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CrIN-4	19.3	21.2	7.8	19.7	21.0	8.7	19.7	23.1	16.0
CrIN-5	26.4	29.8	4.0	26.5	30.8	0.6	26.2	31.0	5.6

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

^b n/a = Not applicable: treated groundwater not injected during the month at this location.

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

Daily volumes of groundwater injected (following treatment) during CY 2023 Quarter 1 are presented in Table 2.12-1.

**Table 2.12-1
Daily Injection Summary Table – CY 2023 Quarter 1, DP-1835**

Date	CrIN-1 (gal.)	CrIN-2 (gal.)	CrIN-3 (gal.)	CrIN-4 (gal.)	CrIN-5 (gal.)	Total (gal.)
1/1/2023	0	0	0	97,718	98,965	196,683
1/2/2023	0	0	0	96,871	2,558	99,428
1/3/2023	0	0	0	96,095	52,508	148,603
1/4/2023	0	0	0	95,128	104,883	200,012
1/5/2023	0	0	0	94,359	102,311	196,670
1/6/2023	0	0	0	97,146	98,446	195,591
1/7/2023	0	0	0	103,690	100,805	204,494
1/8/2023	0	0	0	103,925	100,817	204,743
1/9/2023	0	0	0	102,904	99,813	202,717
1/10/2023	0	0	0	106,525	99,715	206,240
1/11/2023	0	0	0	106,704	99,933	206,637
1/12/2023	0	0	0	106,638	99,497	206,135
1/13/2023	0	0	0	106,566	99,465	206,030
1/14/2023	0	0	0	106,399	100,306	206,705
1/15/2023	0	0	0	105,773	99,690	205,463
1/16/2023	0	0	0	106,354	104,033	210,387
1/17/2023	0	0	0	107,748	96,406	204,154
1/18/2023	0	0	0	105,736	100,667	206,403
1/19/2023	0	0	0	105,344	97,345	202,689
1/20/2023	0	0	0	103,764	98,070	201,834
1/21/2023	0	0	0	100,295	97,915	198,210
1/22/2023	0	0	0	100,417	101,149	201,566
1/23/2023	0	0	0	100,820	105,813	206,633
1/24/2023	0	0	0	100,715	104,367	205,082
1/25/2023	0	0	0	100,762	105,351	206,113
1/26/2023	0	0	0	100,485	100,262	200,747
1/27/2023	0	0	0	100,874	99,303	200,177
1/28/2023	0	0	0	100,723	104,120	204,843
1/29/2023	0	0	0	101,630	98,804	200,435
1/30/2023	0	0	0	103,147	101,638	204,785
1/31/2023	0	0	0	107,551	105,768	213,319
2/1/2023	0	0	0	104,841	99,673	204,513
2/2/2023	0	0	0	104,419	94,007	198,425
2/3/2023	0	0	0	104,176	95,892	200,068

Table 2.12-1 (continued)

Date	CrIN-1 (gal.)	CrIN-2 (gal.)	CrIN-3 (gal.)	CrIN-4 (gal.)	CrIN-5 (gal.)	Total (gal.)
2/4/2023	0	0	0	105,116	99,566	204,682
2/5/2023	0	0	0	105,199	98,940	204,139
2/6/2023	0	0	0	105,903	97,043	202,946
2/7/2023	0	0	0	93,482	89,807	183,289
2/8/2023	0	0	0	104,495	105,463	209,957
2/9/2023	0	0	0	106,763	104,185	210,948
2/10/2023	0	0	0	101,821	97,541	199,362
2/11/2023	0	0	0	100,823	96,525	197,348
2/12/2023	0	0	0	98,622	96,145	194,766
2/13/2023	0	0	0	103,201	100,489	203,691
2/14/2023	0	0	0	103,579	103,646	207,225
2/15/2023	0	0	0	103,642	102,706	206,348
2/16/2023	0	0	0	102,426	98,027	200,453
2/17/2023	0	0	0	102,120	100,051	202,172
2/18/2023	0	0	0	102,322	100,808	203,130
2/19/2023	0	0	0	102,296	100,784	203,079
2/20/2023	0	0	0	102,187	102,050	204,237
2/21/2023	0	0	0	102,263	102,205	204,468
2/22/2023	0	0	0	102,194	101,697	203,891
2/23/2023	0	0	0	100,829	109,480	210,309
2/24/2023	0	0	0	101,692	106,565	208,256
2/25/2023	0	0	0	101,613	106,538	208,152
2/26/2023	0	0	0	101,949	99,903	201,852
2/27/2023	0	0	0	102,928	98,930	201,858
2/28/2023	0	0	0	103,710	99,657	203,367
3/1/2023	0	0	0	103,117	101,443	204,560
3/2/2023	0	0	0	102,482	103,448	205,930
3/3/2023	0	0	0	103,457	102,997	206,454
3/4/2023	0	0	0	104,847	102,951	207,798
3/5/2023	0	0	0	103,714	103,358	207,071
3/6/2023	0	0	0	103,669	104,393	208,062
3/7/2023	0	0	0	102,946	106,504	209,450
3/8/2023	0	0	0	102,431	98,049	200,480
3/9/2023	0	0	0	103,121	97,968	201,088
3/10/2023	0	0	0	103,173	97,873	201,046
3/11/2023	0	0	0	103,498	97,905	201,403
3/12/2023	0	0	0	103,486	97,908	201,395
3/13/2023	0	0	0	103,389	97,840	201,229
3/14/2023	0	0	0	102,606	97,597	200,204

Table 2.12-1 (continued)

Date	CrIN-1 (gal.)	CrIN-2 (gal.)	CrIN-3 (gal.)	CrIN-4 (gal.)	CrIN-5 (gal.)	Total (gal.)
3/15/2023	0	0	0	102,182	100,760	202,941
3/16/2023	0	0	0	102,263	97,430	199,693
3/17/2023	0	0	0	102,343	96,665	199,008
3/18/2023	0	0	0	102,267	97,259	199,526
3/19/2023	0	0	0	102,203	97,139	199,343
3/20/2023	0	0	0	102,219	97,385	199,604
3/21/2023	0	0	0	101,977	97,820	199,797
3/22/2023	0	0	0	101,882	98,452	200,334
3/23/2023	0	0	0	87,374	87,200	174,574
3/24/2023	0	0	0	99,879	97,420	197,299
3/25/2023	0	0	0	99,055	97,975	197,029
3/26/2023	0	0	0	98,967	98,052	197,018
3/27/2023	0	0	0	99,345	99,019	198,364
3/28/2023	0	0	0	99,373	98,820	198,193
3/29/2023	0	0	0	53,683	46,372	100,055
3/30/2023	0	0	0	46,516	45,672	92,188
3/31/2023	0	0	0	56,371	56,440	112,811
						Total 17,760,407

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

Daily volumes of groundwater pumped from extraction wells during 2023 Quarter 1 are presented in Table 2.13-1.

Table 2.13-1
Daily Extraction Summary Table – CY 2023 Quarter 1, DP-1835

Date	CrEX-1 (gal.)	CrEX-2 (gal.)	CrEX-3 (gal.)	CrEX-4 (gal.)	CrEX-5 (gal.)	Total (gal.)
1/1/2023	0	0	0	82,284	111,595	193,880
1/2/2023	0	0	0	95,055	0	95,055
1/3/2023	0	0	0	84,662	60,334	144,995
1/4/2023	0	0	0	92,145	110,838	202,983
1/5/2023	0	0	0	92,119	110,822	202,941
1/6/2023	0	0	0	92,128	99,933	192,061
1/7/2023	0	0	0	96,490	106,576	203,066
1/8/2023	0	0	0	96,498	106,495	202,992
1/9/2023	0	0	0	96,482	106,644	203,126
1/10/2023	0	0	0	96,672	108,952	205,623
1/11/2023	0	0	0	96,462	110,463	206,925
1/12/2023	0	0	0	96,515	110,581	207,096
1/13/2023	0	0	0	96,471	110,532	207,003

Table 2.13-1 (continued)

Date	CrEX-1 (gal.)	CrEX-2 (gal.)	CrEX-3 (gal.)	CrEX-4 (gal.)	CrEX-5 (gal.)	Total (gal.)
1/14/2023	0	0	0	96,458	110,290	206,748
1/15/2023	0	0	0	95,209	110,560	205,770
1/16/2023	0	0	0	93,969	110,783	204,751
1/17/2023	0	0	0	96,513	110,726	207,239
1/18/2023	0	0	0	95,924	112,317	208,241
1/19/2023	0	0	0	95,389	114,086	209,475
1/20/2023	0	0	0	96,932	104,567	201,499
1/21/2023	0	0	0	97,903	99,136	197,039
1/22/2023	0	0	0	97,779	99,037	196,816
1/23/2023	0	0	0	97,337	103,671	201,008
1/24/2023	0	0	0	97,060	106,592	203,652
1/25/2023	0	0	0	96,556	109,141	205,697
1/26/2023	0	0	0	96,261	110,843	207,105
1/27/2023	0	0	0	93,742	109,309	203,050
1/28/2023	0	0	0	92,347	105,698	198,045
1/29/2023	0	0	0	92,157	107,268	199,425
1/30/2023	0	0	0	92,161	107,344	199,505
1/31/2023	0	0	0	91,617	116,450	208,067
2/1/2023	0	0	0	91,906	118,095	210,001
2/2/2023	0	0	0	92,028	116,127	208,155
2/3/2023	0	0	0	93,124	107,642	200,766
2/4/2023	0	0	0	93,500	105,649	199,149
2/5/2023	0	0	0	93,288	107,517	200,805
2/6/2023	0	0	0	92,281	110,838	203,119
2/7/2023	0	0	0	83,457	98,526	181,983
2/8/2023	0	0	0	92,332	110,908	203,240
2/9/2023	0	0	0	92,244	112,401	204,645
2/10/2023	0	0	0	92,105	116,273	208,378
2/11/2023	0	0	0	92,547	109,867	202,414
2/12/2023	0	0	0	92,389	107,094	199,483
2/13/2023	0	0	0	90,489	107,809	198,299
2/14/2023	0	0	0	92,195	113,363	205,557
2/15/2023	0	0	0	92,148	114,830	206,978
2/16/2023	0	0	0	92,152	112,802	204,953
2/17/2023	0	0	0	92,504	109,622	202,127
2/18/2023	0	0	0	93,179	106,971	200,150
2/19/2023	0	0	0	93,273	106,701	199,974
2/20/2023	0	0	0	93,387	106,758	200,145
2/21/2023	0	0	0	95,431	109,540	204,971

Table 2.13-1 (continued)

Date	CrEX-1 (gal.)	CrEX-2 (gal.)	CrEX-3 (gal.)	CrEX-4 (gal.)	CrEX-5 (gal.)	Total (gal.)
2/22/2023	0	0	0	96,475	110,805	207,280
2/23/2023	0	0	0	96,484	110,806	207,290
2/24/2023	0	0	0	96,487	110,764	207,250
2/25/2023	0	0	0	96,473	110,772	207,245
2/26/2023	0	0	0	94,994	110,824	205,818
2/27/2023	0	0	0	92,783	108,473	201,256
2/28/2023	0	0	0	92,182	107,299	199,481
3/1/2023	0	0	0	95,382	107,327	202,709
3/2/2023	0	0	0	96,569	112,908	209,477
3/3/2023	0	0	0	97,324	106,585	203,910
3/4/2023	0	0	0	96,663	109,581	206,244
3/5/2023	0	0	0	96,472	110,555	207,028
3/6/2023	0	0	0	96,469	110,563	207,032
3/7/2023	0	0	0	96,470	110,698	207,168
3/8/2023	0	0	0	96,527	110,703	207,229
3/9/2023	0	0	0	94,574	108,438	203,012
3/10/2023	0	0	0	93,319	106,942	200,261
3/11/2023	0	0	0	93,272	106,854	200,126
3/12/2023	0	0	0	93,031	106,892	199,923
3/13/2023	0	0	0	92,974	107,067	200,041
3/14/2023	0	0	0	86,094	95,810	181,904
3/15/2023	0	0	0	96,483	110,595	207,078
3/16/2023	0	0	0	96,503	110,658	207,161
3/17/2023	0	0	0	96,450	110,827	207,277
3/18/2023	0	0	0	95,759	105,991	201,749
3/19/2023	0	0	0	93,593	103,608	197,201
3/20/2023	0	0	0	93,580	103,708	197,288
3/21/2023	0	0	0	93,610	103,645	197,255
3/22/2023	0	0	0	93,947	100,413	194,361
3/23/2023	0	0	0	100,133	65,062	165,195
3/24/2023	0	0	0	97,010	110,727	207,738
3/25/2023	0	0	0	97,120	107,749	204,869
3/26/2023	0	0	0	92,174	107,260	199,435
3/27/2023	0	0	0	89,272	107,955	197,226
3/28/2023	6,779	3,854	0	81,674	98,724	191,031
3/29/2023	0	0	1,286	31,317	42,672	75,275
3/30/2023	0	0	0	47,426	54,447	101,873
3/31/2023	0	0	0	48,615	54,689	103,304
						Total 17,703,171

2.14 Facility Layout Map (Requirement 14)

Figure 2.14-1 is the facility layout map for CY 2023 Quarter 1, 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. Section 2.3 provides an explanation of how this map was generated.

3.0 REFERENCES

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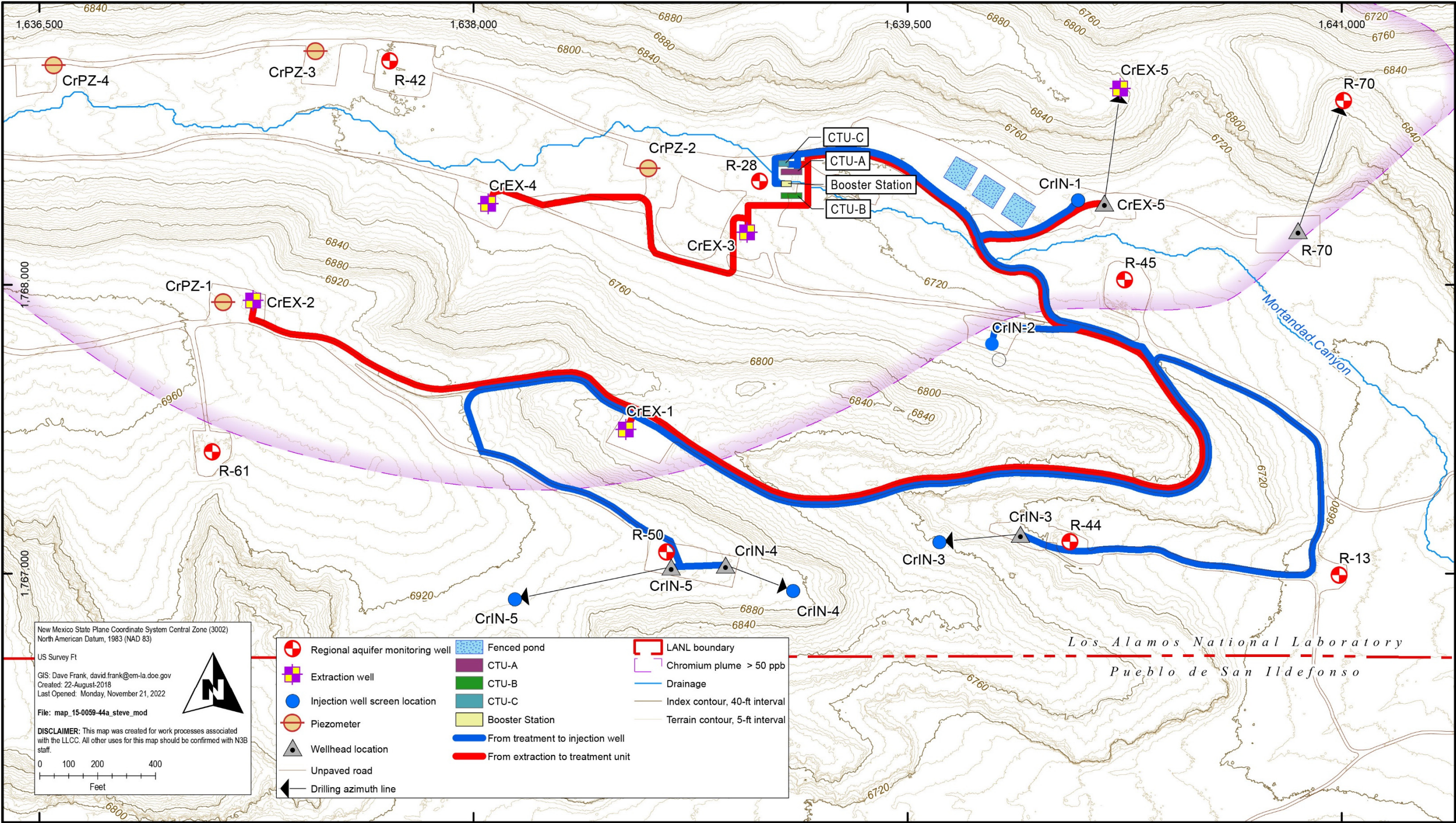


Figure 2.14-1 Facility layout map – CY 2023 Quarter 1, DP-1835

