



2025 Annual Groundwater Monitoring and Corrective Action Report

*CCR Annual Monitoring Report
Fly Ash Area Landfill and Bottom Ash Area Landfill*

*Bonanza Power Plant
Vernal, Utah*



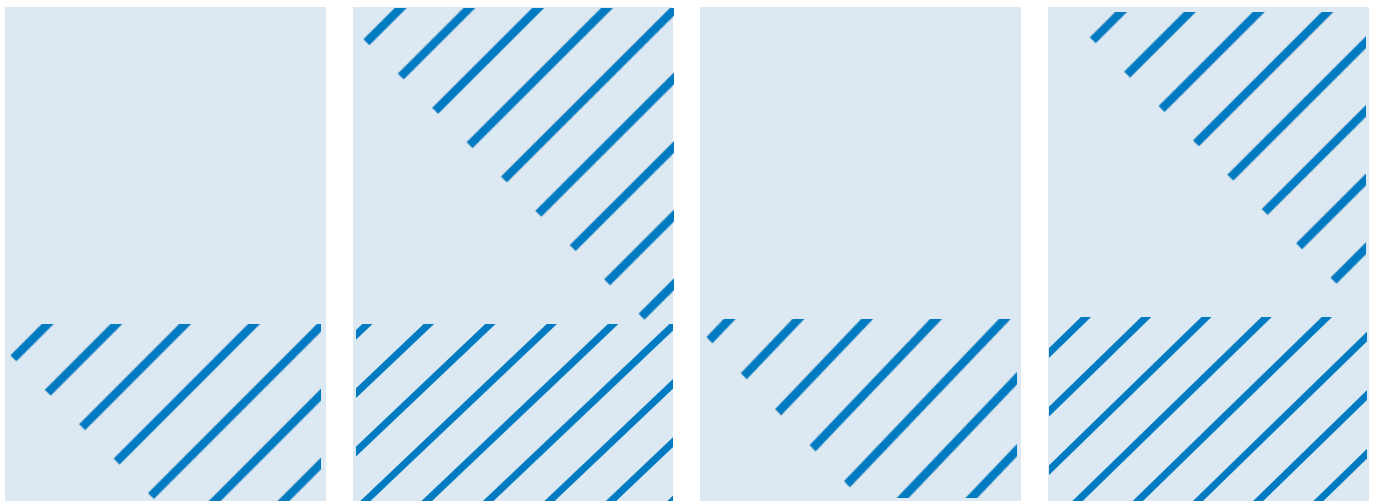
Prepared for
Deseret Power Electric Cooperative

Prepared by
Barr Engineering Co.

January 2026

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2025 Annual Groundwater Monitoring and Corrective Action Report

CCR Annual Monitoring Report Fly Ash Area Landfill and Bottom Ash Area Landfill Bonanza Power Plant Vernal, Utah

January 2026



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Abbreviations

ASD	alternative source demonstration
CCR	coal combustion residuals
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
FGD	flue gas desulfurization
MW	megawatt
SSI	statistically significant increase

Summary for CCR Units §257.90(e)(6)

At the beginning, end, and throughout 2025, the CCR units were operating under a detection monitoring program as described in 40 CFR 257.94. Pursuant to §257.94, statistically significant increases (SSIs) were determined for fluoride at monitoring well FA-DG4 during the spring 2025 sampling event. One SSI was determined for fluoride at monitoring well FA-DG4 during the fall 2025 sampling event. The 2025 monitoring data are shown on Attached Table 1

An alternative source demonstration (ASD) has been completed for these well/parameter SSIs for the fall 2024 and spring 2025 events, as summarized in Appendix B of this report. The statistical results of the fall 2025 detection monitoring event have been evaluated, and an alternative source investigation is ongoing, with results, including an ASD if appropriate, anticipated in spring 2025. Therefore, no assessment monitoring program (§257.95), or related corrective or remedial measures (§§257.96, 257.97, and 257.98), were necessary for 2025.

1 Introduction

Deseret Power Electric Cooperative (Deseret) operates Bonanza Power Plant, a 500 megawatt (MW) coal-fired generation unit near Vernal, Utah. Coal combustion residuals (CCR) from the generating station are placed in two on-site CCR units: the Fly Ash Area Landfill and the Bottom Ash Landfill as shown on Figure 1.

These landfills are existing CCR landfills that are required to comply with the provisions of the U.S. Environmental Protection Agency (EPA) CCR Rule (40 CFR Parts 257 and 261 Disposal of Coal Combustion Residuals from Electric Utilities). The Fly Ash Area landfill contains primarily fly ash and flue gas desulfurization (FGD) solids. The Bottom Ash Area landfill is used to manage bottom ash and boiler slag from the facility.

The location of each of the landfills and their associated groundwater monitoring systems are depicted in Figure 1. These systems are not considered Multiunit Groundwater Monitoring Systems.

1.1 Purpose

As stated in §257.90(e), the purpose of the Annual Groundwater Monitoring and Corrective Action Report (Annual Report) is to:

- Document the status of the monitoring and corrective action program for the CCR units
- Summarize key actions completed
- Describe any problems encountered
- Discuss actions to resolve the problems
- Highlight key activities for the upcoming year

1.2 Status of the Groundwater Monitoring and Corrective Action Program

- Both CCR units were in detection monitoring
- All wells in the CCR groundwater monitoring system were sampled and analyzed for Appendix III parameters

1.3 CCR Rule Requirements

This Annual Report has been prepared in accordance with the requirements of §257.90(e) of the CCR Rule, as outlined in the following Table 1-1.

Table 1-1 CCR Rule Requirements

CCR Rule Reference	Content Required in Report	Location
§257.90(e)(1)	Map showing the CCR unit and all monitoring wells that are part of the groundwater monitoring system	Section 2.1.1 Documentation; see Figure 1
§257.90(e)(2)	Discuss any new or decommissioned monitoring wells	Section 2.1.2 Changes to Monitoring System
§257.90(e)(3)	Provide the number and date groundwater samples were collected, and the monitoring (i.e., detection or assessment)	Section 2.2 Monitoring and Analytical Results
§257.90(e)(4)	Discuss any transition between monitoring programs	Not applicable- no transition between monitoring programs has occurred.
§257.90(e)(5)	Other information specified in §257.90 through §257.98	Section 2.4 Key Actions Completed/Problems Encountered
§257.90(e)(6)	Overview at beginning of annual report	Summary for CCR Units §257.90(e)(6)

2 Groundwater Monitoring and Corrective Action Program

This section documents the status of the groundwater monitoring and corrective action program for the CCR units for 2025. The groundwater monitoring system is described in Section 2.1, the monitoring and analytical results are described in Section 2.2, groundwater direction and flow rates in Section 2.3, key actions completed and problems encountered are described in Section 2.4, and key activities planned for 2026 are described in Section 2.5.

2.1 Groundwater Monitoring System

2.1.1 Documentation

Figure 1 shows an aerial image of the CCR units and all background (or upgradient) and downgradient monitoring wells, including the well identification numbers, that are part of the groundwater monitoring program, as required by §257.90(e)(1).

2.1.2 Changes to Monitoring System

No monitoring wells were installed or decommissioned in 2025.

2.2 Monitoring and Analytical Results

2.2.1 Existing Monitoring System Wells

As shown in Table 2-1 below, a total of eleven detection monitoring groundwater samples were collected during the spring 2025 semiannual sampling event, and eleven samples were collected during the fall 2025 semiannual sampling event from the monitoring system wells. Results from the 2025 sampling events are included in Table 2-2, Table 2-3, Attached Table 1, and Appendix A.

Table 2-1 Semiannual Detection Monitoring Well Sample Events

Well	Spring 2025 Semiannual Monitoring Date	Fall 2025 Semiannual Monitoring Date
FA-UG1	5/12/2025	10/13/2025
FA-UG2 (PZ-11)	5/12/2025	10/13/2025
FA-DG2	5/14/2025	10/15/2025
FA-DG3	5/13/2025	10/14/2025
FA-DG4	5/13/2025	10/14/2025
FA-DG5	5/13/2025	10/14/2025
BA-UG1	5/14/2025	10/15/2025
BA-DG1	5/15/2025	10/15/2025
BA-DG2	5/15/2025	10/15/2025
BA-DG3	5/15/2025	10/16/2025
BA-DG4	5/14/2025	10/16/2025

Fall 2024 SSIs and Subsequent ASD

Sampling for the fall 2024 monitoring event was conducted on October 14-15 and 21-22, 2024. Results indicated one SSI for the fall 2024 event: fluoride at FA-DG4. This information was included in the 2024 Annual Report (Barr, 2025).

An ASD report regarding the fall 2024 SSI was completed on May 5, 2025. The results of the ASD concluded that the SSIs were attributable to a source other than the CCR units listed in this report. The ASD is provided in Appendix B.

Spring 2025 SSIs and Subsequent ASD

Table 2-2 summarizes the verified SSIs determined from the spring 2025 event. During the May 12-15, 2025, sampling event, a potential SSI for fluoride at FA-DG4 was identified. The complete dataset for the detection monitoring event can be found in Attached Table 1.

Table 2-2 Verified SSIs for the Spring 2025 Event

Well	Constituent/SSI
FA-DG4	Fluoride

An ASD was completed with regard to the SSI for fluoride identified in Table 2-2 on December 1, 2025. The ASD is included in Appendix B and concluded that the SSI was attributable to a source other than the CCR unit.

Fall 2025 Sampling Event

Sampling for the fall 2025 monitoring event was conducted on October 13-16, 2025. Preliminary statistical evaluation of the fall 2025 results indicated elevated fluoride at monitoring well FA-DG4 (Attached Table 1).

Table 2-3 summarizes the preliminary SSI determined from the fall event. If verified, the fall 2025 SSI will be evaluated against previous ASDs, and a new ASD will be generated if appropriate.

Table 2-3 Preliminary SSI for the Fall 2025 Event

Well	Constituent/SSI
FA-DG4	Fluoride

2.3 Groundwater Flow Direction and Rates

Groundwater flow rates and gradients were calculated using the data collected from the 2025 water level measurements and from aquifer property data presented in the 2017 Groundwater Monitoring System Certification (Burns & McDonnell, 2017a). The calculation tables for groundwater flow rates, directions, and gradients are located in Appendix C. Groundwater elevation contours are shown for each semiannual sampling event on Figure 2 and Figure 3 for the Fly Ash Area and on Figure 4 and Figure 5 for the Bottom Ash Area.

The groundwater in the Fly Ash Landfill area generally flows in the southeast direction (Figure 2 and Figure 3) at rates ranging from a low of 0.002 ft/day to a high of 0.126 ft/day with an average horizontal gradient of 0.005 to 0.006. Groundwater in the Bottom Ash Landfill area generally flows southeast (Figure 4 and Figure 5) at rates ranging from 0.002 ft/day to 0.024 ft/day with an average horizontal gradient of 0.001 to 0.002 (Appendix C).

The flow direction in the northeast corner of the North Evaporation Pond is deflected to the east likely due to mounding of the water table under the pond. Groundwater flow upgradient of the Bottom Ash Landfill is partly influenced by the capture zone created by the Pumpback system, which creates an area of drawdown near the center of the plant site and creates a flow divide north of BA-UG1 so that groundwater flow is generally inward toward the main power block (Loughlin, 2017).

2.4 Key Actions Completed/Problems Encountered

The following key actions were completed for the groundwater monitoring program through 2025:

- Completed semiannual detection monitoring sampling for each background and downgradient well.
- Conducted statistical evaluation of the spring 2025 and fall 2025 groundwater detection monitoring data.
- Determined, pursuant to §257.93(h), that an SSI over background levels did not occur for any of the constituents listed in Appendix III at any downgradient monitoring well with the exception of fluoride at FA-DG4 during the spring and fall 2025, as shown in Table 2-2 and Table 2-3.
- Successful ASDs concluded that the source of the SSIs in fall 2024 and spring 2025 was not the CCR unit. The ASDs for fall 2024 and spring 2025 are provided in Appendix B.

No problems were encountered in 2025.

2.5 Key Activities for Upcoming Year

The following key groundwater monitoring program activities are planned for 2026:

- Continue semiannual detection monitoring according to the Sampling and Analysis Program (Deseret, 2016).
- Evaluate analytical results from two 2026 semiannual detection monitoring events for SSIs according to the CCR Selected Statistical Method Certification (Burns & McDonnell, 2017b).
- Review the conceptual site model and provide recommendations for improvements to the monitoring well network if needed.
- The fall 2025 SSIs will be evaluated against previous ASDs, and a new ASD will be generated for the fall 2025 results per the CCR rule and included in the 2026 Annual CCR Report if appropriate; the site will transition to assessment monitoring if no successful ASD is completed.

3 References

Barr, 2025, 2024 Annual Groundwater Monitoring and Corrective Action Report, Bonanza Power Plant. Prepared for Deseret Power Electric Cooperative. January 2025.

Burns & McDonnell, 2017a, Groundwater Monitoring System Certification – Bonanza Power Plant, Vernal, Utah. October 2017.

Burns & McDonnell, 2017b, Selected Statistical Method Certification, Deseret Generation and Transmission Cooperative – Bonanza Power Plant, Vernal, Utah. October 2017.

Deseret Power Electric Cooperative, 2016, Bonanza Power Plant CCR Groundwater Monitoring Wells Sampling and Analysis Program. May 2016.

Loughlin Water Associates, 2017. Bonanza Power Plant, Coal Combustion Residuals, Monitoring Well Installation Report. Pumpback Capture Zone shown on Drawing 6. January 2017.



Attached Tables

Attached Table 1
Water Quality Analytical Data Summary
2025 CCR Annual Report
Deseret Power Cooperative

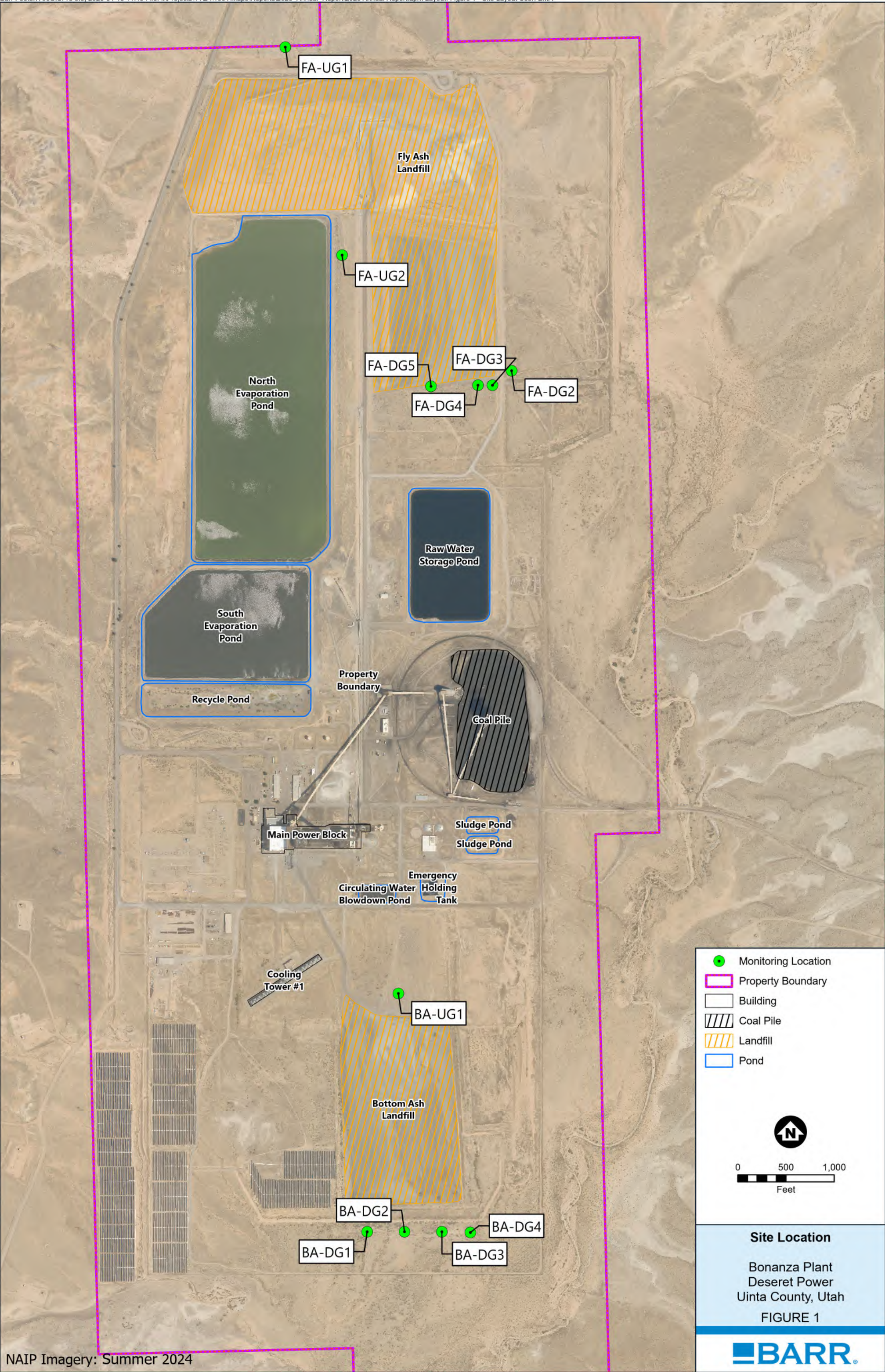
Appendix III Parameters Analysis Location Units			Boron, total Lab mg/l	Calcium, total Lab mg/l	Chloride Lab mg/l	Fluoride Lab mg/l	pH ¹ Field pH units	Solids, total dissolved Lab mg/l	Sulfate, as SO ₄ Lab mg/l	Water Level Elevation Field ft asml
Location	Date	Sample Type								
Bottom Ash Landfill										
BA - DG1	5/15/2025	N	17.1	221	784	3.46	7.2	9900	5460	4991.12
BA - DG1	10/15/2025	N	17.0	207	473	3.83	7.4	10900	3440	4990.56
BA - DG2	5/15/2025	N	34.3	445	706	3.92	7.1	11500	6780	4990.99
BA - DG2	10/15/2025	N	35.6	401	656	2.72	7.2	12900	6780	4990.64
BA - DG3	5/15/2025	N	7.09	21.6	409	9.78	8.1	4970	2200	4989.45
BA - DG3	10/16/2025	N	6.17	20.4	390	8.80	8.1	5140	2220	4989.07
BA - DG4	5/14/2025	N	28.4	258	462	2.83	7.3	11800	4460	4987.52
BA - DG4	10/16/2025	N	30.4	370	783	6.14	7.4	11500	6710	4987.23
BA - UG1	5/14/2025	N	152	423	1380	6.76	7.0	19000	10200	4993.89
BA - UG1	10/15/2025	N	148	380	1300	5.40	7.2	19100	9850	4994.01
Fly Ash Landfill										
FA - DG2	5/14/2025	N	8.09	< 2.0 U	707	43.8	9.0	13300	5130	5029.26
FA - DG2	10/15/2025	N	6.88	1.3	598	38.1	9.1	13800	4290	5029.17
FA - DG3	5/13/2025	N	2.46	2.9	222	8.23	8.7	3490	1460	5029.20
FA - DG3	10/14/2025	N	3.15	2.6	256	10.6	8.8	4030	1450	5028.60
FA - DG4	5/13/2025	N	12.3	45.6	878	8.14	7.7	8680 H	4020	5028.58
FA - DG4	10/14/2025	N	12.8	39.0	819	10.7	7.7	9500	3780	5027.96
FA - DG5	5/13/2025	N	60.2	477	2000	0.739	7.1	16300	8900	5029.35
FA - DG5	10/14/2025	N	60.6	449	1860	0.641	7.1	18300	8490	5028.70
FA - UG1	5/12/2025	N	0.86	8.0	35.2	1.75	8.1	1030	327	5048.47
FA - UG1	10/13/2025	N	0.80	7.6	34.2	1.84	8.1	1010	323	5052.20
FA - UG2	5/12/2025	N	55.5	561	1850	0.495	6.9	16800	8490	5043.68
FA - UG2	5/12/2025	FD	55.3	546	1840	0.470	--	16500	8510	--
FA - UG2	10/13/2025	N	54.5	497	1770	0.448	6.8	17000	8140	5043.39
FA - UG2	10/13/2025	FD	59.9	561	1840	0.461	--	17700	8680	--

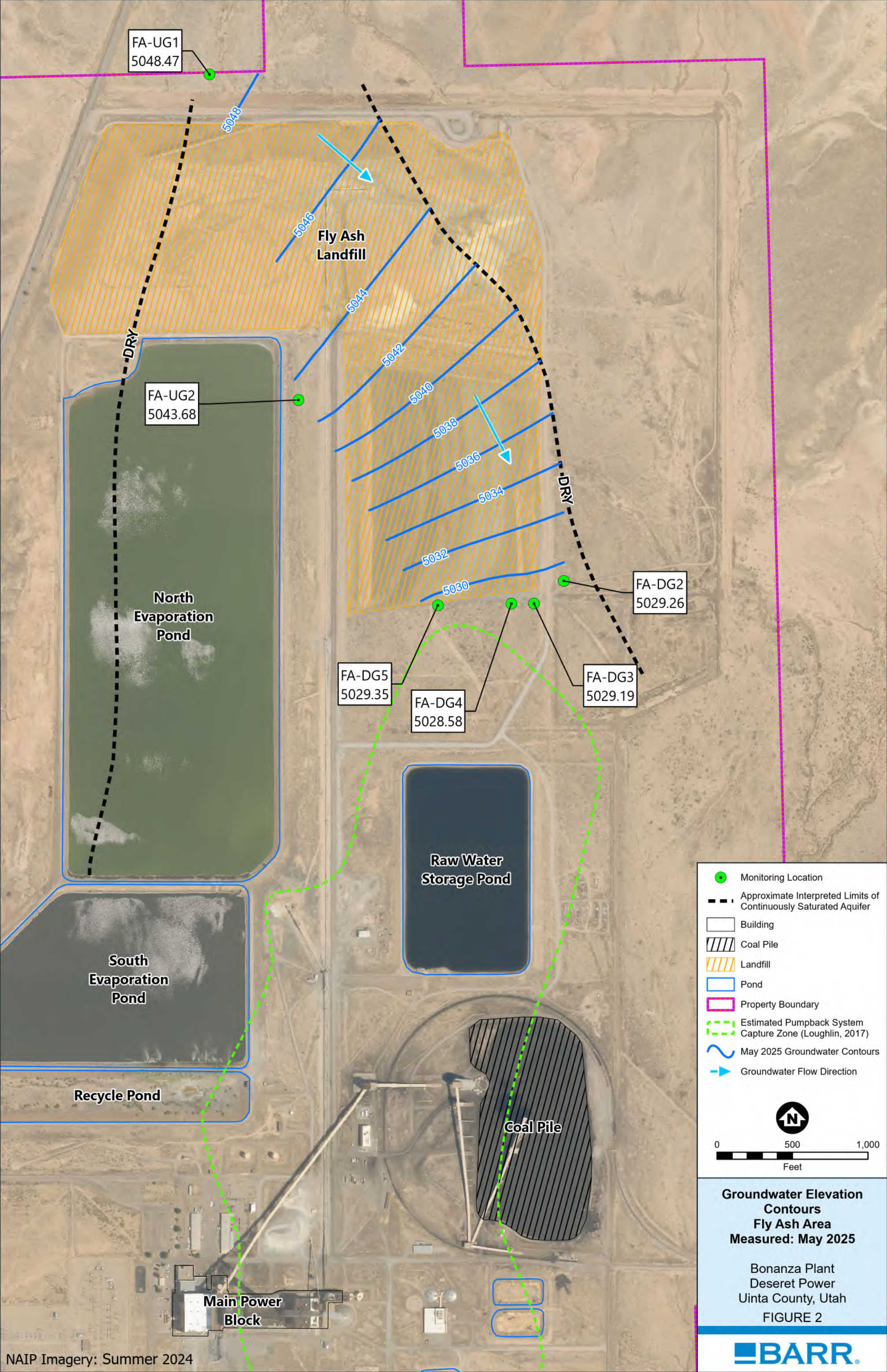
Attached Table 1
Water Quality Analytical Data Summary
2025 CCR Annual Report
Deseret Power Cooperative
Barr Standard Footnotes and Qualifiers

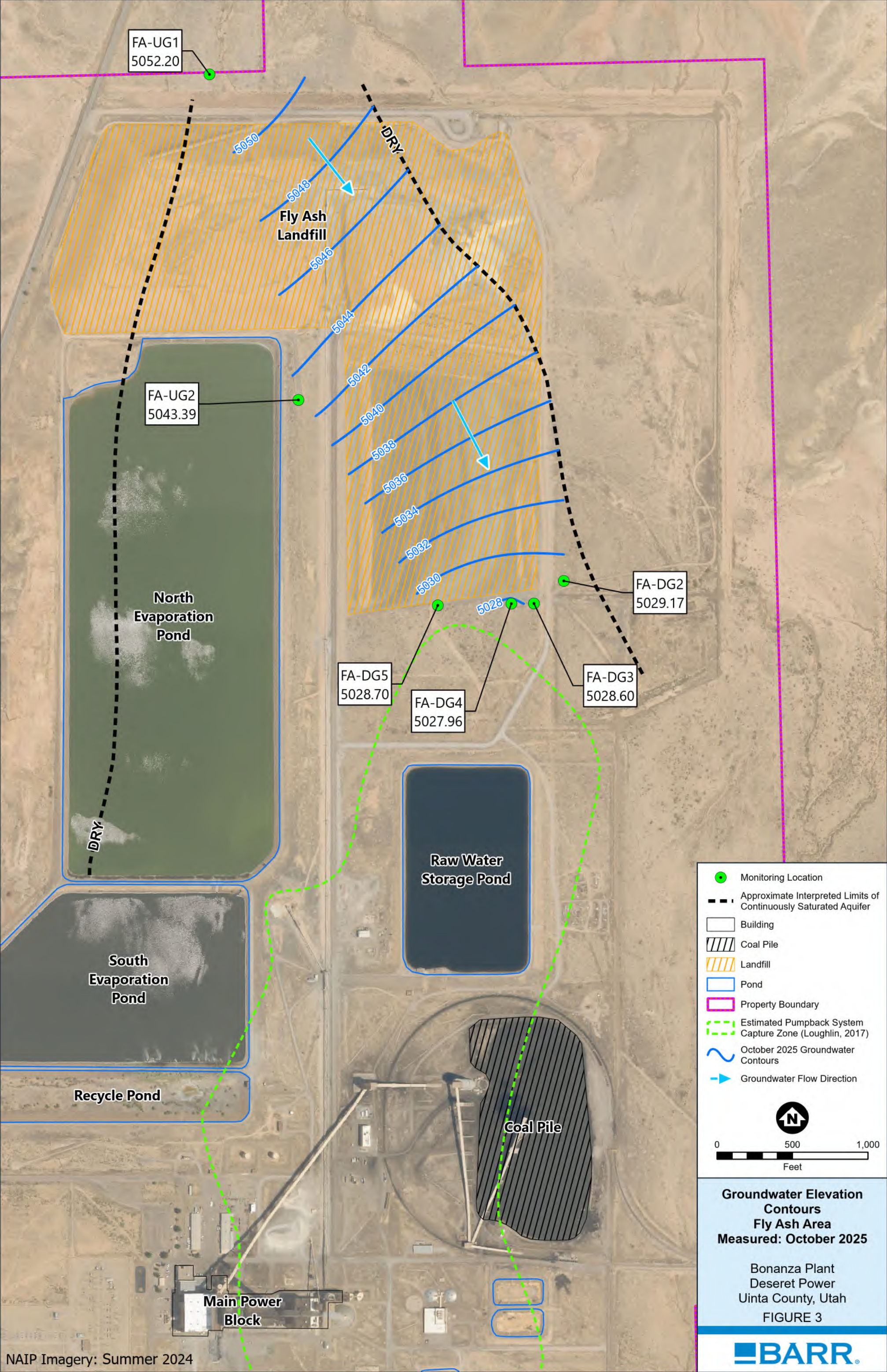
--	Not analyzed/Not available.
N	Sample Type: Normal
R	Sample Type: Resample
FD	Sample Type: Field Duplicate
H	Recommended sample preservation, extraction or analysis holding time was exceeded.
U	The analyte was analyzed for, but was not detected.
1	pH was rounded to the nearest tenth for statistical analysis due to instrument precision

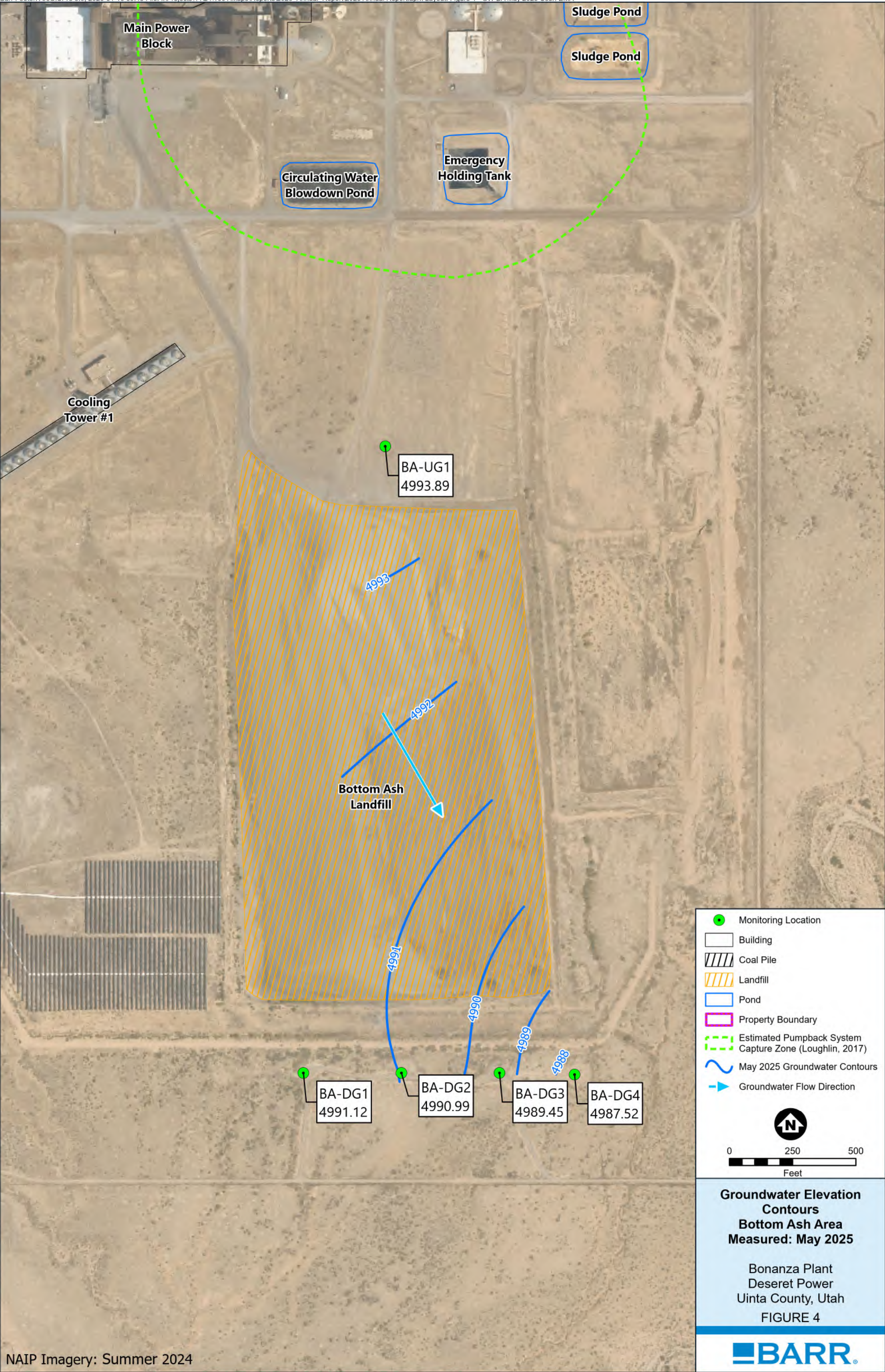


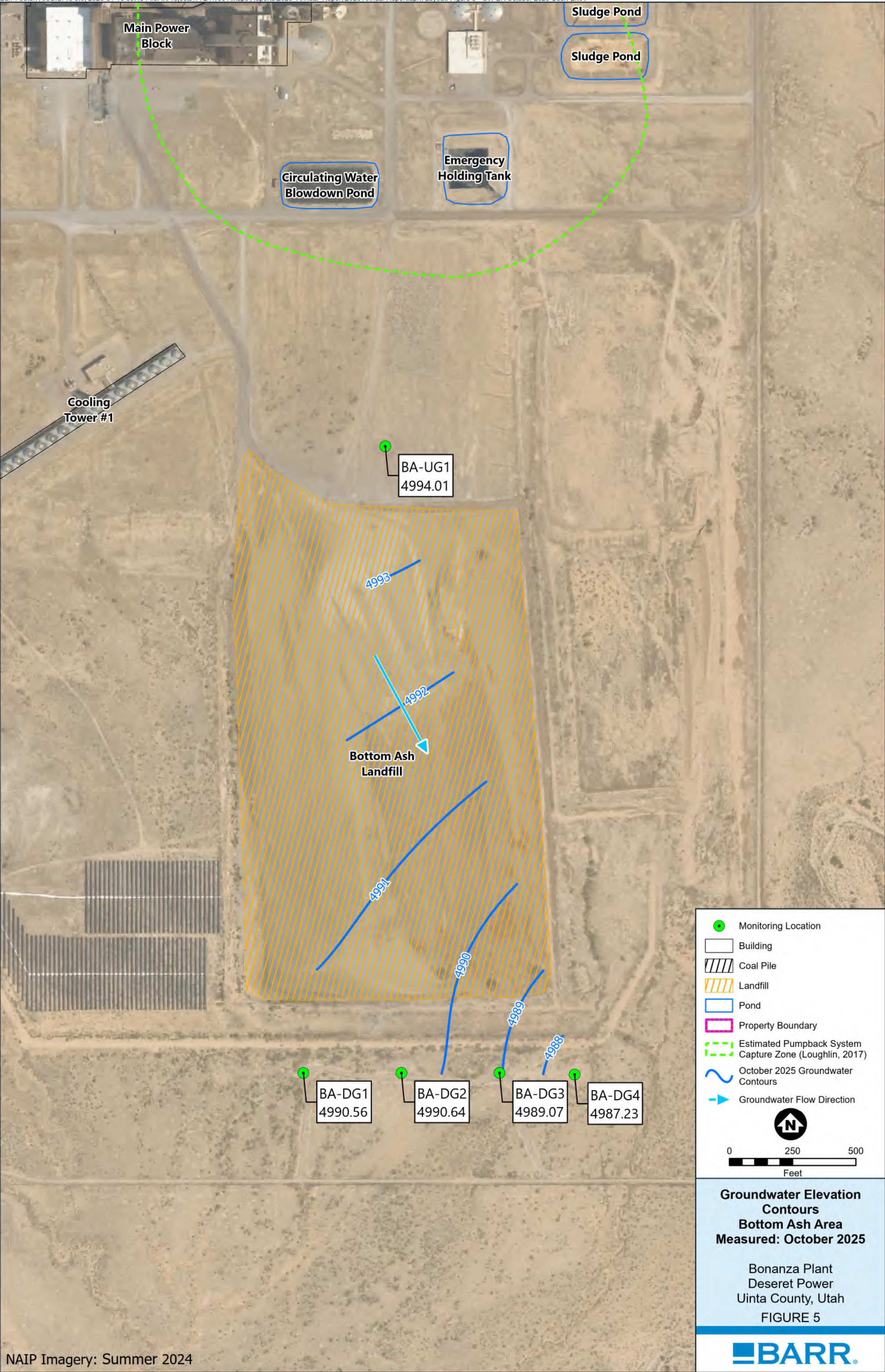
Figures













Appendices



Appendix A

Lab Reports and Field Sheets



6/4/2025

Work Order: 25E1332
Project: CCR Sampling

Deseret Power Electric Cooperative
Attn: Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.



Approved By:

Andrew Royer, Project Manager



Deseret Power Electric Cooperative
Tyler Esplin

REPORT NARRATIVE

Sample Group

<u>Laboratory ID</u>	<u>Sample Name</u>
25E1332-01	FA-UG1
25E1332-02	FA-UG2
25E1332-03	FA-DG2
25E1332-04	FA-DG3
25E1332-05	FA-DG4
25E1332-06	FA-DG5
25E1332-07	BA-UG1
25E1332-08	BA-DG1
25E1332-09	BA-DG2
25E1332-10	BA-DG3
25E1332-11	BA-DG4
25E1332-12	Duplicate

An unusual result was found upon manager review of the initial TDS result for sample 25E1332-05 (FA-DG4). The sample was tested for conductivity for further proof of an error. By this time the holding time had expired, but the decision was made to reprepare and test the TDS for a more accurate result.

Certificate of Analysis

Deseret Power Electric Cooperative
Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: FA-UG1

Matrix: Water

Lab ID: 25E1332-01

Date Sampled: 5/12/25 9:41

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	482	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	6.3	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	489	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	35.2	mg/L	1.00	EPA 300.0	5/17/25	5/17/25	
Fluoride	1.75	mg/L	0.100	EPA 300.0	5/17/25	5/17/25	
Sulfate	327	mg/L	1.00	EPA 300.0	5/17/25	5/17/25	
Total Dissolved Solids (TDS)	1030	mg/L	20	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.0042	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	0.015	mg/L	0.005	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	0.86	mg/L	0.50	EPA 200.7/200.2	5/16/25	5/16/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	8.0	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Chromium, Total	0.0238	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.01	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	0.083	mg/L	0.020	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	5.2	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	0.04	mg/L	0.01	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	1.4	mg/L	0.5	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.0150	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	414	mg/L	10.0	EPA 200.7/200.2	5/16/25	5/16/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	

Certificate of Analysis

Deseret Power Electric Cooperative
Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: FA-UG2

Matrix: Water

Lab ID: 25E1332-02

Date Sampled: 5/12/25 13:08

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	381	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	381	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	1850	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Fluoride	0.495	mg/L	0.100	EPA 300.0	5/17/25	5/17/25	
Sulfate	8490	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Total Dissolved Solids (TDS)	16800	mg/L	500	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.0035	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	ND	mg/L	0.025	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	55.5	mg/L	0.50	EPA 200.7/200.2	5/16/25	5/16/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	561	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Chromium, Total	0.0202	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.05	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	0.0005	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	0.662	mg/L	0.100	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	1120	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	ND	mg/L	0.05	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	8.5	mg/L	2.5	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.00932	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	2920	mg/L	10.0	EPA 200.7/200.2	5/16/25	5/16/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	

Certificate of Analysis

Deseret Power Electric Cooperative
Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: FA-DG2

Matrix: Water

Lab ID: 25E1332-03

Date Sampled: 5/14/25 8:39

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	2490	mg/L	1.0	SM 2320 B	5/17/25	5/17/25	
Alkalinity - Carbonate (as CaCO ₃)	1220	mg/L	1.0	SM 2320 B	5/17/25	5/17/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/17/25	5/17/25	
Alkalinity - Total (as CaCO ₃)	3710	mg/L	1.0	SM 2320 B	5/17/25	5/17/25	
Chloride	707	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Fluoride	43.8	mg/L	2.00	EPA 300.0	5/17/25	5/17/25	
Sulfate	5130	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Total Dissolved Solids (TDS)	13300	mg/L	500	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	0.0009	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.127	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	ND	mg/L	0.050	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	8.09	mg/L	0.50	EPA 200.7/200.2	5/19/25	5/19/25	
Cadmium, Total	0.0003	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	ND	mg/L	2.0	EPA 200.7/200.2	5/19/25	5/19/25	
Chromium, Total	0.132	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.10	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	ND	mg/L	0.200	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	7.7	mg/L	2.0	EPA 200.7/200.2	5/19/25	5/19/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	1.31	mg/L	0.10	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	7.2	mg/L	5.0	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.316	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	4510	mg/L	10.0	EPA 200.7/200.2	5/19/25	5/19/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	

Certificate of Analysis

Deseret Power Electric Cooperative
Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: FA-DG3

Matrix: Water

Lab ID: 25E1332-04

Date Sampled: 5/13/25 14:57

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	795	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	89.4	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	885	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	222	mg/L	10.0	EPA 300.0	5/17/25	5/17/25	
Fluoride	8.23	mg/L	1.00	EPA 300.0	5/17/25	5/17/25	
Sulfate	1460	mg/L	10.0	EPA 300.0	5/17/25	5/17/25	
Total Dissolved Solids (TDS)	3490	mg/L	20	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.0141	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	0.010	mg/L	0.005	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	2.46	mg/L	0.50	EPA 200.7/200.2	5/16/25	5/16/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	2.9	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Chromium, Total	0.0565	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.01	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	0.131	mg/L	0.020	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	6.5	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	0.18	mg/L	0.01	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	3.2	mg/L	0.5	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.0896	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	1290	mg/L	10.0	EPA 200.7/200.2	5/16/25	5/16/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	

Certificate of Analysis

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Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: FA-DG4

Matrix: Water

Lab ID: 25E1332-05

Date Sampled: 5/13/25 12:53

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	912	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	912	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	878	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Fluoride	8.14	mg/L	2.00	EPA 300.0	5/17/25	5/17/25	
Sulfate	4020	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Total Dissolved Solids (TDS)	8680	mg/L	100	SM 2540 C	5/21/25	5/21/25	APH-R
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.0044	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	ND	mg/L	0.025	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	12.3	mg/L	0.50	EPA 200.7/200.2	5/16/25	5/16/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	45.6	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Chromium, Total	0.0525	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.05	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	0.244	mg/L	0.100	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	73.1	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	0.28	mg/L	0.05	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	5.1	mg/L	2.5	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.0470	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	2780	mg/L	10.0	EPA 200.7/200.2	5/16/25	5/16/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	

Certificate of Analysis

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PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: FA-DG5

Matrix: Water

Lab ID: 25E1332-06

Date Sampled: 5/13/25 9:23

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	344	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	344	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	2000	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Fluoride	0.739	mg/L	0.100	EPA 300.0	5/17/25	5/17/25	
Sulfate	8900	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Total Dissolved Solids (TDS)	16300	mg/L	500	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/16/25	5/19/25	
Arsenic, Total	0.0046	mg/L	0.0005	EPA 200.8/200.2	5/16/25	5/19/25	
Barium, Total	0.009	mg/L	0.005	EPA 200.7/200.2	5/16/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/16/25	5/19/25	
Boron, Total	60.2	mg/L	0.05	EPA 200.7/200.2	5/16/25	5/19/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/16/25	5/19/25	
Calcium, Total	477	mg/L	0.2	EPA 200.7/200.2	5/16/25	5/19/25	
Chromium, Total	0.0032	mg/L	0.0005	EPA 200.8/200.2	5/16/25	5/19/25	
Cobalt, Total	0.03	mg/L	0.01	EPA 200.7/200.2	5/16/25	5/19/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/16/25	5/19/25	
Lithium, Total	0.738	mg/L	0.020	EPA 200.7/200.2	5/16/25	5/19/25	
Magnesium, Total	885	mg/L	0.2	EPA 200.7/200.2	5/16/25	5/19/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	0.04	mg/L	0.01	EPA 200.7/200.2	5/16/25	5/19/25	
Potassium, Total	7.1	mg/L	0.5	EPA 200.7/200.2	5/16/25	5/19/25	
Selenium, Total	0.0107	mg/L	0.00060	EPA 200.8/200.2	5/16/25	5/19/25	
Sodium, Total	3680	mg/L	20.0	EPA 200.7/200.2	5/16/25	5/20/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/16/25	5/19/25	

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Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: BA-UG1

Matrix: Water

Lab ID: 25E1332-07

Date Sampled: 5/14/25 12:41

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	473	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	473	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	1380	mg/L	50.0	EPA 300.0	5/17/25	5/17/25	
Fluoride	6.76	mg/L	5.00	EPA 300.0	5/17/25	5/17/25	
Sulfate	10200	mg/L	50.0	EPA 300.0	5/17/25	5/17/25	
Total Dissolved Solids (TDS)	19000	mg/L	500	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.0072	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	ND	mg/L	0.025	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	152	mg/L	0.50	EPA 200.7/200.2	5/16/25	5/16/25	
Cadmium, Total	0.0002	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	423	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Chromium, Total	0.0271	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.05	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	0.0005	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	0.504	mg/L	0.100	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	1850	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	0.14	mg/L	0.05	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	7.2	mg/L	2.5	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.0564	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	2670	mg/L	10.0	EPA 200.7/200.2	5/16/25	5/16/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	

Certificate of Analysis

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Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: BA-DG1

Matrix: Water

Lab ID: 25E1332-08

Date Sampled: 5/15/25 13:33

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	682	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	682	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	784	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Fluoride	3.46	mg/L	2.00	EPA 300.0	5/17/25	5/17/25	
Sulfate	5460	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Total Dissolved Solids (TDS)	9900	mg/L	500	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.0026	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	ND	mg/L	0.025	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	17.1	mg/L	0.50	EPA 200.7/200.2	5/16/25	5/16/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	221	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Chromium, Total	0.0408	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.05	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	0.220	mg/L	0.100	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	410	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	0.08	mg/L	0.05	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	9.8	mg/L	2.5	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.0224	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	2620	mg/L	10.0	EPA 200.7/200.2	5/16/25	5/16/25	
Thallium, Total	0.0004	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	

Certificate of Analysis

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Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: BA-DG2

Matrix: Water

Lab ID: 25E1332-09

Date Sampled: 5/15/25 11:01

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	475	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	475	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	706	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Fluoride	3.92	mg/L	2.00	EPA 300.0	5/17/25	5/17/25	
Sulfate	6780	mg/L	20.0	EPA 300.0	5/17/25	5/17/25	
Total Dissolved Solids (TDS)	11500	mg/L	500	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.0031	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	ND	mg/L	0.010	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	34.3	mg/L	0.50	EPA 200.7/200.2	5/16/25	5/16/25	
Cadmium, Total	0.0005	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	445	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Chromium, Total	0.0289	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.02	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	0.330	mg/L	0.040	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	1080	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	0.08	mg/L	0.02	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	11.5	mg/L	1.0	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.0180	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	1740	mg/L	10.0	EPA 200.7/200.2	5/16/25	5/16/25	
Thallium, Total	0.0002	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	

Certificate of Analysis

Deseret Power Electric Cooperative
Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: BA-DG3

Matrix: Water

Lab ID: 25E1332-10

Date Sampled: 5/15/25 8:19

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	793	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	19.3	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	812	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	409	mg/L	1.00	EPA 300.0	5/19/25	5/19/25	
Fluoride	9.78	mg/L	0.100	EPA 300.0	5/19/25	5/19/25	
Sulfate	2200	mg/L	100	EPA 300.0	5/19/25	5/19/25	
Total Dissolved Solids (TDS)	4970	mg/L	20	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.0020	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	0.012	mg/L	0.010	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	7.09	mg/L	0.50	EPA 200.7/200.2	5/16/25	5/16/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	21.6	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Chromium, Total	0.0443	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.02	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	0.061	mg/L	0.040	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	48.9	mg/L	2.0	EPA 200.7/200.2	5/16/25	5/16/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	0.32	mg/L	0.02	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	4.1	mg/L	1.0	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.0437	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	1630	mg/L	10.0	EPA 200.7/200.2	5/16/25	5/16/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	

Certificate of Analysis

Deseret Power Electric Cooperative
Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: BA-DG4

Matrix: Water

Lab ID: 25E1332-11

Date Sampled: 5/14/25 14:53

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	310	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	310	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	462	mg/L	100	EPA 300.0	5/19/25	5/19/25	
Fluoride	2.83	mg/L	0.100	EPA 300.0	5/19/25	5/19/25	
Sulfate	4460	mg/L	100	EPA 300.0	5/19/25	5/19/25	
Total Dissolved Solids (TDS)	11800	mg/L	500	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.0041	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	ND	mg/L	0.050	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	28.4	mg/L	0.50	EPA 200.7/200.2	5/19/25	5/19/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	258	mg/L	2.0	EPA 200.7/200.2	5/19/25	5/19/25	
Chromium, Total	0.0170	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.10	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	0.430	mg/L	0.200	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	474	mg/L	2.0	EPA 200.7/200.2	5/19/25	5/19/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	ND	mg/L	0.10	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	5.9	mg/L	5.0	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.0218	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	2740	mg/L	10.0	EPA 200.7/200.2	5/19/25	5/19/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	

Certificate of Analysis

Deseret Power Electric Cooperative
Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Sample ID: Duplicate

Matrix: Water

Lab ID: 25E1332-12

Date Sampled: 5/12/25 13:09

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	384	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Alkalinity - Total (as CaCO ₃)	384	mg/L	1.0	SM 2320 B	5/16/25	5/16/25	
Chloride	1840	mg/L	100	EPA 300.0	5/19/25	5/19/25	
Fluoride	0.470	mg/L	0.100	EPA 300.0	5/19/25	5/19/25	
Sulfate	8510	mg/L	100	EPA 300.0	5/19/25	5/19/25	
Total Dissolved Solids (TDS)	16500	mg/L	500	SM 2540 C	5/16/25	5/16/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Arsenic, Total	0.0036	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Barium, Total	ND	mg/L	0.050	EPA 200.7/200.2	5/19/25	5/19/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Boron, Total	55.3	mg/L	0.50	EPA 200.7/200.2	5/19/25	5/19/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	
Calcium, Total	546	mg/L	2.0	EPA 200.7/200.2	5/19/25	5/19/25	
Chromium, Total	0.0245	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Cobalt, Total	ND	mg/L	0.10	EPA 200.7/200.2	5/19/25	5/19/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	5/19/25	5/19/25	
Lithium, Total	0.761	mg/L	0.200	EPA 200.7/200.2	5/19/25	5/19/25	
Magnesium, Total	1090	mg/L	2.0	EPA 200.7/200.2	5/19/25	5/19/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	5/16/25	5/19/25	
Molybdenum, Total	ND	mg/L	0.10	EPA 200.7/200.2	5/19/25	5/19/25	
Potassium, Total	8.7	mg/L	5.0	EPA 200.7/200.2	5/19/25	5/19/25	
Selenium, Total	0.00978	mg/L	0.00060	EPA 200.8/200.2	5/19/25	5/19/25	
Sodium, Total	2970	mg/L	10.0	EPA 200.7/200.2	5/19/25	5/19/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	5/19/25	5/19/25	



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Certificate of Analysis

Deseret Power Electric Cooperative
Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 5/16/25 10:30 @ 3.3 °C
Date Reported: 6/4/2025
Project Name: CCR Sampling

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).

1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.

1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.

1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.

On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

Flag Descriptions

APH-R = This sample was originally analyzed within the EPA-recommended holding time. The reported value was obtained from a confirmatory re-analysis that was performed outside of that holding time.

RUSH Due Date*:	QC Level
	QC 2
	QC levels definition: QC1: none (default if blank)

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Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

Lab Use Only	CLIENT SAMPLE INFORMATION			
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX
-1	1. FA-UG1	5-12-25	09:41	W
-2	2. FA-UG2	5-12-25	13:08	W
-3	3. FA-DG2	5-14-25	08:39	W
-4	4. FA-DG3	5-13-25	14:57	W
-5	5. FA-DG4	5-13-25	12:53	W
-6	6. FA-DG5	5-13-25	09:23	W
-7	7. BA-UG1	5-14-25	12:41	W
-8	8. BA-DG1	5-15-25	13:33	W
-9	9. BA-DG2	5-15-25	11:01	W
-10	10. BA-DG3	5-15-25	08:19	W

* Radium on set 25E1329

Bottle type	A9	M
Lot #	14104	1461

[illegible]

Sampled by: [print] Henton Keller		Sampled by: [signature] <i>[Signature]</i>		☒ ON ICE ☐ NOT ON ICE		Temp (C°): 3.3	
Special Instructions:				Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.			
Relinquished by: [signature] <i>[Signature]</i>		Date/Time 5-16-25 10:30		Received by: [signature] <i>[Signature]</i>		Date/Time 5/16/25 10:30	
Relinquished by: [signature]		Date/Time		Received by: [signature]		Date/Time	
Relinquished by: [signature]		Date/Time		Received by: [signature]		Date/Time	

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QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - SM 2320 B - Alkalinity (w/total)									
QC Sample ID: BZE0802-BLK1	Batch: BZE0802								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units: mg/L					
Alkalinity - Bicarbonate (as CaCO3)					ND			1.0	1.00
Alkalinity - Carbonate (as CaCO3)					ND			1.0	1.00
Alkalinity - Hydroxide (as CaCO3)					ND			1.0	1.00
Alkalinity - Total (as CaCO3)					ND			1.0	1.00
QC Sample ID: BZE0803-BLK1	Batch: BZE0803								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units: mg/L					
Alkalinity - Bicarbonate (as CaCO3)					ND			1.0	1.00
Alkalinity - Carbonate (as CaCO3)					ND			1.0	1.00
Alkalinity - Hydroxide (as CaCO3)					ND			1.0	1.00
Alkalinity - Total (as CaCO3)					ND			1.0	1.00
Duplicate - SM 2320 B - Alkalinity (w/total)									
QC Sample ID: BZE0802-DUP1	Batch: BZE0802			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units: mg/L					
Alkalinity - Bicarbonate (as CaCO3)	0.00	20	235	235				1.0	1.00
Alkalinity - Carbonate (as CaCO3)		20	ND	ND				1.0	1.00
Alkalinity - Hydroxide (as CaCO3)		20	ND	ND				1.0	1.00
Alkalinity - Total (as CaCO3)	0.00	20	235	235				1.0	1.00
QC Sample ID: BZE0803-DUP1	Batch: BZE0803			QC Source Sample: 25E1332-06					
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units: mg/L					
Alkalinity - Bicarbonate (as CaCO3)	1.88	20	337	344				1.0	1.00
Alkalinity - Carbonate (as CaCO3)		20	ND	ND				1.0	1.00
Alkalinity - Hydroxide (as CaCO3)		20	ND	ND				1.0	1.00
Alkalinity - Total (as CaCO3)	1.88	20	337	344				1.0	1.00
LCS - SM 2320 B - Alkalinity (w/total)									
QC Sample ID: BZE0802-BS1	Batch: BZE0802								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units: mg/L					
Alkalinity - Total (as CaCO3)	94.8	90-110	224			236		1.0	1.00
QC Sample ID: BZE0803-BS1	Batch: BZE0803								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units: mg/L					
Alkalinity - Total (as CaCO3)	95.1	90-110	224			236		1.0	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Antimony (T) 200.8									
QC Sample ID: BZE0839-BLK1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Antimony, Total	ND							0.0005	1.00
QC Sample ID: BZE0853-BLK1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Antimony, Total	ND							0.0005	1.00
LCS - EPA 200.8 - Antimony (T) 200.8									
QC Sample ID: BZE0839-BS1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Antimony, Total	102	85-115	0.041			0.0400	0.0005	1.00	
QC Sample ID: BZE0853-BS1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Antimony, Total	97.8	85-115	0.039			0.0400	0.0005	1.00	
Matrix Spike - EPA 200.8 - Antimony (T) 200.8									
QC Sample ID: BZE0839-MS1	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Antimony, Total	101	70-130	0.041	0.0009	0.0400	0.0005	1.00		
QC Sample ID: BZE0839-MS2	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Antimony, Total	108	70-130	0.044	0.001	0.0400	0.0005	1.00		
QC Sample ID: BZE0853-MS1	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Antimony, Total	98.5	70-130	0.039	ND	0.0400	0.0005	1.00		
QC Sample ID: BZE0853-MS2	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Antimony, Total	102	70-130	0.041	0.0004	0.0400	0.0005	1.00		

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - As (T) 200.8									
QC Sample ID: BZE0839-BLK1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Arsenic, Total					ND			0.0005	1.00
QC Sample ID: BZE0853-BLK1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Arsenic, Total					ND			0.0005	1.00
LCS - EPA 200.8 - As (T) 200.8									
QC Sample ID: BZE0839-BS1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Arsenic, Total	101	85-115		0.040			0.0400	0.0005	1.00
QC Sample ID: BZE0853-BS1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Arsenic, Total	97.1	85-115		0.039			0.0400	0.0005	1.00
Matrix Spike - EPA 200.8 - As (T) 200.8									
QC Sample ID: BZE0839-MS1	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Arsenic, Total	103	70-130		0.055	0.014		0.0400	0.0005	1.00
QC Sample ID: BZE0839-MS2	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Arsenic, Total	104	70-130		0.050	0.008		0.0400	0.0005	1.00
QC Sample ID: BZE0853-MS1	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Arsenic, Total	97.7	70-130		0.039	ND		0.0400	0.0005	1.00
QC Sample ID: BZE0853-MS2	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Arsenic, Total	101	70-130		0.041	0.0007		0.0400	0.0005	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - B (T) 200.7									
QC Sample ID: BZE0811-BLK1	Batch: BZE0811								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025					Units: mg/L			
Boron, Total					ND			0.05	1.00
QC Sample ID: BZE0840-BLK1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025					Units: mg/L			
Boron, Total					ND			0.05	1.00
QC Sample ID: BZE0864-BLK1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025					Units: mg/L			
Boron, Total					ND			0.05	1.00
LCS - EPA 200.7 - B (T) 200.7									
QC Sample ID: BZE0811-BS1	Batch: BZE0811								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025					Units: mg/L			
Boron, Total	101		85-115		0.28		0.273	0.05	1.00
QC Sample ID: BZE0840-BS1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025					Units: mg/L			
Boron, Total	102		85-115		0.28		0.273	0.05	1.00
QC Sample ID: BZE0864-BS1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025					Units: mg/L			
Boron, Total	106		85-115		0.29		0.273	0.05	1.00
Matrix Spike - EPA 200.7 - B (T) 200.7									
QC Sample ID: BZE0811-MS1	Batch: BZE0811			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025					Units: mg/L			
Boron, Total	105		70-130		0.64	0.35	0.273	0.05	1.00
QC Sample ID: BZE0811-MS2	Batch: BZE0811			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025					Units: mg/L			
Boron, Total	103		70-130		0.31	0.03	0.273	0.05	1.00
QC Sample ID: BZE0840-MS1	Batch: BZE0840			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025					Units: mg/L			
Boron, Total	110		70-130		0.52	0.22	0.273	0.05	1.00
QC Sample ID: BZE0840-MS2	Batch: BZE0840			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025					Units: mg/L			
Boron, Total	107		70-130		0.60	0.31	0.273	0.05	1.00
QC Sample ID: BZE0864-MS1	Batch: BZE0864			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025					Units: mg/L			
Boron, Total	100		70-130		0.31	0.04	0.273	0.05	1.00
QC Sample ID: BZE0864-MS2	Batch: BZE0864			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025					Units: mg/L			
Boron, Total	112		70-130		0.40	0.10	0.273	0.05	1.00
Matrix Spike Dup - EPA 200.7 - B (T) 200.7									
QC Sample ID: BZE0811-MSD1	Batch: BZE0811			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025					Units: mg/L			
Boron, Total	104	0.328	70-130	20	0.64	0.35	0.273	0.05	1.00
QC Sample ID: BZE0811-MSD2	Batch: BZE0811			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025					Units: mg/L			
Boron, Total	105	1.21	70-130	20	0.32	0.03	0.273	0.05	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Matrix Spike Dup - EPA 200.7 - B (T) 200.7 (cont.)									
QC Sample ID: BZE0840-MSD1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Boron, Total	110	0.306	70-130	20	0.52	0.22	0.273	0.05	1.00
QC Sample ID: BZE0840-MSD2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Boron, Total	109	0.777	70-130	20	0.61	0.31	0.273	0.05	1.00
QC Sample ID: BZE0864-MSD1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Boron, Total	99.8	0.194	70-130	20	0.31	0.04	0.273	0.05	1.00
QC Sample ID: BZE0864-MSD2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Boron, Total	111	0.550	70-130	20	0.40	0.10	0.273	0.05	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Ba (T) 200.7									
QC Sample ID: BZE0840-BLK1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total					ND			0.005	1.00
QC Sample ID: BZE0864-BLK1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total					ND			0.005	1.00
LCS - EPA 200.7 - Ba (T) 200.7									
QC Sample ID: BZE0840-BS1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total	101		85-115		0.229		0.227	0.005	1.00
QC Sample ID: BZE0864-BS1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total	103		85-115		0.235		0.227	0.005	1.00
Matrix Spike - EPA 200.7 - Ba (T) 200.7									
QC Sample ID: BZE0840-MS1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total	106		70-130		0.354	0.115	0.227	0.005	1.00
QC Sample ID: BZE0840-MS2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total	104		70-130		0.413	0.176	0.227	0.005	1.00
QC Sample ID: BZE0864-MS1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total	99.3		70-130		0.225	ND	0.227	0.005	1.00
QC Sample ID: BZE0864-MS2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total	109		70-130		0.253	0.007	0.227	0.005	1.00
Matrix Spike Dup - EPA 200.7 - Ba (T) 200.7									
QC Sample ID: BZE0840-MSD1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total	105	0.651	70-130	20	0.352	0.115	0.227	0.005	1.00
QC Sample ID: BZE0840-MSD2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total	100	2.06	70-130	20	0.404	0.176	0.227	0.005	1.00
QC Sample ID: BZE0864-MSD1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total	99.0	0.267	70-130	20	0.225	ND	0.227	0.005	1.00
QC Sample ID: BZE0864-MSD2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Barium, Total	108	0.913	70-130	20	0.251	0.007	0.227	0.005	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Be (T) 200.8									
QC Sample ID: BZE0839-BLK1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Beryllium, Total					ND			0.0005	1.00
QC Sample ID: BZE0853-BLK1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Beryllium, Total					ND			0.0005	1.00
LCS - EPA 200.8 - Be (T) 200.8									
QC Sample ID: BZE0839-BS1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Beryllium, Total	105		85-115		0.042		0.0400	0.0005	1.00
QC Sample ID: BZE0853-BS1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Beryllium, Total	97.9		85-115		0.039		0.0400	0.0005	1.00
Matrix Spike - EPA 200.8 - Be (T) 200.8									
QC Sample ID: BZE0839-MS1	Batch: BZE0839			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Beryllium, Total	98.6		70-130		0.039	ND	0.0400	0.0005	1.00
QC Sample ID: BZE0839-MS2	Batch: BZE0839			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Beryllium, Total	97.2		70-130		0.039	ND	0.0400	0.0005	1.00
QC Sample ID: BZE0853-MS1	Batch: BZE0853			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Beryllium, Total	98.3		70-130		0.039	ND	0.0400	0.0005	1.00
QC Sample ID: BZE0853-MS2	Batch: BZE0853			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Beryllium, Total	97.5		70-130		0.039	ND	0.0400	0.0005	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Ca (T) 200.7									
QC Sample ID: BZE0811-BLK1	Batch: BZE0811								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025				Units:	mg/L			
Calcium, Total					ND			0.2	1.00
QC Sample ID: BZE0840-BLK1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Calcium, Total					ND			0.2	1.00
QC Sample ID: BZE0864-BLK1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Calcium, Total					ND			0.2	1.00
LCS - EPA 200.7 - Ca (T) 200.7									
QC Sample ID: BZE0811-BS1	Batch: BZE0811								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025				Units:	mg/L			
Calcium, Total	104		85-115		9.7		9.29	0.2	1.00
QC Sample ID: BZE0840-BS1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Calcium, Total	101		85-115		9.4		9.29	0.2	1.00
QC Sample ID: BZE0864-BS1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Calcium, Total	104		85-115		9.6		9.29	0.2	1.00
Matrix Spike - EPA 200.7 - Ca (T) 200.7									
QC Sample ID: BZE0811-MS1	Batch: BZE0811		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025				Units:	mg/L			
Calcium, Total	102		70-130		32.4	22.9	9.29	0.2	1.00
QC Sample ID: BZE0811-MS2	Batch: BZE0811		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025				Units:	mg/L			
Calcium, Total	94.6		70-130		60.7	51.9	9.29	0.2	1.00
QC Sample ID: BZE0840-MS1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Calcium, Total	113		70-130		71.5	61.0	9.29	0.2	1.00
QC Sample ID: BZE0840-MS2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Calcium, Total	90.5		70-130		138	129	9.29	0.2	1.00
QC Sample ID: BZE0864-MS1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Calcium, Total	100		70-130		9.4	0.05	9.29	0.2	1.00
QC Sample ID: BZE0864-MS2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Calcium, Total	108		70-130		17.8	7.8	9.29	0.2	1.00
Matrix Spike Dup - EPA 200.7 - Ca (T) 200.7									
QC Sample ID: BZE0811-MSD1	Batch: BZE0811		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025				Units:	mg/L			
Calcium, Total	103	0.0987	70-130	20	32.4	22.9	9.29	0.2	1.00
QC Sample ID: BZE0811-MSD2	Batch: BZE0811		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025				Units:	mg/L			
Calcium, Total	97.7	0.468	70-130	20	61.0	51.9	9.29	0.2	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Matrix Spike Dup - EPA 200.7 - Ca (T) 200.7 (cont.)									
QC Sample ID: BZE0840-MSD1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Calcium, Total	111	0.364	70-130	20	71.2	61.0	9.29	0.2	1.00
QC Sample ID: BZE0840-MSD2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Calcium, Total	79.1	0.771	70-130	20	137	129	9.29	0.2	1.00
QC Sample ID: BZE0864-MSD1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Calcium, Total	99.9	0.199	70-130	20	9.3	0.05	9.29	0.2	1.00
QC Sample ID: BZE0864-MSD2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Calcium, Total	107	0.175	70-130	20	17.8	7.8	9.29	0.2	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Cd (T) 200.8									
QC Sample ID: BZE0839-BLK1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Cadmium, Total					ND			0.0002	1.00
QC Sample ID: BZE0853-BLK1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Cadmium, Total					ND			0.0002	1.00

LCS - EPA 200.8 - Cd (T) 200.8

QC Sample ID: BZE0839-BS1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Cadmium, Total	101		85-115		0.040		0.0400	0.0002	1.00
QC Sample ID: BZE0853-BS1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Cadmium, Total	96.8		85-115		0.039		0.0400	0.0002	1.00

Matrix Spike - EPA 200.8 - Cd (T) 200.8

QC Sample ID: BZE0839-MS1	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Cadmium, Total	97.3		70-130		0.039	0.00006	0.0400	0.0002	1.00
QC Sample ID: BZE0839-MS2	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Cadmium, Total	97.3		70-130		0.040	0.001	0.0400	0.0002	1.00
QC Sample ID: BZE0853-MS1	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Cadmium, Total	96.5		70-130		0.039	ND	0.0400	0.0002	1.00
QC Sample ID: BZE0853-MS2	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Cadmium, Total	96.1		70-130		0.038	ND	0.0400	0.0002	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 300.0 - Chloride (IC)									
QC Sample ID: BZE0796-BLK1	Batch: BZE0796								
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025				Units:	mg/L			
Chloride	ND							1.00	1.00
QC Sample ID: BZE0866-BLK1	Batch: BZE0866								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Chloride	ND							1.00	1.00
LCS - EPA 300.0 - Chloride (IC)									
QC Sample ID: BZE0796-BS1	Batch: BZE0796								
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025				Units:	mg/L			
Chloride	105	90-110	210			200		1.00	1.00
QC Sample ID: BZE0866-BS1	Batch: BZE0866								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Chloride	102	90-110	203			200		1.00	1.00
Matrix Spike - EPA 300.0 - Chloride (IC)									
QC Sample ID: BZE0796-MS1	Batch: BZE0796		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025				Units:	mg/L			
Chloride	101	80-120	20900	18900		2000		110	1.00
QC Sample ID: BZE0796-MS2	Batch: BZE0796		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025				Units:	mg/L			
Chloride	102	80-120	77.9	55.2		22.2		1.11	1.00
QC Sample ID: BZE0866-MS1	Batch: BZE0866		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025				Units:	mg/L			
Chloride	101	80-120	67.8	45.3		22.2		1.11	1.00
QC Sample ID: BZE0866-MS2	Batch: BZE0866		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025				Units:	mg/L			
Chloride	100	80-120	97.3	75.0		22.2		1.11	1.00
Matrix Spike Dup - EPA 300.0 - Chloride (IC)									
QC Sample ID: BZE0796-MSD1	Batch: BZE0796		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025				Units:	mg/L			
Chloride	102	0.101	80-120	20	20900	18900	2000	110	1.00
QC Sample ID: BZE0796-MSD2	Batch: BZE0796		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025				Units:	mg/L			
Chloride	104	0.516	80-120	20	78.3	55.2	22.2	1.11	1.00
QC Sample ID: BZE0866-MSD1	Batch: BZE0866		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025				Units:	mg/L			
Chloride	102	0.311	80-120	20	68.0	45.3	22.2	1.11	1.00
QC Sample ID: BZE0866-MSD2	Batch: BZE0866		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025				Units:	mg/L			
Chloride	102	0.512	80-120	20	97.8	75.0	22.2	1.11	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Co (T) 200.7									
QC Sample ID: BZE0840-BLK1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total				ND				0.01	1.00
QC Sample ID: BZE0864-BLK1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total				ND				0.01	1.00
LCS - EPA 200.7 - Co (T) 200.7									
QC Sample ID: BZE0840-BS1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total	103	85-115	0.21			0.200	0.01	1.00	
QC Sample ID: BZE0864-BS1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total	100	85-115	0.20			0.200	0.01	1.00	
Matrix Spike - EPA 200.7 - Co (T) 200.7									
QC Sample ID: BZE0840-MS1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total	103	70-130	0.21		ND	0.200	0.01	1.00	
QC Sample ID: BZE0840-MS2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total	99.0	70-130	0.20		ND	0.200	0.01	1.00	
QC Sample ID: BZE0864-MS1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total	96.8	70-130	0.19		ND	0.200	0.01	1.00	
QC Sample ID: BZE0864-MS2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total	111	70-130	0.22		ND	0.200	0.01	1.00	
Matrix Spike Dup - EPA 200.7 - Co (T) 200.7									
QC Sample ID: BZE0840-MSD1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total	103	0.583	70-130	20	0.21	ND	0.200	0.01	1.00
QC Sample ID: BZE0840-MSD2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total	101	1.75	70-130	20	0.20	ND	0.200	0.01	1.00
QC Sample ID: BZE0864-MSD1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total	99.3	2.60	70-130	20	0.20	ND	0.200	0.01	1.00
QC Sample ID: BZE0864-MSD2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Cobalt, Total	111	0.226	70-130	20	0.22	ND	0.200	0.01	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Cr (T) 200.8									
QC Sample ID: BZE0839-BLK1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Chromium, Total					ND			0.0005	1.00
QC Sample ID: BZE0853-BLK1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Chromium, Total					ND			0.0005	1.00
LCS - EPA 200.8 - Cr (T) 200.8									
QC Sample ID: BZE0839-BS1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Chromium, Total	105		85-115		0.042		0.0400	0.0005	1.00
QC Sample ID: BZE0853-BS1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Chromium, Total	101		85-115		0.040		0.0400	0.0005	1.00
Matrix Spike - EPA 200.8 - Cr (T) 200.8									
QC Sample ID: BZE0839-MS1	Batch: BZE0839			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Chromium, Total	94.0		70-130		0.039	0.002	0.0400	0.0005	1.00
QC Sample ID: BZE0839-MS2	Batch: BZE0839			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Chromium, Total	85.8		70-130		0.036	0.002	0.0400	0.0005	1.00
QC Sample ID: BZE0853-MS1	Batch: BZE0853			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Chromium, Total	99.7		70-130		0.040	ND	0.0400	0.0005	1.00
QC Sample ID: BZE0853-MS2	Batch: BZE0853			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Chromium, Total	92.1		70-130		0.039	0.002	0.0400	0.0005	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 300.0 - Fluoride (IC)									
QC Sample ID: BZE0796-BLK1	Batch: BZE0796								
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025			Units: mg/L					
Fluoride	ND					0.100	1.00		
QC Sample ID: BZE0866-BLK1	Batch: BZE0866								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Fluoride	ND					0.100	1.00		
LCS - EPA 300.0 - Fluoride (IC)									
QC Sample ID: BZE0796-BS1	Batch: BZE0796								
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025			Units: mg/L					
Fluoride	105	90-110	21.0	20.0	0.100	1.00			
QC Sample ID: BZE0866-BS1	Batch: BZE0866								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units: mg/L					
Fluoride	100	90-110	20.0	20.0	0.100	1.00			
Matrix Spike - EPA 300.0 - Fluoride (IC)									
QC Sample ID: BZE0796-MS1	Batch: BZE0796			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025			Units: mg/L					
Fluoride	74.3	80-120	149	ND	200	11.0	1.00		
QM-RPD - The recovery was outside acceptance limits for the MS and/or MSD. The RPD between the MS and MSD was acceptable and indicates the recovery is due to matrix interference. The batch was accepted based on the acceptable recovery of the LCS and the RPD.									
QC Sample ID: BZE0796-MS2	Batch: BZE0796			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025			Units: mg/L					
Fluoride	86.8	80-120	1.93	ND	2.22	0.111	1.00		
QC Sample ID: BZE0866-MS1	Batch: BZE0866			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025			Units: mg/L					
Fluoride	84.5	80-120	1.88	ND	2.22	0.111	1.00		
QC Sample ID: BZE0866-MS2	Batch: BZE0866			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025			Units: mg/L					
Fluoride	81.1	80-120	1.90	0.100	2.22	0.111	1.00		
Matrix Spike Dup - EPA 300.0 - Fluoride (IC)									
QC Sample ID: BZE0796-MSD1	Batch: BZE0796			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025			Units: mg/L					
Fluoride	75.3	1.31	80-120	20	151	ND	200	11.0	1.00
QM-RPD - The recovery was outside acceptance limits for the MS and/or MSD. The RPD between the MS and MSD was acceptable and indicates the recovery is due to matrix interference. The batch was accepted based on the acceptable recovery of the LCS and the RPD.									
QC Sample ID: BZE0796-MSD2	Batch: BZE0796			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025			Units: mg/L					
Fluoride	89.7	3.34	80-120	20	1.99	ND	2.22	0.111	1.00
QC Sample ID: BZE0866-MSD1	Batch: BZE0866			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025			Units: mg/L					
Fluoride	85.1	0.749	80-120	20	1.89	ND	2.22	0.111	1.00
QC Sample ID: BZE0866-MSD2	Batch: BZE0866			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025			Units: mg/L					
Fluoride	82.9	2.10	80-120	20	1.94	0.100	2.22	0.111	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Lead (T) 200.8									
QC Sample ID: BZE0839-BLK1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lead, Total					ND			0.0005	1.00
QC Sample ID: BZE0853-BLK1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lead, Total					ND			0.0005	1.00
LCS - EPA 200.8 - Lead (T) 200.8									
QC Sample ID: BZE0839-BS1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lead, Total	98.5		85-115		0.039		0.0400	0.0005	1.00
QC Sample ID: BZE0853-BS1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lead, Total	94.4		85-115		0.038		0.0400	0.0005	1.00
Matrix Spike - EPA 200.8 - Lead (T) 200.8									
QC Sample ID: BZE0839-MS1	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lead, Total	92.5		70-130		0.037	ND	0.0400	0.0005	1.00
QC Sample ID: BZE0839-MS2	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lead, Total	88.7		70-130		0.036	0.0006	0.0400	0.0005	1.00
QC Sample ID: BZE0853-MS1	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lead, Total	94.1		70-130		0.038	ND	0.0400	0.0005	1.00
QC Sample ID: BZE0853-MS2	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lead, Total	90.0		70-130		0.036	0.0005	0.0400	0.0005	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Li (T) 200.7									
QC Sample ID: BZE0840-BLK1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total					ND			0.020	1.00
QC Sample ID: BZE0864-BLK1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total					ND			0.020	1.00
LCS - EPA 200.7 - Li (T) 200.7									
QC Sample ID: BZE0840-BS1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total	105	85-115		0.209			0.200	0.020	1.00
QC Sample ID: BZE0864-BS1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total	104	85-115		0.207			0.200	0.020	1.00
Matrix Spike - EPA 200.7 - Li (T) 200.7									
QC Sample ID: BZE0840-MS1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total	103	70-130		0.377	0.171		0.200	0.020	1.00
QC Sample ID: BZE0840-MS2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total	98.3	70-130		0.461	0.264		0.200	0.020	1.00
QC Sample ID: BZE0864-MS1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total	100	70-130		0.200	ND		0.200	0.020	1.00
QC Sample ID: BZE0864-MS2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total	109	70-130		0.266	0.048		0.200	0.020	1.00
Matrix Spike Dup - EPA 200.7 - Li (T) 200.7									
QC Sample ID: BZE0840-MSD1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total	102	0.319	70-130	20	0.376	0.171	0.200	0.020	1.00
QC Sample ID: BZE0840-MSD2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total	98.0	0.109	70-130	20	0.460	0.264	0.200	0.020	1.00
QC Sample ID: BZE0864-MSD1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total	104	4.01	70-130	20	0.208	ND	0.200	0.020	1.00
QC Sample ID: BZE0864-MSD2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Lithium, Total	107	0.945	70-130	20	0.263	0.048	0.200	0.020	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 245.1 - Mercury (T) 245.1									
QC Sample ID: BZE0836-BLK1	Batch: BZE0836								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025								
Mercury, Total					ND			0.00015	1.00
LCS - EPA 245.1 - Mercury (T) 245.1									
QC Sample ID: BZE0836-BS1	Batch: BZE0836								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025								
Mercury, Total	100		85-115		0.00501		0.00500	0.00015	1.00
Matrix Spike - EPA 245.1 - Mercury (T) 245.1									
QC Sample ID: BZE0836-MS1	Batch: BZE0836 QC Source Sample: 25E1332-01								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025								
Mercury, Total	101		75-125		0.00504	ND	0.00500	0.00015	1.00
QC Sample ID: BZE0836-MS2	Batch: BZE0836 QC Source Sample: 25E1332-02								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025								
Mercury, Total	92.5		75-125		0.00463	ND	0.00500	0.00015	1.00
Matrix Spike Dup - EPA 245.1 - Mercury (T) 245.1									
QC Sample ID: BZE0836-MSD1	Batch: BZE0836 QC Source Sample: 25E1332-01								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025								
Mercury, Total	99.3	1.46	75-125	20	0.00497	ND	0.00500	0.00015	1.00
QC Sample ID: BZE0836-MSD2	Batch: BZE0836 QC Source Sample: 25E1332-02								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025								
Mercury, Total	88.4	4.55	75-125	20	0.00442	ND	0.00500	0.00015	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Mg (T) 200.7									
QC Sample ID: BZE0811-BLK1	Batch: BZE0811								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units:		mg/L			
Magnesium, Total				ND				0.2	1.00
QC Sample ID: BZE0840-BLK1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Magnesium, Total				ND				0.2	1.00
QC Sample ID: BZE0864-BLK1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Magnesium, Total				ND				0.2	1.00
LCS - EPA 200.7 - Mg (T) 200.7									
QC Sample ID: BZE0811-BS1	Batch: BZE0811								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units:		mg/L			
Magnesium, Total	109	85-115	10.1		9.29	0.2	1.00		
QC Sample ID: BZE0840-BS1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Magnesium, Total	106	85-115	9.8		9.29	0.2	1.00		
QC Sample ID: BZE0864-BS1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Magnesium, Total	108	85-115	10.0		9.29	0.2	1.00		
Matrix Spike - EPA 200.7 - Mg (T) 200.7									
QC Sample ID: BZE0811-MS1	Batch: BZE0811		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025		Units:		mg/L				
Magnesium, Total	109	70-130	24.9		14.8	9.29	0.2	1.00	
QC Sample ID: BZE0811-MS2	Batch: BZE0811		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025		Units:		mg/L				
Magnesium, Total	106	70-130	23.7		13.9	9.29	0.2	1.00	
QC Sample ID: BZE0840-MS1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units:		mg/L				
Magnesium, Total	117	70-130	58.9		48.1	9.29	0.2	1.00	
QC Sample ID: BZE0840-MS2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units:		mg/L				
Magnesium, Total	99.8	70-130	150		141	9.29	0.2	1.00	
QC Sample ID: BZE0864-MS1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units:		mg/L				
Magnesium, Total	103	70-130	10.7		1.2	9.29	0.2	1.00	
QC Sample ID: BZE0864-MS2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units:		mg/L				
Magnesium, Total	111	70-130	13.1		2.8	9.29	0.2	1.00	
Matrix Spike Dup - EPA 200.7 - Mg (T) 200.7									
QC Sample ID: BZE0811-MSD1	Batch: BZE0811		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025		Units:		mg/L				
Magnesium, Total	108	0.213	70-130	20	24.8	14.8	9.29	0.2	1.00
QC Sample ID: BZE0811-MSD2	Batch: BZE0811		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025		Units:		mg/L				
Magnesium, Total	109	1.16	70-130	20	24.0	13.9	9.29	0.2	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Matrix Spike Dup - EPA 200.7 - Mg (T) 200.7 (cont.)									
QC Sample ID: BZE0840-MSD1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Magnesium, Total	113	0.540	70-130	20	58.6	48.1	9.29	0.2	1.00
QC Sample ID: BZE0840-MSD2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Magnesium, Total	94.7	0.313	70-130	20	150	141	9.29	0.2	1.00
QC Sample ID: BZE0864-MSD1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Magnesium, Total	103	0.190	70-130	20	10.7	1.2	9.29	0.2	1.00
QC Sample ID: BZE0864-MSD2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Magnesium, Total	110	0.571	70-130	20	13.0	2.8	9.29	0.2	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Mo (T) 200.7									
QC Sample ID: BZE0840-BLK1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total					ND			0.01	1.00
QC Sample ID: BZE0864-BLK1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total					ND			0.01	1.00
LCS - EPA 200.7 - Mo (T) 200.7									
QC Sample ID: BZE0840-BS1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total	102	85-115		0.20			0.200	0.01	1.00
QC Sample ID: BZE0864-BS1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total	103	85-115		0.21			0.200	0.01	1.00
Matrix Spike - EPA 200.7 - Mo (T) 200.7									
QC Sample ID: BZE0840-MS1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total	105	70-130		0.21	ND		0.200	0.01	1.00
QC Sample ID: BZE0840-MS2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total	104	70-130		0.21	ND		0.200	0.01	1.00
QC Sample ID: BZE0864-MS1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total	98.6	70-130		0.20	ND		0.200	0.01	1.00
QC Sample ID: BZE0864-MS2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total	113	70-130		0.23	ND		0.200	0.01	1.00
Matrix Spike Dup - EPA 200.7 - Mo (T) 200.7									
QC Sample ID: BZE0840-MSD1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total	106	0.709	70-130	20	0.21	ND	0.200	0.01	1.00
QC Sample ID: BZE0840-MSD2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total	107	3.22	70-130	20	0.21	ND	0.200	0.01	1.00
QC Sample ID: BZE0864-MSD1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total	101	2.50	70-130	20	0.20	ND	0.200	0.01	1.00
QC Sample ID: BZE0864-MSD2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Molybdenum, Total	112	0.666	70-130	20	0.22	ND	0.200	0.01	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Potassium (T) 200.7									
QC Sample ID: BZE0840-BLK1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total					ND			0.5	1.00
QC Sample ID: BZE0864-BLK1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total					ND			0.5	1.00
LCS - EPA 200.7 - Potassium (T) 200.7									
QC Sample ID: BZE0840-BS1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total	100	85-115		9.1			9.09	0.5	1.00
QC Sample ID: BZE0864-BS1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total	103	85-115		9.4			9.09	0.5	1.00
Matrix Spike - EPA 200.7 - Potassium (T) 200.7									
QC Sample ID: BZE0840-MS1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total	105	70-130		21.6		12.0	9.09	0.5	1.00
QC Sample ID: BZE0840-MS2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total	102	70-130		26.9		17.6	9.09	0.5	1.00
QC Sample ID: BZE0864-MS1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total	99.5	70-130		9.0		ND	9.09	0.5	1.00
QC Sample ID: BZE0864-MS2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total	107	70-130		10.5		0.8	9.09	0.5	1.00
Matrix Spike Dup - EPA 200.7 - Potassium (T) 200.7									
QC Sample ID: BZE0840-MSD1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total	104	0.641	70-130	20	21.4	12.0	9.09	0.5	1.00
QC Sample ID: BZE0840-MSD2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total	101	0.322	70-130	20	26.8	17.6	9.09	0.5	1.00
QC Sample ID: BZE0864-MSD1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total	99.0	0.581	70-130	20	9.0	ND	9.09	0.5	1.00
QC Sample ID: BZE0864-MSD2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Potassium, Total	105	0.976	70-130	20	10.4	0.8	9.09	0.5	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Se (T) 200.8									
QC Sample ID: BZE0839-BLK1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Selenium, Total					ND			0.00060	1.00
QC Sample ID: BZE0853-BLK1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Selenium, Total					ND			0.00060	1.00
LCS - EPA 200.8 - Se (T) 200.8									
QC Sample ID: BZE0839-BS1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Selenium, Total	98.7		85-115		0.039		0.0400	0.00060	1.00
QC Sample ID: BZE0853-BS1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Selenium, Total	94.5		85-115		0.038		0.0400	0.00060	1.00
Matrix Spike - EPA 200.8 - Se (T) 200.8									
QC Sample ID: BZE0839-MS1	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Selenium, Total	97.9		70-130		0.046	0.007	0.0400	0.00060	1.00
QC Sample ID: BZE0839-MS2	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Selenium, Total	97.4		70-130		0.043	0.004	0.0400	0.00060	1.00
QC Sample ID: BZE0853-MS1	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Selenium, Total	95.6		70-130		0.038	ND	0.0400	0.00060	1.00
QC Sample ID: BZE0853-MS2	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Selenium, Total	97.4		70-130		0.040	0.001	0.0400	0.00060	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Sodium (T) 200.7									
QC Sample ID: BZE0811-BLK1	Batch: BZE0811								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units:		mg/L			
Sodium, Total	ND						1.0	1.00	
QC Sample ID: BZE0840-BLK1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Sodium, Total	ND						1.0	1.00	
QC Sample ID: BZE0864-BLK1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Sodium, Total	ND						1.0	1.00	
LCS - EPA 200.7 - Sodium (T) 200.7									
QC Sample ID: BZE0811-BS1	Batch: BZE0811								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units:		mg/L			
Sodium, Total	102	85-115	9.3			9.09	1.0	1.00	
QC Sample ID: BZE0840-BS1	Batch: BZE0840								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Sodium, Total	104	85-115	9.5			9.09	1.0	1.00	
QC Sample ID: BZE0864-BS1	Batch: BZE0864								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Sodium, Total	107	85-115	9.7			9.09	1.0	1.00	
Matrix Spike - EPA 200.7 - Sodium (T) 200.7									
QC Sample ID: BZE0811-MS1	Batch: BZE0811			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units:		mg/L			
Sodium, Total	68.8	70-130	176	170		9.09	1.0	1.00	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.									
QC Sample ID: BZE0811-MS2	Batch: BZE0811			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units:		mg/L			
Sodium, Total	97.9	70-130	25.4	16.5		9.09	1.0	1.00	
QC Sample ID: BZE0840-MS1	Batch: BZE0840			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Sodium, Total	128	70-130	196	184		9.09	1.0	1.00	
QC Sample ID: BZE0840-MS2	Batch: BZE0840			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Sodium, Total	72.3	70-130	297	291		9.09	1.0	1.00	
QC Sample ID: BZE0864-MS1	Batch: BZE0864			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Sodium, Total	99.9	70-130	18.0	8.9		9.09	1.0	1.00	
QC Sample ID: BZE0864-MS2	Batch: BZE0864			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025			Units:		mg/L			
Sodium, Total	26.1	70-130	266	263		9.09	1.0	1.00	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.									
Matrix Spike Dup - EPA 200.7 - Sodium (T) 200.7									
QC Sample ID: BZE0811-MSD1	Batch: BZE0811			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025			Units:		mg/L			
Sodium, Total	67.4	0.0692	70-130	20	176	170	9.09	1.0	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Matrix Spike Dup - EPA 200.7 - Sodium (T) 200.7 (cont.)									
QC Sample ID: BZE0811-MSD1	Batch: BZE0811		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025		Units: mg/L						
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.									
QC Sample ID: BZE0811-MSD2	Batch: BZE0811		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025		Units: mg/L						
Sodium, Total	100	0.782	70-130	20	25.6	16.5	9.09	1.0	1.00
QC Sample ID: BZE0840-MSD1	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Sodium, Total	120	0.395	70-130	20	195	184	9.09	1.0	1.00
QC Sample ID: BZE0840-MSD2	Batch: BZE0840		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Sodium, Total	45.5	0.823	70-130	20	295	291	9.09	1.0	1.00
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.									
QC Sample ID: BZE0864-MSD1	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Sodium, Total	100	0.0567	70-130	20	18.0	8.9	9.09	1.0	1.00
QC Sample ID: BZE0864-MSD2	Batch: BZE0864		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025		Units: mg/L						
Sodium, Total	41.6	0.529	70-130	20	267	263	9.09	1.0	1.00
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.									

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 300.0 - Sulfate (IC)									
QC Sample ID: BZE0796-BLK1	Batch: BZE0796								
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025								
Sulfate					ND			1.00	1.00
QC Sample ID: BZE0866-BLK1	Batch: BZE0866								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025								
Sulfate					ND			1.00	1.00
LCS - EPA 300.0 - Sulfate (IC)									
QC Sample ID: BZE0796-BS1	Batch: BZE0796								
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025								
Sulfate	97.9		90-110		196		200	1.00	1.00
QC Sample ID: BZE0866-BS1	Batch: BZE0866								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025								
Sulfate	94.1		90-110		188		200	1.00	1.00
Matrix Spike - EPA 300.0 - Sulfate (IC)									
QC Sample ID: BZE0796-MS1	Batch: BZE0796			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025								
Sulfate	96.5		80-120		4930	3010	2000	110	1.00
QC Sample ID: BZE0796-MS2	Batch: BZE0796			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025								
Sulfate	93.5		80-120		30.5	9.73	22.2	1.11	1.00
QC Sample ID: BZE0866-MS1	Batch: BZE0866			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025								
Sulfate	93.0		80-120		40.2	19.5	22.2	1.11	1.00
QC Sample ID: BZE0866-MS2	Batch: BZE0866			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025								
Sulfate	92.0		80-120		58.1	37.6	22.2	1.11	1.00
Matrix Spike Dup - EPA 300.0 - Sulfate (IC)									
QC Sample ID: BZE0796-MSD1	Batch: BZE0796			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025								
Sulfate	96.2	0.0943	80-120	20	4930	3010	2000	110	1.00
QC Sample ID: BZE0796-MSD2	Batch: BZE0796			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/17/2025	Date Analyzed: 05/17/2025								
Sulfate	95.9	1.75	80-120	20	31.0	9.73	22.2	1.11	1.00
QC Sample ID: BZE0866-MSD1	Batch: BZE0866			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025								
Sulfate	93.5	0.313	80-120	20	40.3	19.5	22.2	1.11	1.00
QC Sample ID: BZE0866-MSD2	Batch: BZE0866			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 05/19/2025	Date Analyzed: 05/20/2025								
Sulfate	94.6	0.957	80-120	20	58.6	37.6	22.2	1.11	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - SM 2540 C - TDS									
QC Sample ID: BZE0827-BLK1	Batch: BZE0827								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025				Units:	mg/L			
Total Dissolved Solids (TDS)					ND			10	1.00
QC Sample ID: BZE1038-BLK1	Batch: BZE1038								
Date Prepared: 05/21/2025	Date Analyzed: 05/21/2025				Units:	mg/L			
Total Dissolved Solids (TDS)					ND			10	1.00
Duplicate - SM 2540 C - TDS									
QC Sample ID: BZE0827-DUP1	Batch: BZE0827		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025				Units:	mg/L			
Total Dissolved Solids (TDS)	3	10	908	880				20	1.00
QC Sample ID: BZE0827-DUP2	Batch: BZE0827		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025				Units:	mg/L			
Total Dissolved Solids (TDS)	1	10	1860	1880				20	1.00
QC Sample ID: BZE1038-DUP1	Batch: BZE1038		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/21/2025	Date Analyzed: 05/21/2025				Units:	mg/L			
Total Dissolved Solids (TDS)	0.5	10	7860	7820				20	1.00
QC Sample ID: BZE1038-DUP2	Batch: BZE1038		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/21/2025	Date Analyzed: 05/21/2025				Units:	mg/L			
Total Dissolved Solids (TDS)	1	10	352	356				20	1.00
LCS - SM 2540 C - TDS									
QC Sample ID: BZE0827-BS1	Batch: BZE0827								
Date Prepared: 05/16/2025	Date Analyzed: 05/16/2025				Units:	mg/L			
Total Dissolved Solids (TDS)	106	90-110	424				400	20	1.00
QC Sample ID: BZE1038-BS1	Batch: BZE1038								
Date Prepared: 05/21/2025	Date Analyzed: 05/21/2025				Units:	mg/L			
Total Dissolved Solids (TDS)	103	90-110	412				400	20	1.00

QC Report for Work Order (WO) - 25E1332

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - TI (T) 200.8									
QC Sample ID: BZE0839-BLK1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Thallium, Total	ND							0.0002	1.00
QC Sample ID: BZE0853-BLK1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Thallium, Total	ND							0.0002	1.00
LCS - EPA 200.8 - TI (T) 200.8									
QC Sample ID: BZE0839-BS1	Batch: BZE0839								
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Thallium, Total	105	85-115	0.042			0.0400	0.0002	1.00	
QC Sample ID: BZE0853-BS1	Batch: BZE0853								
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Thallium, Total	98.2	85-115	0.039			0.0400	0.0002	1.00	
Matrix Spike - EPA 200.8 - TI (T) 200.8									
QC Sample ID: BZE0839-MS1	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Thallium, Total	100	70-130	0.040		ND	0.0400	0.0002	1.00	
QC Sample ID: BZE0839-MS2	Batch: BZE0839		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/16/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Thallium, Total	96.7	70-130	0.039		ND	0.0400	0.0002	1.00	
QC Sample ID: BZE0853-MS1	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Thallium, Total	99.8	70-130	0.040		ND	0.0400	0.0002	1.00	
QC Sample ID: BZE0853-MS2	Batch: BZE0853		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 05/19/2025	Date Analyzed: 05/19/2025				Units:	mg/L			
Thallium, Total	94.8	70-130	0.038		ND	0.0400	0.0002	1.00	



Amended

11/18/2025

**Work Order: 25J1598
Project: CCR Sampling 2025 Fall**

**Deseret Power Electric Cooperative
Attn: Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525**

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.



Approved By:

Melissa Connolly, Project Manager



Deseret Power Electric Cooperative
12500 East 25500 South
Vernal, UT 84078-8525

Project: CCR Sampling 2025 Fall
Project Manager: Tyler Esplin

<u>Laboratory ID</u>	<u>Sample Name</u>
25J1598-01	FA-UG1
25J1598-02	FA-UG2
25J1598-03	FA-DG2
25J1598-04	FA-DG3
25J1598-05	FA-DG4
25J1598-06	FA-DG5
25J1598-07	BA-UG1
25J1598-08	BA-DG1
25J1598-09	BA-DG2
25J1598-10	BA-DG3
25J1598-11	BA-DG4
25J1598-12	NEP
25J1598-13	Duplicate

Amended Report Narrative

Report Changes: Sample 25J1598-13 was reanalyzed for Barium and Molybdenum at a different dilution factor and the results have been amended.

Amended

Certificate of Analysis

Amended

Deseret Power Electric Cooperative
Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 10/17/25 11:09 @ 3.6 °C
Date Reported: 11/18/2025
Project Name: CCR Sampling 2025 Fall

Sample ID: FA-UG1

Matrix: Water

Lab ID: 25J1598-01

Date Sampled: 10/13/25 12:54

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	495	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	495	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	34.2	mg/L	1.00	EPA 300.0	10/22/25	10/22/25	
Fluoride	1.84	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	323	mg/L	1.00	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	1010	mg/L	20	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.0042	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	0.016	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	0.80	mg/L	0.05	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	7.6	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0042	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.086	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	4.7	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.04	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	1.6	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.0156	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	345	mg/L	1.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	

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Tyler Esplin

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Vernal, UT 84078-8525

PO#: 190210

Receipt: 10/17/25 11:09 @ 3.6 °C

Date Reported: 11/18/2025

Project Name: CCR Sampling 2025 Fall

Sample ID: FA-UG2

Matrix: Water

Lab ID: 25J1598-02

Date Sampled: 10/13/25 9:25

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	390	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	390	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	1770	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Fluoride	0.448	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	8140	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	17000	mg/L	500	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.0075	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	ND	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	54.5	mg/L	0.50	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	0.0002	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	497	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0047	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	0.0132	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.621	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	997	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.04	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	13.9	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.0355	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	2680	mg/L	10.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	

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PO#: 190210
Receipt: 10/17/25 11:09 @ 3.6 °C
Date Reported: 11/18/2025
Project Name: CCR Sampling 2025 Fall

Sample ID: FA-DG2

Matrix: Water

Lab ID: 25J1598-03

Date Sampled: 10/15/25 8:39

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	2920	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	754	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	3680	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	598	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Fluoride	38.1	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	4290	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	13800	mg/L	500	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	0.0010	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.151	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	0.014	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	6.88	mg/L	0.05	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	0.0014	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	1.3	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0504	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.137	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	7.5	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	1.21	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	12.5	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.403	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	3990	mg/L	10.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	

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Vernal, UT 84078-8525

PO#: 190210

Receipt: 10/17/25 11:09 @ 3.6 °C

Date Reported: 11/18/2025

Project Name: CCR Sampling 2025 Fall

Sample ID: FA-DG3

Matrix: Water

Lab ID: 25J1598-04

Date Sampled: 10/14/25 14:23

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	876	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	77.0	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	953	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	256	mg/L	1.00	EPA 300.0	10/22/25	10/22/25	
Fluoride	10.6	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	1450	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	4030	mg/L	20	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.0201	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	0.015	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	3.15	mg/L	0.05	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	0.0002	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	2.6	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0235	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.116	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	5.4	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.20	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	3.0	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.0979	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	1440	mg/L	10.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	

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Vernal, UT 84078-8525

PO#: 190210
Receipt: 10/17/25 11:09 @ 3.6 °C
Date Reported: 11/18/2025
Project Name: CCR Sampling 2025 Fall

Sample ID: FA-DG4

Matrix: Water

Lab ID: 25J1598-05

Date Sampled: 10/14/25 10:48

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	887	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	20.4	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	908	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	819	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Fluoride	10.7	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	3780	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	9500	mg/L	500	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.0089	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	0.008	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	12.8	mg/L	0.05	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	0.0002	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	39.0	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0119	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.184	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	61.6	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.26	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	6.4	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.0673	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	2660	mg/L	10.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	

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Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 10/17/25 11:09 @ 3.6 °C
Date Reported: 11/18/2025
Project Name: CCR Sampling 2025 Fall

Sample ID: FA-DG5

Matrix: Water

Lab ID: 25J1598-06

Date Sampled: 10/14/25 8:44

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	339	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	339	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	1860	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Fluoride	0.641	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	8490	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	18300	mg/L	500	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.0093	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	ND	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	60.6	mg/L	0.50	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	449	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0055	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	0.0207	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.655	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	805	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.04	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	8.5	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.0423	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	3220	mg/L	10.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	

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Vernal, UT 84078-8525

PO#: 190210
Receipt: 10/17/25 11:09 @ 3.6 °C
Date Reported: 11/18/2025
Project Name: CCR Sampling 2025 Fall

Sample ID: BA-UG1

Matrix: Water

Lab ID: 25J1598-07

Date Sampled: 10/15/25 10:30

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	459	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	459	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	1300	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Fluoride	5.40	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	9850	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	19100	mg/L	500	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.0220	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	0.005	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	148	mg/L	0.50	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	0.0002	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	380	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0046	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	0.0087	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.458	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	1620	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.12	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	10.1	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.181	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	2450	mg/L	10.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	

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Deseret Power Electric Cooperative

Tyler Esplin

12500 East 25500 South

Vernal, UT 84078-8525

PO#: 190210

Receipt: 10/17/25 11:09 @ 3.6 °C

Date Reported: 11/18/2025

Project Name: CCR Sampling 2025 Fall

Sample ID: BA-DG1

Matrix: Water

Lab ID: 25J1598-08

Date Sampled: 10/15/25 13:11

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	647	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	647	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	473	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Fluoride	3.83	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	3440	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	10900	mg/L	500	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.0086	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	0.006	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	17.0	mg/L	0.05	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	207	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0069	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	0.0020	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.190	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	368	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.07	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	11.3	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.0741	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	2460	mg/L	10.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	0.0003	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	

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Tyler Esplin

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Vernal, UT 84078-8525

PO#: 190210

Receipt: 10/17/25 11:09 @ 3.6 °C

Date Reported: 11/18/2025

Project Name: CCR Sampling 2025 Fall

Sample ID: BA-DG2

Matrix: Water

Lab ID: 25J1598-09

Date Sampled: 10/15/25 14:49

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	432	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	432	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	656	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Fluoride	2.72	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	6780	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	12900	mg/L	500	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.0065	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	ND	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	35.6	mg/L	0.50	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	0.0008	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	401	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0047	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	0.0043	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.309	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	935	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.09	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	12.2	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.0504	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	1710	mg/L	10.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	0.0003	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	

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Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 10/17/25 11:09 @ 3.6 °C
Date Reported: 11/18/2025
Project Name: CCR Sampling 2025 Fall

Sample ID: BA-DG3

Matrix: Water

Lab ID: 25J1598-10

Date Sampled: 10/16/25 8:43

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	741	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	11.2	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	752	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	390	mg/L	1.00	EPA 300.0	10/22/25	10/22/25	
Fluoride	8.80	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	2220	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	5140	mg/L	20	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.0031	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	0.010	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	6.17	mg/L	0.05	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	0.0003	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	20.4	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0087	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.044	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	41.2	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	0.00027	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.27	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	4.7	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.0479	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	1660	mg/L	10.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	

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Tyler Esplin
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Vernal, UT 84078-8525

PO#: 190210
Receipt: 10/17/25 11:09 @ 3.6 °C
Date Reported: 11/18/2025
Project Name: CCR Sampling 2025 Fall

Sample ID: BA-DG4

Matrix: Water

Lab ID: 25J1598-11

Date Sampled: 10/16/25 10:25

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	280	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	280	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	783	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Fluoride	6.14	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	6710	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	11500	mg/L	500	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Arsenic, Total	0.0087	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Barium, Total	0.009	mg/L	0.005	EPA 200.7/200.2	10/20/25	10/20/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Boron, Total	30.4	mg/L	0.50	EPA 200.7/200.2	10/20/25	10/20/25	
Cadmium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	
Calcium, Total	370	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Chromium, Total	0.0037	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Cobalt, Total	0.0010	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/20/25	10/20/25	
Lithium, Total	0.261	mg/L	0.020	EPA 200.7/200.2	10/20/25	10/20/25	
Magnesium, Total	702	mg/L	0.2	EPA 200.7/200.2	10/20/25	10/20/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.05	mg/L	0.01	EPA 200.7/200.2	10/20/25	10/20/25	
Potassium, Total	10.1	mg/L	0.5	EPA 200.7/200.2	10/20/25	10/20/25	
Selenium, Total	0.311	mg/L	0.00060	EPA 200.8/200.2	10/20/25	10/20/25	
Sodium, Total	2070	mg/L	10.0	EPA 200.7/200.2	10/20/25	10/20/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/20/25	10/20/25	



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PO#: 190210
Receipt: 10/17/25 11:09 @ 3.6 °C
Date Reported: 11/18/2025
Project Name: CCR Sampling 2025 Fall

Sample ID: NEP

Matrix: Water

Lab ID: 25J1598-12

Date Sampled: 10/13/25 14:51

Sampled By: Trenton Keller

	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	538	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	551	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	1090	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	5370	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Fluoride	35.1	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	25300	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	52600	mg/L	1000	SM 2540 C	10/17/25	10/17/25	
Metals							
Boron, Total	208	mg/L	0.50	EPA 200.7/200.2	10/21/25	10/21/25	
Calcium, Total	631	mg/L	2.0	EPA 200.7/200.2	10/21/25	10/21/25	
Magnesium, Total	4250	mg/L	2.0	EPA 200.7/200.2	10/21/25	10/21/25	
Potassium, Total	185	mg/L	5.0	EPA 200.7/200.2	10/21/25	10/21/25	
Sodium, Total	8460	mg/L	10.0	EPA 200.7/200.2	10/21/25	10/21/25	

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Deseret Power Electric Cooperative
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Vernal, UT 84078-8525

PO#: 190210
Receipt: 10/17/25 11:09 @ 3.6 °C
Date Reported: 11/18/2025
Project Name: CCR Sampling 2025 Fall

Sample ID: Duplicate

Matrix: Water

Lab ID: 25J1598-13

Date Sampled: 10/13/25 9:25

Sampled By: Trenton Keller

	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
Inorganic							
Alkalinity - Bicarbonate (as CaCO ₃)	377	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Carbonate (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Hydroxide (as CaCO ₃)	ND	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Alkalinity - Total (as CaCO ₃)	377	mg/L	1.0	SM 2320 B	10/21/25	10/21/25	
Chloride	1840	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Fluoride	0.461	mg/L	0.100	EPA 300.0	10/22/25	10/22/25	
Sulfate	8680	mg/L	100	EPA 300.0	10/22/25	10/22/25	
Total Dissolved Solids (TDS)	17700	mg/L	500	SM 2540 C	10/17/25	10/17/25	
Metals							
Antimony, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/21/25	10/21/25	
Arsenic, Total	0.0071	mg/L	0.0005	EPA 200.8/200.2	10/21/25	10/21/25	
Barium, Total	ND	mg/L	0.005	EPA 200.7/200.2	11/12/25	11/12/25	
Beryllium, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/21/25	10/21/25	
Boron, Total	59.9	mg/L	0.50	EPA 200.7/200.2	10/21/25	10/21/25	
Cadmium, Total	0.0002	mg/L	0.0002	EPA 200.8/200.2	10/21/25	10/21/25	
Calcium, Total	561	mg/L	2.0	EPA 200.7/200.2	10/21/25	10/21/25	
Chromium, Total	0.0087	mg/L	0.0005	EPA 200.8/200.2	10/21/25	10/21/25	
Cobalt, Total	0.0132	mg/L	0.0005	EPA 200.8/200.2	10/21/25	10/21/25	
Lead, Total	ND	mg/L	0.0005	EPA 200.8/200.2	10/21/25	10/21/25	
Lithium, Total	0.648	mg/L	0.200	EPA 200.7/200.2	10/21/25	10/21/25	
Magnesium, Total	1160	mg/L	2.0	EPA 200.7/200.2	10/21/25	10/21/25	
Mercury, Total	ND	mg/L	0.00015	EPA 245.1	10/17/25	10/17/25	
Molybdenum, Total	0.03	mg/L	0.01	EPA 200.7/200.2	11/12/25	11/12/25	
Potassium, Total	9.8	mg/L	5.0	EPA 200.7/200.2	10/21/25	10/21/25	
Selenium, Total	0.0338	mg/L	0.00060	EPA 200.8/200.2	10/21/25	10/21/25	
Sodium, Total	3350	mg/L	10.0	EPA 200.7/200.2	10/21/25	10/21/25	
Thallium, Total	ND	mg/L	0.0002	EPA 200.8/200.2	10/21/25	10/21/25	



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Tyler Esplin
12500 East 25500 South
Vernal, UT 84078-8525

PO#: 190210
Receipt: 10/17/25 11:09 @ 3.6 °C
Date Reported: 11/18/2025
Project Name: CCR Sampling 2025 Fall

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).

1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.

1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.

1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.

On calculated parameters, there may be a slight difference between summing the rounded values shown on the report vs the unrounded values used in the calculation.

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM



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Phone: 801-262-7299
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COMPANY: Deseret Power Electric Cooperative
ADDRESS: 12500 East 25500 South
CITY/STATE/ZIP: Vernal, UT 84078-8525
PHONE #: 435-781-5706
CONTACT: Tyler Esplin
EMAIL: tesplin@deseretspower.com
PROJECT: CCR Sampling 2024 Fall
PO Number: 187398 5
INVOICE EMAIL ADDRESS: _____

RUSH Due Date*:	QC Level
	QC 2

* Expedited turnaround subject
to additional charge

QC levels definition:
QC1: none (default if blank)
QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC,
your sample selected
QC4: 40% surcharge. Add raw data

Sample condition		Delivery Method	
☒ Custody Seal	☒ Correct Containers	☐ UPS	☐ USPS
☒ Container Intact	☒ Sufficient Sample Volume	☐ FedEx	☐ Chemtech-Ford Courier
☒ COC/Labels Agree	☐ Headspace Present (VOC)	☒ Walk-in	☐ Customer Courier
☒ Received on Ice	☐ Temperature Blank		
	☒ Received within Holding Time		

Lab Use Only	CLIENT SAMPLE INFORMATION				
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	
-1	1. FA-UG1 ✓✓	10-13-25	12:54	W	
-2	2. FA-UG2 ✓✓	10-13-25	09:25	W	
-3	3. FA-DG2 ✓✓	10-15-25	08:39	W	
-4	4. FA-DG3 ✓✓	10-14-25	14:23	W	
-5	5. FA-DG4 ✓✓	10-14-25	10:48	W	
-6	6. FA-DG5 ✓✓	10-14-25	08:44	W	
-7	7. BA-UG1 ✓✓	10-15-25	10:30	W	
-8	8. BA-DG1 ✓✓	10-15-25	13:11	W	
-9	9. BA-DG2 ✓✓	10-15-25	14:49	W	
-10	10. BA-DG3 ✓✓	10-16-25	08:43	W	

TESTS REQUESTED													
Chloride	Fluoride	Sulfate	TDS	Hg 245.1	200.7: B, Ca	200.7: Ba, Li, Mo	200.8: Sb, As, Be, Cd Ce, Cr, Pb, Se Ti	Metals by 200.8	200.7: Mg, K, Na	Alkalinity			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			
X	X	X	X	X	X	X	X	X	X	X			

Bottle type

Lot #

Sampled by: [print] <u>Trenton Keller</u>	Sampled by: [signature] <u>Trenton Keller</u>	ON ICE	NOT ON ICE	Temp (C°): <u>3.6°C</u>
Special Instructions:		Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.		
Relinquished by: [signature] <u>Trenton Keller</u>	Date/Time <u>10-17-25 11:09</u>	Received by: [signature] <u>Denise Brun</u>	Date/Time <u>10/17/25 11:09</u>	
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time	
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time	

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

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QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - SM 2320 B - Alkalinity (w/total)									
QC Sample ID: BZJ1119-BLK1	Batch: BZJ1119								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Alkalinity - Bicarbonate (as CaCO3)					ND			1.0	1.00
Alkalinity - Carbonate (as CaCO3)					ND			1.0	1.00
Alkalinity - Hydroxide (as CaCO3)					ND			1.0	1.00
Alkalinity - Total (as CaCO3)					ND			1.0	1.00
Duplicate - SM 2320 B - Alkalinity (w/total)									
QC Sample ID: BZJ1119-DUP1	Batch: BZJ1119		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Alkalinity - Bicarbonate (as CaCO3)	0.00		20	391	391			1.0	1.00
Alkalinity - Carbonate (as CaCO3)			20	ND	ND			1.0	1.00
Alkalinity - Hydroxide (as CaCO3)			20	ND	ND			1.0	1.00
Alkalinity - Total (as CaCO3)	0.00		20	391	391			1.0	1.00
LCS - SM 2320 B - Alkalinity (w/total)									
QC Sample ID: BZJ1119-BS1	Batch: BZJ1119								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Alkalinity - Total (as CaCO3)	97.6		90-110	230			236	1.0	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Antimony (T) 200.8									
QC Sample ID: BZJ1048-BLK1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Antimony, Total				ND				0.0005	1.00
QC Sample ID: BZJ1122-BLK1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Antimony, Total				ND				0.0005	1.00
LCS - EPA 200.8 - Antimony (T) 200.8									
QC Sample ID: BZJ1048-BS1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Antimony, Total	94.3	85-115		0.038			0.0400	0.0005	1.00
QC Sample ID: BZJ1122-BS1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Antimony, Total	102	85-115		0.041			0.0400	0.0005	1.00
Matrix Spike - EPA 200.8 - Antimony (T) 200.8									
QC Sample ID: BZJ1048-MS1	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Antimony, Total	99.8	70-130		0.040		0.0004	0.0400	0.0005	1.00
QC Sample ID: BZJ1048-MS2	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Antimony, Total	104	70-130		0.042		0.0002	0.0400	0.0005	1.00
QC Sample ID: BZJ1122-MS1	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Antimony, Total	93.8	70-130		0.038		0.0003	0.0400	0.0005	1.00
QC Sample ID: BZJ1122-MS2	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Antimony, Total	105	70-130		0.042		ND	0.0400	0.0005	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - As (T) 200.8									
QC Sample ID: BZJ1048-BLK1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Arsenic, Total	ND						0.0005	1.00	
QC Sample ID: BZJ1122-BLK1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Arsenic, Total	ND						0.0005	1.00	
LCS - EPA 200.8 - As (T) 200.8									
QC Sample ID: BZJ1048-BS1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Arsenic, Total	94.3	85-115	0.038			0.0400	0.0005	1.00	
QC Sample ID: BZJ1122-BS1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Arsenic, Total	101	85-115	0.040			0.0400	0.0005	1.00	
Matrix Spike - EPA 200.8 - As (T) 200.8									
QC Sample ID: BZJ1048-MS1	Batch: BZJ1048		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Arsenic, Total	103	70-130	0.086		0.044	0.0400	0.0005	1.00	
QC Sample ID: BZJ1048-MS2	Batch: BZJ1048		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Arsenic, Total	105	70-130	0.057		0.015	0.0400	0.0005	1.00	
QC Sample ID: BZJ1122-MS1	Batch: BZJ1122		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Arsenic, Total	95.8	70-130	0.039		0.0003	0.0400	0.0005	1.00	
QC Sample ID: BZJ1122-MS2	Batch: BZJ1122		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Arsenic, Total	103	70-130	0.042		0.001	0.0400	0.0005	1.00	

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - B (T) 200.7									
QC Sample ID: BZJ1041-BLK1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Boron, Total	ND						0.05	1.00	
QC Sample ID: BZJ1140-BLK1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Boron, Total	ND						0.05	1.00	
LCS - EPA 200.7 - B (T) 200.7									
QC Sample ID: BZJ1041-BS1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Boron, Total	99.2	85-115	0.30			0.300	0.05	1.00	
QC Sample ID: BZJ1140-BS1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Boron, Total	111	85-115	0.33			0.300	0.05	1.00	
Matrix Spike - EPA 200.7 - B (T) 200.7									
QC Sample ID: BZJ1041-MS1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Boron, Total	99.8	70-130	0.50		0.20	0.300	0.05	1.00	
QC Sample ID: BZJ1041-MS2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Boron, Total	103	70-130	0.51		0.20	0.300	0.05	1.00	
QC Sample ID: BZJ1140-MS1	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Boron, Total	110	70-130	0.37		0.04	0.300	0.05	1.00	
QC Sample ID: BZJ1140-MS2	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Boron, Total	117	70-130	0.39		0.04	0.300	0.05	1.00	
Matrix Spike Dup - EPA 200.7 - B (T) 200.7									
QC Sample ID: BZJ1041-MSD1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Boron, Total	95.5	2.62	70-130	20	0.49	0.20	0.300	0.05	1.00
QC Sample ID: BZJ1041-MSD2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Boron, Total	105	0.843	70-130	20	0.51	0.20	0.300	0.05	1.00
QC Sample ID: BZJ1140-MSD1	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Boron, Total	114	3.34	70-130	20	0.39	0.04	0.300	0.05	1.00
QC Sample ID: BZJ1140-MSD2	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Boron, Total	105	9.45	70-130	20	0.36	0.04	0.300	0.05	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Ba (T) 200.7									
QC Sample ID: BZJ1041-BLK1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Barium, Total				ND				0.005	1.00
QC Sample ID: BZK0494-BLK1	Batch: BZK0494								
Date Prepared: 11/12/2025	Date Analyzed: 11/12/2025				Units:	mg/L			
Barium, Total				ND				0.005	1.00
LCS - EPA 200.7 - Ba (T) 200.7									
QC Sample ID: BZJ1041-BS1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Barium, Total	99.6	85-115	0.249				0.250	0.005	1.00
QC Sample ID: BZK0494-BS1	Batch: BZK0494								
Date Prepared: 11/12/2025	Date Analyzed: 11/12/2025				Units:	mg/L			
Barium, Total	99.0	85-115	0.247				0.250	0.005	1.00
Matrix Spike - EPA 200.7 - Ba (T) 200.7									
QC Sample ID: BZJ1041-MS1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Barium, Total	99.4	70-130	0.273	0.024			0.250	0.005	1.00
QC Sample ID: BZJ1041-MS2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Barium, Total	100	70-130	0.274	0.024			0.250	0.005	1.00
QC Sample ID: BZK0494-MS1	Batch: BZK0494			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 11/12/2025	Date Analyzed: 11/12/2025				Units:	mg/L			
Barium, Total	97.6	70-130	0.280	0.036			0.250	0.005	1.00
Matrix Spike Dup - EPA 200.7 - Ba (T) 200.7									
QC Sample ID: BZJ1041-MSD1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Barium, Total	98.6	0.810	70-130	20	0.270	0.024	0.250	0.005	1.00
QC Sample ID: BZJ1041-MSD2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Barium, Total	102	1.73	70-130	20	0.279	0.024	0.250	0.005	1.00
QC Sample ID: BZK0494-MSD1	Batch: BZK0494			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 11/12/2025	Date Analyzed: 11/12/2025				Units:	mg/L			
Barium, Total	98.8	1.07	70-130	20	0.283	0.036	0.250	0.005	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Be (T) 200.8									
QC Sample ID: BZJ1048-BLK1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Beryllium, Total					ND			0.0005	1.00
QC Sample ID: BZJ1122-BLK1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Beryllium, Total					ND			0.0005	1.00
LCS - EPA 200.8 - Be (T) 200.8									
QC Sample ID: BZJ1048-BS1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Beryllium, Total	88.8		85-115		0.036		0.0400	0.0005	1.00
QC Sample ID: BZJ1122-BS1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Beryllium, Total	101		85-115		0.041		0.0400	0.0005	1.00
Matrix Spike - EPA 200.8 - Be (T) 200.8									
QC Sample ID: BZJ1048-MS1	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Beryllium, Total	92.9		70-130		0.037	ND	0.0400	0.0005	1.00
QC Sample ID: BZJ1048-MS2	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Beryllium, Total	93.3		70-130		0.037	ND	0.0400	0.0005	1.00
QC Sample ID: BZJ1122-MS1	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Beryllium, Total	98.6		70-130		0.039	ND	0.0400	0.0005	1.00
QC Sample ID: BZJ1122-MS2	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Beryllium, Total	105		70-130		0.042	ND	0.0400	0.0005	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Ca (T) 200.7									
QC Sample ID: BZJ1041-BLK1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Calcium, Total	ND					0.2		1.00	
QC Sample ID: BZJ1140-BLK1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Calcium, Total	ND					0.2		1.00	
LCS - EPA 200.7 - Ca (T) 200.7									
QC Sample ID: BZJ1041-BS1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Calcium, Total	102	85-115	10.5			10.2	0.2	1.00	
QC Sample ID: BZJ1140-BS1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Calcium, Total	115	85-115	11.7			10.2	0.2	1.00	
Matrix Spike - EPA 200.7 - Ca (T) 200.7									
QC Sample ID: BZJ1041-MS1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Calcium, Total	96.7	70-130	37.9	28.1	10.2	0.2	1.00		
QC Sample ID: BZJ1041-MS2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Calcium, Total	103	70-130	38.5	27.9	10.2	0.2	1.00		
QC Sample ID: BZJ1140-MS1	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Calcium, Total	117	70-130	145	133	10.2	0.2	1.00		
QC Sample ID: BZJ1140-MS2	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Calcium, Total	87.7	70-130	142	133	10.2	0.2	1.00		
Matrix Spike Dup - EPA 200.7 - Ca (T) 200.7									
QC Sample ID: BZJ1041-MSD1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Calcium, Total	97.4	0.183	70-130	20	38.0	28.1	10.2	0.2	1.00
QC Sample ID: BZJ1041-MSD2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Calcium, Total	108	1.26	70-130	20	39.0	27.9	10.2	0.2	1.00
QC Sample ID: BZJ1140-MSD1	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Calcium, Total	101	1.10	70-130	20	144	133	10.2	0.2	1.00
QC Sample ID: BZJ1140-MSD2	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Calcium, Total	75.5	0.877	70-130	20	141	133	10.2	0.2	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Cd (T) 200.8									
QC Sample ID: BZJ1048-BLK1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Cadmium, Total	ND					0.0002	1.00		
QC Sample ID: BZJ1122-BLK1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Cadmium, Total	ND					0.0002	1.00		
LCS - EPA 200.8 - Cd (T) 200.8									
QC Sample ID: BZJ1048-BS1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Cadmium, Total	93.4	85-115	0.037			0.0400	0.0002	1.00	
QC Sample ID: BZJ1122-BS1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Cadmium, Total	99.7	85-115	0.040			0.0400	0.0002	1.00	
Matrix Spike - EPA 200.8 - Cd (T) 200.8									
QC Sample ID: BZJ1048-MS1	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Cadmium, Total	95.0	70-130	0.038	ND		0.0400	0.0002	1.00	
QC Sample ID: BZJ1048-MS2	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Cadmium, Total	96.8	70-130	0.039	ND		0.0400	0.0002	1.00	
QC Sample ID: BZJ1122-MS1	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Cadmium, Total	89.9	70-130	0.036	ND		0.0400	0.0002	1.00	
QC Sample ID: BZJ1122-MS2	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Cadmium, Total	96.1	70-130	0.038	ND		0.0400	0.0002	1.00	

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 300.0 - Chloride (IC)									
QC Sample ID: BZJ1012-BLK1	Batch: BZJ1012								
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025			Units: mg/L					
Chloride					ND			1.00	1.00
LCS - EPA 300.0 - Chloride (IC)									
QC Sample ID: BZJ1012-BS1	Batch: BZJ1012								
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025			Units: mg/L					
Chloride	98.5		90-110		197		200	1.00	1.00
Matrix Spike - EPA 300.0 - Chloride (IC)									
QC Sample ID: BZJ1012-MS1	Batch: BZJ1012			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025			Units: mg/L					
Chloride	99.6		80-120		66.0	43.9	22.2	1.11	1.00
QC Sample ID: BZJ1012-MS2	Batch: BZJ1012			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025			Units: mg/L					
Chloride	104		80-120		66.9	43.8	22.2	1.11	1.00
Matrix Spike Dup - EPA 300.0 - Chloride (IC)									
QC Sample ID: BZJ1012-MSD1	Batch: BZJ1012			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025			Units: mg/L					
Chloride	102	0.932	80-120	20	66.7	43.9	22.2	1.11	1.00
QC Sample ID: BZJ1012-MSD2	Batch: BZJ1012			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025			Units: mg/L					
Chloride	103	0.229	80-120	20	66.7	43.8	22.2	1.11	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Co (T) 200.8									
QC Sample ID: BZJ1048-BLK1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Cobalt, Total	ND					0.0005	1.00		
QC Sample ID: BZJ1122-BLK1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Cobalt, Total	ND					0.0005	1.00		
LCS - EPA 200.8 - Co (T) 200.8									
QC Sample ID: BZJ1048-BS1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Cobalt, Total	98.6	85-115	0.039		0.0400	0.0005	1.00		
QC Sample ID: BZJ1122-BS1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Cobalt, Total	107	85-115	0.043		0.0400	0.0005	1.00		
Matrix Spike - EPA 200.8 - Co (T) 200.8									
QC Sample ID: BZJ1048-MS1	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Cobalt, Total	92.7	70-130	0.037		0.00008	0.0400	0.0005	1.00	
QC Sample ID: BZJ1048-MS2	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Cobalt, Total	90.1	70-130	0.036		0.0002	0.0400	0.0005	1.00	
QC Sample ID: BZJ1122-MS1	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Cobalt, Total	93.5	70-130	0.038		0.0001	0.0400	0.0005	1.00	
QC Sample ID: BZJ1122-MS2	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Cobalt, Total	96.7	70-130	0.039		0.00008	0.0400	0.0005	1.00	

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Cr (T) 200.8									
QC Sample ID: BZJ1048-BLK1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Chromium, Total	ND					0.0005	1.00		
QC Sample ID: BZJ1122-BLK1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Chromium, Total	ND					0.0005	1.00		
LCS - EPA 200.8 - Cr (T) 200.8									
QC Sample ID: BZJ1048-BS1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Chromium, Total	95.1	85-115	0.038		0.0400	0.0005	1.00		
QC Sample ID: BZJ1122-BS1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Chromium, Total	105	85-115	0.042		0.0400	0.0005	1.00		
Matrix Spike - EPA 200.8 - Cr (T) 200.8									
QC Sample ID: BZJ1048-MS1	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Chromium, Total	93.3	70-130	0.039		0.002	0.0400	0.0005	1.00	
QC Sample ID: BZJ1048-MS2	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Chromium, Total	93.2	70-130	0.040		0.003	0.0400	0.0005	1.00	
QC Sample ID: BZJ1122-MS1	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Chromium, Total	96.8	70-130	0.041		0.002	0.0400	0.0005	1.00	
QC Sample ID: BZJ1122-MS2	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Chromium, Total	97.9	70-130	0.043		0.004	0.0400	0.0005	1.00	

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 300.0 - Fluoride (IC)									
QC Sample ID: BZJ1012-BLK1	Batch: BZJ1012								
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025				Units:	mg/L			
Fluoride	ND							0.100	1.00
LCS - EPA 300.0 - Fluoride (IC)									
QC Sample ID: BZJ1012-BS1	Batch: BZJ1012								
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025				Units:	mg/L			
Fluoride	102	90-110	20.4			20.0		0.100	1.00
Matrix Spike - EPA 300.0 - Fluoride (IC)									
QC Sample ID: BZJ1012-MS1	Batch: BZJ1012		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025				Units:	mg/L			
Fluoride	90.3	80-120	2.16	0.154		2.22		0.111	1.00
QC Sample ID: BZJ1012-MS2	Batch: BZJ1012		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025				Units:	mg/L			
Fluoride	95.1	80-120	2.27	0.156		2.22		0.111	1.00
Matrix Spike Dup - EPA 300.0 - Fluoride (IC)									
QC Sample ID: BZJ1012-MSD1	Batch: BZJ1012		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025				Units:	mg/L			
Fluoride	93.5	3.28	80-120	20	2.23	0.154	2.22	0.111	1.00
QC Sample ID: BZJ1012-MSD2	Batch: BZJ1012		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025				Units:	mg/L			
Fluoride	94.6	0.491	80-120	20	2.26	0.156	2.22	0.111	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Lead (T) 200.8									
QC Sample ID: BZJ1048-BLK1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Lead, Total	ND						0.0005	1.00	
QC Sample ID: BZJ1122-BLK1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Lead, Total	ND						0.0005	1.00	
LCS - EPA 200.8 - Lead (T) 200.8									
QC Sample ID: BZJ1048-BS1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Lead, Total	95.5	85-115	0.038			0.0400	0.0005	1.00	
QC Sample ID: BZJ1122-BS1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Lead, Total	102	85-115	0.041			0.0400	0.0005	1.00	
Matrix Spike - EPA 200.8 - Lead (T) 200.8									
QC Sample ID: BZJ1048-MS1	Batch: BZJ1048		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Lead, Total	92.5	70-130	0.037		ND	0.0400	0.0005	1.00	
QC Sample ID: BZJ1048-MS2	Batch: BZJ1048		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Lead, Total	95.8	70-130	0.038		ND	0.0400	0.0005	1.00	
QC Sample ID: BZJ1122-MS1	Batch: BZJ1122		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Lead, Total	90.5	70-130	0.036		ND	0.0400	0.0005	1.00	
QC Sample ID: BZJ1122-MS2	Batch: BZJ1122		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Lead, Total	96.5	70-130	0.039		ND	0.0400	0.0005	1.00	

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Li (T) 200.7									
QC Sample ID: BZJ1041-BLK1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Lithium, Total				ND				0.020	1.00
QC Sample ID: BZJ1140-BLK1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Lithium, Total				ND				0.020	1.00
LCS - EPA 200.7 - Li (T) 200.7									
QC Sample ID: BZJ1041-BS1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Lithium, Total	100	85-115		0.200			0.200	0.020	1.00
QC Sample ID: BZJ1140-BS1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Lithium, Total	94.6	85-115		0.189			0.200	0.020	1.00
Matrix Spike - EPA 200.7 - Li (T) 200.7									
QC Sample ID: BZJ1041-MS1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Lithium, Total	87.2	70-130		0.257		0.082	0.200	0.020	1.00
QC Sample ID: BZJ1041-MS2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Lithium, Total	90.5	70-130		0.255		0.074	0.200	0.020	1.00
QC Sample ID: BZJ1140-MS1	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Lithium, Total	106	70-130		0.228		0.017	0.200	0.020	1.00
QC Sample ID: BZJ1140-MS2	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Lithium, Total	106	70-130		0.229		0.017	0.200	0.020	1.00
Matrix Spike Dup - EPA 200.7 - Li (T) 200.7									
QC Sample ID: BZJ1041-MSD1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Lithium, Total	83.7	2.77	70-130	20	0.250	0.082	0.200	0.020	1.00
QC Sample ID: BZJ1041-MSD2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Lithium, Total	93.2	2.09	70-130	20	0.261	0.074	0.200	0.020	1.00
QC Sample ID: BZJ1140-MSD1	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Lithium, Total	107	1.35	70-130	20	0.231	0.017	0.200	0.020	1.00
QC Sample ID: BZJ1140-MSD2	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Lithium, Total	100	5.51	70-130	20	0.217	0.017	0.200	0.020	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 245.1 - Mercury (T) 245.1									
QC Sample ID: BZJ0989-BLK1	Batch: BZJ0989								
Date Prepared: 10/17/2025	Date Analyzed: 10/17/2025				Units:	mg/L			
Mercury, Total	ND						0.00015	1.00	
LCS - EPA 245.1 - Mercury (T) 245.1									
QC Sample ID: BZJ0989-BS1	Batch: BZJ0989								
Date Prepared: 10/17/2025	Date Analyzed: 10/17/2025				Units:	mg/L			
Mercury, Total	106	85-115		0.00528		0.00500	0.00015	1.00	
Matrix Spike - EPA 245.1 - Mercury (T) 245.1									
QC Sample ID: BZJ0989-MS1	Batch: BZJ0989		QC Source Sample: 25J1598-01						
Date Prepared: 10/17/2025	Date Analyzed: 10/17/2025				Units:	mg/L			
Mercury, Total	103	75-125		0.00514	ND	0.00500	0.00015	1.00	
QC Sample ID: BZJ0989-MS2	Batch: BZJ0989		QC Source Sample: 25J1598-11						
Date Prepared: 10/17/2025	Date Analyzed: 10/17/2025				Units:	mg/L			
Mercury, Total	105	75-125		0.00526	ND	0.00500	0.00015	1.00	
Matrix Spike Dup - EPA 245.1 - Mercury (T) 245.1									
QC Sample ID: BZJ0989-MSD1	Batch: BZJ0989		QC Source Sample: 25J1598-01						
Date Prepared: 10/17/2025	Date Analyzed: 10/17/2025				Units:	mg/L			
Mercury, Total	101	1.69	75-125	20	0.00505	ND	0.00500	0.00015	1.00
QC Sample ID: BZJ0989-MSD2	Batch: BZJ0989		QC Source Sample: 25J1598-11						
Date Prepared: 10/17/2025	Date Analyzed: 10/17/2025				Units:	mg/L			
Mercury, Total	102	2.83	75-125	20	0.00511	ND	0.00500	0.00015	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Mg (T) 200.7									
QC Sample ID: BZJ1041-BLK1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Magnesium, Total	ND							0.2	1.00
QC Sample ID: BZJ1140-BLK1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Magnesium, Total	ND							0.2	1.00
LCS - EPA 200.7 - Mg (T) 200.7									
QC Sample ID: BZJ1041-BS1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Magnesium, Total	104	85-115	10.6			10.2	0.2	1.00	
QC Sample ID: BZJ1140-BS1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Magnesium, Total	118	85-115	12.0			10.2	0.2	1.00	
QM-11 - The Laboratory Control Sample recovery was outside acceptance limits. The analytical batch was accepted based on the recovery of the Matrix Spike or the Matrix Spike Duplicate.									
Matrix Spike - EPA 200.7 - Mg (T) 200.7									
QC Sample ID: BZJ1041-MS1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Magnesium, Total	98.8	70-130	35.9		25.8	10.2	0.2	1.00	
QC Sample ID: BZJ1041-MS2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Magnesium, Total	105	70-130	36.5		25.8	10.2	0.2	1.00	
QC Sample ID: BZJ1140-MS1	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Magnesium, Total	113	70-130	79.8		68.3	10.2	0.2	1.00	
QC Sample ID: BZJ1140-MS2	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Magnesium, Total	104	70-130	78.5		68.0	10.2	0.2	1.00	
Matrix Spike Dup - EPA 200.7 - Mg (T) 200.7									
QC Sample ID: BZJ1041-MSD1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Magnesium, Total	101	0.573	70-130	20	36.1	25.8	10.2	0.2	1.00
QC Sample ID: BZJ1041-MSD2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Magnesium, Total	110	1.37	70-130	20	37.0	25.8	10.2	0.2	1.00
QC Sample ID: BZJ1140-MSD1	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Magnesium, Total	102	1.31	70-130	20	78.8	68.3	10.2	0.2	1.00
QC Sample ID: BZJ1140-MSD2	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Magnesium, Total	90.8	1.67	70-130	20	77.2	68.0	10.2	0.2	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Mo (T) 200.7									
QC Sample ID: BZJ1041-BLK1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Molybdenum, Total				ND				0.01	1.00
QC Sample ID: BZK0494-BLK1	Batch: BZK0494								
Date Prepared: 11/12/2025	Date Analyzed: 11/12/2025				Units:	mg/L			
Molybdenum, Total				ND				0.01	1.00
LCS - EPA 200.7 - Mo (T) 200.7									
QC Sample ID: BZJ1041-BS1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Molybdenum, Total	96.5	85-115		0.19			0.200	0.01	1.00
QC Sample ID: BZK0494-BS1	Batch: BZK0494								
Date Prepared: 11/12/2025	Date Analyzed: 11/12/2025				Units:	mg/L			
Molybdenum, Total	90.4	85-115		0.18			0.200	0.01	1.00
Matrix Spike - EPA 200.7 - Mo (T) 200.7									
QC Sample ID: BZJ1041-MS1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Molybdenum, Total	98.8	70-130		0.20	ND		0.200	0.01	1.00
QC Sample ID: BZJ1041-MS2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Molybdenum, Total	101	70-130		0.20	ND		0.200	0.01	1.00
QC Sample ID: BZK0494-MS1	Batch: BZK0494			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 11/12/2025	Date Analyzed: 11/12/2025				Units:	mg/L			
Molybdenum, Total	90.0	70-130		0.19	0.007		0.200	0.01	1.00
Matrix Spike Dup - EPA 200.7 - Mo (T) 200.7									
QC Sample ID: BZJ1041-MSD1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Molybdenum, Total	96.7	2.10	70-130	20	0.19	ND	0.200	0.01	1.00
QC Sample ID: BZJ1041-MSD2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Molybdenum, Total	102	1.33	70-130	20	0.20	ND	0.200	0.01	1.00
QC Sample ID: BZK0494-MSD1	Batch: BZK0494			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 11/12/2025	Date Analyzed: 11/12/2025				Units:	mg/L			
Molybdenum, Total	91.4	1.43	70-130	20	0.19	0.007	0.200	0.01	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Potassium (T) 200.7									
QC Sample ID: BZJ1041-BLK1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Potassium, Total	ND					0.5		1.00	
QC Sample ID: BZJ1140-BLK1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Potassium, Total	ND					0.5		1.00	
LCS - EPA 200.7 - Potassium (T) 200.7									
QC Sample ID: BZJ1041-BS1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Potassium, Total	106	85-115	10.6			10.0	0.5	1.00	
QC Sample ID: BZJ1140-BS1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Potassium, Total	115	85-115	11.5			10.0	0.5	1.00	
Matrix Spike - EPA 200.7 - Potassium (T) 200.7									
QC Sample ID: BZJ1041-MS1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Potassium, Total	104	70-130	16.6	6.2		10.0	0.5	1.00	
QC Sample ID: BZJ1041-MS2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Potassium, Total	105	70-130	16.7	6.2		10.0	0.5	1.00	
QC Sample ID: BZJ1140-MS1	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Potassium, Total	113	70-130	16.1	4.8		10.0	0.5	1.00	
QC Sample ID: BZJ1140-MS2	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Potassium, Total	126	70-130	17.0	4.5		10.0	0.5	1.00	
Matrix Spike Dup - EPA 200.7 - Potassium (T) 200.7									
QC Sample ID: BZJ1041-MSD1	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Potassium, Total	103	0.503	70-130	20	16.5	6.2	10.0	0.5	1.00
QC Sample ID: BZJ1041-MSD2	Batch: BZJ1041			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units:		mg/L			
Potassium, Total	109	2.22	70-130	20	17.0	6.2	10.0	0.5	1.00
QC Sample ID: BZJ1140-MSD1	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Potassium, Total	119	3.21	70-130	20	16.7	4.8	10.0	0.5	1.00
QC Sample ID: BZJ1140-MSD2	Batch: BZJ1140			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units:		mg/L			
Potassium, Total	113	7.59	70-130	20	15.8	4.5	10.0	0.5	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - Se (T) 200.8									
QC Sample ID: BZJ1048-BLK1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Selenium, Total	ND					0.00060	1.00		
QC Sample ID: BZJ1122-BLK1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Selenium, Total	ND					0.00060	1.00		
LCS - EPA 200.8 - Se (T) 200.8									
QC Sample ID: BZJ1048-BS1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Selenium, Total	94.0	85-115	0.038		0.0400	0.00060	1.00		
QC Sample ID: BZJ1122-BS1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Selenium, Total	98.8	85-115	0.040		0.0400	0.00060	1.00		
Matrix Spike - EPA 200.8 - Se (T) 200.8									
QC Sample ID: BZJ1048-MS1	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Selenium, Total	107	70-130	0.043	ND	0.0400	0.00060	1.00		
QC Sample ID: BZJ1048-MS2	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Selenium, Total	104	70-130	0.043	0.002	0.0400	0.00060	1.00		
QC Sample ID: BZJ1122-MS1	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Selenium, Total	99.6	70-130	0.040	ND	0.0400	0.00060	1.00		
QC Sample ID: BZJ1122-MS2	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Selenium, Total	104	70-130	0.042	0.0007	0.0400	0.00060	1.00		

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.7 - Sodium (T) 200.7									
QC Sample ID: BZJ1041-BLK1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Sodium, Total	ND						1.0	1.00	
QC Sample ID: BZJ1140-BLK1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Sodium, Total	ND						1.0	1.00	
LCS - EPA 200.7 - Sodium (T) 200.7									
QC Sample ID: BZJ1041-BS1	Batch: BZJ1041								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Sodium, Total	107	85-115	10.7			10.0	1.0	1.00	
QC Sample ID: BZJ1140-BS1	Batch: BZJ1140								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Sodium, Total	114	85-115	11.4			10.0	1.0	1.00	
Matrix Spike - EPA 200.7 - Sodium (T) 200.7									
QC Sample ID: BZJ1041-MS1	Batch: BZJ1041		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Sodium, Total	63.2	70-130	138		132	10.0	1.0	1.00	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.									
QC Sample ID: BZJ1041-MS2	Batch: BZJ1041		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Sodium, Total	102	70-130	141		131	10.0	1.0	1.00	
QC Sample ID: BZJ1140-MS1	Batch: BZJ1140		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Sodium, Total	104	70-130	36.1		25.6	10.0	1.0	1.00	
QC Sample ID: BZJ1140-MS2	Batch: BZJ1140		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Sodium, Total	108	70-130	36.5		25.7	10.0	1.0	1.00	
Matrix Spike Dup - EPA 200.7 - Sodium (T) 200.7									
QC Sample ID: BZJ1041-MSD1	Batch: BZJ1041		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Sodium, Total	64.4	0.0874	70-130	20	138	132	10.0	1.0	1.00
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.									
QC Sample ID: BZJ1041-MSD2	Batch: BZJ1041		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025				Units:	mg/L			
Sodium, Total	106	0.243	70-130	20	142	131	10.0	1.0	1.00
QC Sample ID: BZJ1140-MSD1	Batch: BZJ1140		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Sodium, Total	107	0.896	70-130	20	36.4	25.6	10.0	1.0	1.00
QC Sample ID: BZJ1140-MSD2	Batch: BZJ1140		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025				Units:	mg/L			
Sodium, Total	95.2	3.61	70-130	20	35.2	25.7	10.0	1.0	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 300.0 - Sulfate (IC)									
QC Sample ID: BZJ1012-BLK1	Batch: BZJ1012								
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025					Units: mg/L			
Sulfate					ND			1.00	1.00
LCS - EPA 300.0 - Sulfate (IC)									
QC Sample ID: BZJ1012-BS1	Batch: BZJ1012								
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025					Units: mg/L			
Sulfate	92.6	90-110			185	200		1.00	1.00
Matrix Spike - EPA 300.0 - Sulfate (IC)									
QC Sample ID: BZJ1012-MS1	Batch: BZJ1012		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025					Units: mg/L			
Sulfate	92.5	80-120			169	148	22.2	1.11	1.00
QC Sample ID: BZJ1012-MS2	Batch: BZJ1012		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025					Units: mg/L			
Sulfate	96.3	80-120			170	148	22.2	1.11	1.00
Matrix Spike Dup - EPA 300.0 - Sulfate (IC)									
QC Sample ID: BZJ1012-MSD1	Batch: BZJ1012		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025					Units: mg/L			
Sulfate	95.0	0.335	80-120	20	169	148	22.2	1.11	1.00
QC Sample ID: BZJ1012-MSD2	Batch: BZJ1012		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/22/2025	Date Analyzed: 10/22/2025					Units: mg/L			
Sulfate	93.0	0.433	80-120	20	169	148	22.2	1.11	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - SM 2540 C - TDS									
QC Sample ID: BZJ0997-BLK1	Batch: BZJ0997								
Date Prepared: 10/17/2025	Date Analyzed: 10/17/2025					Units:	mg/L		
Total Dissolved Solids (TDS)					ND			20	1.00
Duplicate - SM 2540 C - TDS									
QC Sample ID: BZJ0997-DUP1	Batch: BZJ0997		QC Source Sample: XXXXXXXX-XX						
Date Prepared: 10/17/2025	Date Analyzed: 10/17/2025					Units:	mg/L		
Total Dissolved Solids (TDS)	0		10	584	584			20	1.00
QC Sample ID: BZJ0997-DUP2	Batch: BZJ0997		QC Source Sample: 25J1598-13						
Date Prepared: 10/17/2025	Date Analyzed: 10/17/2025					Units:	mg/L		
Total Dissolved Solids (TDS)	0.6		10	17600	17700			500	1.00
LCS - SM 2540 C - TDS									
QC Sample ID: BZJ0997-BS1	Batch: BZJ0997								
Date Prepared: 10/17/2025	Date Analyzed: 10/17/2025					Units:	mg/L		
Total Dissolved Solids (TDS)	107	90-110		428			400	20	1.00

QC Report for Work Order (WO) - 25J1598

Analyte	% Rec	RPD	Limits	RPD Max	Result	Source Conc	Spk Value	MRL	DF
Blank - EPA 200.8 - TI (T) 200.8									
QC Sample ID: BZJ1048-BLK1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Thallium, Total	ND					0.0002	1.00		
QC Sample ID: BZJ1122-BLK1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Thallium, Total	ND					0.0002	1.00		
LCS - EPA 200.8 - TI (T) 200.8									
QC Sample ID: BZJ1048-BS1	Batch: BZJ1048								
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Thallium, Total	96.9	85-115	0.039			0.0400	0.0002	1.00	
QC Sample ID: BZJ1122-BS1	Batch: BZJ1122								
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Thallium, Total	103	85-115	0.041			0.0400	0.0002	1.00	
Matrix Spike - EPA 200.8 - TI (T) 200.8									
QC Sample ID: BZJ1048-MS1	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Thallium, Total	95.0	70-130	0.038		ND	0.0400	0.0002	1.00	
QC Sample ID: BZJ1048-MS2	Batch: BZJ1048			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/20/2025	Date Analyzed: 10/20/2025			Units: mg/L					
Thallium, Total	99.7	70-130	0.040		ND	0.0400	0.0002	1.00	
QC Sample ID: BZJ1122-MS1	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Thallium, Total	93.1	70-130	0.037		ND	0.0400	0.0002	1.00	
QC Sample ID: BZJ1122-MS2	Batch: BZJ1122			QC Source Sample: XXXXXXXX-XX					
Date Prepared: 10/21/2025	Date Analyzed: 10/21/2025			Units: mg/L					
Thallium, Total	98.2	70-130	0.039		ND	0.0400	0.0002	1.00	

[illegible]



Well number: BA-DG4
Field Personnel: TK, KO
Sampling date: 5/14/25
Well condition: Good
Was the meter(s) calibrated prior to sampling (circle): Yes No
Water level, pre-pump installation (ft): N/A
Water level, post-pump installation (ft): N/A
Total volume of water pumped (Liters): 1.50
Clock time of sample: 14:53
Lab's name sample(s) are being sent to: CTF
Type and size of sample bottles used: Plastic
Sample bottle(s) identification number used: BA-DG4
Was a blind sample obtained at this well (circle): Yes No

Additional Notes: _____

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

RUSH Due Date*:	QC Level
	QC 2
	QC levels definition: QC1: none (default if blank)

CHEMTECH-FORD
LABORATORIES

Chemtech-Ford, Inc.
9632 South 500 West
Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

Lab Use Only	CLIENT SAMPLE INFORMATION			
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX
-1	1. FA-UG1	5-12-25	09:41	W
-2	2. FA-UG2	5-12-25	13:08	W
-3	3. FA-DG2	5-14-25	08:39	W
-4	4. FA-DG3	5-13-25	14:57	W
-5	5. FA-DG4	5-13-25	12:53	W
-6	6. FA-DG5	5-13-25	09:23	W
-7	7. BA-UG1	5-14-25	12:41	W
-8	8. BA-DG1	5-15-25	13:33	W
-9	9. BA-DG2	5-15-25	11:01	W
-10	10. BA-DG3	5-15-25	08:19	W

* Radium on set 25E1329

Bottle type	A9	M
Lot #	14104	1461

[illegible]

Sampled by: [print] Trenton Keller		Sampled by: [signature] <i>[Signature]</i>		☒ ON ICE ☐ NOT ON ICE Temp (C°): 3.3	
Special Instructions:				Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.	
Relinquished by: [signature] <i>[Signature]</i>		Date/Time 5-16-25 10:30		Received by: [signature] <i>Denise Brun</i>	
Relinquished by: [signature]		Date/Time		Received by: [signature]	
Relinquished by: [signature]		Date/Time		Received by: [signature]	

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Well number: Duplicate (FA-UG2)
Field Personnel: TK, KO
Sampling date: 10-13-25
Well condition: Good
Was the meter(s) calibrated prior to sampling (circle): Yes No
Water level, pre-pump installation (ft): N/A
Water level, post-pump installation (ft): N/A
Total volume of water pumped (Liters): _____
Clock time of sample: 09:25
Lab's name sample(s) are being sent to: CTF
Sample bottle(s) identification number used: Duplicate
Type and size of sample bottles used: Plastic: Pint Quart 1/2 Gallon
Was a blind sample obtained at this well (circle): Yes No

Additional Notes:

See FA-UGZ

[illegible]



**BONANZA POWER PLANT
CCR GROUNDWATER MONITORING WELLS
SAMPLING & ANALYSIS PROGRAM**

Well number: FA-UG2

Field Personnel: TK KO

Sampling date: 10-13-25

Well condition: Good

Was the meter(s) calibrated prior to sampling (circle): Yes No

Water level, pre-pump installation (ft): N/A

Water level, post-pump installation (ft): N/A

Total volume of water pumped (Liters): _____

Clock time of sample: 09:25

Lab's name sample(s) are being sent to: CTF

Sample bottle(s) identification number used: FA-UG2

Type and size of sample bottles used: Plastic: ~~Pint~~ ~~Quart~~ 1/2 Gallon

Was a blind sample obtained at this well (circle): Yes No

Note: If yes, label the blind sample "CCR-QA".

Additional Notes: _____

[illegible]



**BONANZA POWER PLANT
CCR GROUNDWATER MONITORING WELLS
SAMPLING & ANALYSIS PROGRAM**

Well number: BA-UG1

Field Personnel: TK, KO

Sampling date: 10-15-25

Well condition: Good

Was the meter(s) calibrated prior to sampling (circle): Yes No

Water level, pre-pump installation (ft): N/A

Water level, post-pump installation (ft): N/A

Total volume of water pumped (Liters): _____

Clock time of sample: 10:30

Lab's name sample(s) are being sent to: CTF

Sample bottle(s) identification number used: BA-UG1

Type and size of sample bottles used: Plastic: Pint Quart 1/2 Gallon

Was a blind sample obtained at this well (circle): Yes No

Note: If yes, label the blind sample "CCR-QA".

Additional Notes: _____

[illegible]



**BONANZA POWER PLANT
CCR GROUNDWATER MONITORING WELLS
SAMPLING & ANALYSIS PROGRAM**

Note: If yes, label the blind sample "CCR-QA".

[illegible]



**BONANZA POWER PLANT
CCR GROUNDWATER MONITORING WELLS
SAMPLING & ANALYSIS PROGRAM**

Well number: BA-DG2

Field Personnel: TK, KO

Sampling date: 10-15-25

Well condition: Good

Was the meter(s) calibrated prior to sampling (circle): Yes No

Water level, pre-pump installation (ft): N/A

Water level, post-pump installation (ft): N/A

Total volume of water pumped (Liters): _____

Clock time of sample: 14:49

Lab's name sample(s) are being sent to: CTF

Sample bottle(s) identification number used: BA-DG2

Type and size of sample bottles used: Plastic: Pin Quart 1/2 Gallon

Was a blind sample obtained at this well (circle): Yes No

Note: If yes, label the blind sample "CCR-QA".

Additional Notes: _____

[illegible]



**BONANZA POWER PLANT
CCR GROUNDWATER MONITORING WELLS
SAMPLING & ANALYSIS PROGRAM**

Well number: FA-DG3

Field Personnel: TK, KO

Sampling date: 10-14-25

Well condition: Good

Was the meter(s) calibrated prior to sampling (circle): Yes No

Water level, pre-pump installation (ft): N/A

Water level, post-pump installation (ft): N/A

Total volume of water pumped (Liters): _____

Clock time of sample: 14:23

Lab's name sample(s) are being sent to: CTF

Sample bottle(s) identification number used: FA-DG3

Type and size of sample bottles used: Plastic: ~~Pint~~ ~~Quart~~ ~~1/2 Gallon~~

Was a blind sample obtained at this well (circle): Yes No

Note: If yes, label the blind sample "CCR-QA".

Additional Notes: _____

[illegible]

[illegible]



Well number: FA-DG5
Field Personnel: TK, KO
Sampling date: 10-14-25
Well condition: Good
Was the meter(s) calibrated prior to sampling (circle): Yes No
Water level, pre-pump installation (ft): N/A
Water level, post-pump installation (ft): N/A
Total volume of water pumped (Liters): N/A
Clock time of sample: 8:44
Lab's name sample(s) are being sent to: CTF
Sample bottle(s) identification number used: FA-DG5
Type and size of sample bottles used: Plastic: ~~Pint~~ Quart 1/2 ~~Gallon~~
Was a blind sample obtained at this well (circle): Yes No

Additional Notes: _____

[illegible]



Well number: NEP
Field Personnel: TK, KO
Sampling date: 10-13-25
Well condition: N/A
Was the meter(s) calibrated prior to sampling (circle): Yes No
Water level, pre-pump installation (ft): N/A
Water level, post-pump installation (ft): N/A
Total volume of water pumped (Liters): N/A
Clock time of sample: 14:51
Lab's name sample(s) are being sent to: CTF
Sample bottle(s) identification number used: ~~NEP~~ NEP
Type and size of sample bottles used: Plastic: Pint Quart 1/2 Gallon
Was a blind sample obtained at this well (circle): Yes No

Additional Notes: _____

[illegible]

DRINKING WATER SAMPLES ONLY

CHEMTECH - FORD ANALYTICAL LABORATORY

COMPANY: Deseret Power Electric Cooperative
 ADDRESS: 12500 East 25500 South
 CITY/STATE/ZIP: Vernal, Utah 84078-8525
 PHONE #: (435) 781-5748
 CONTACT: PROJECT:
 EMAIL:

Sample Receipt Conditions:

() Custody Seal () Received on Ice () Headspace Present (VOC)
 () Containers Intact () Correct Containers () Temperature Blank
 () COC and Labels Match () Sufficient Sample Volume () Received within Hold
 Delivered By: IV- **Ag(2) 1493 pres in rec**

CHAIN OF CUSTODY

BILLING ADDRESS: _____
 BILLING CITY/STATE/ZIP: _____
 PURCHASE ORDER: _____



TURNAROUND TIME REQUIRED*:

* Expedited turnaround subject to additional charge

State System Number
24036

Send to State
☒ Yes ☐ No

*not drinking water
not sent to state*

Please fill in all blue highlighted areas. Thank you!

TESTS REQUESTED														Bacteria			
Radium 226	Radium 228													Total Coliform + E. coli (Present/Absent)	Total Coliform + E. coli (Enumerated)	HPC (Plate Count)	R = Routine
																	I = Investigative
																	TR = Trigger Source
																	RP = Repeat
																	REPEAT
																	OR = Original Location
																	UP = Upstream
																	DN = Downstream
																	LAB FAIL Ref #

Lab Use Only	CLIENT SAMPLE INFORMATION						
	LOCATION	DATE	TIME	FACILITY ID (source code)	POINT CODE (DBP)	Field: Residual Chlorine	
-1	1. FA-UG1	10-13-25	12:54				X X
-2	2. FA-UG2	10-13-25	09:25				X X
-3	3. FA-DG2	10-15-25	08:39				X X
-4	4. FA-DG3	10-14-25	14:23				X X
-5	5. FA-DG4	10-14-25	10:48				X X
-6	6. FA-DG5	10-14-25	08:44				X X
-7	7. BA-UG1	10-15-25	10:30				X X
-8	8. BA-DG1	10-15-25	13:11				X X
-9	9. BA-DG2	10-15-25	14:49				X X
-10	10. BA-DG3	10-16-25	08:43				X X
-11	11. BA-DG4	10-16-25	10:25				X X
-12	12. Duplicate	10-13-25	09:25				X X

Sampled by: [print] <u>Trenton Keller</u>		Sampled by: [signature] <u>Trenton Keller</u>		ON ICE ☒ NOT ON ICE ☐ Temp (C°): <u>8.9</u>	
Special Instructions:				Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.	
Relinquished by: [signature] <u>Trenton Keller</u>	Date/Time	Received by: [signature] <u>Denise Brun</u>	Date/Time		
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time		
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time		

CHEMTECH-FORD
 9632 South 500 West
 Sandy, UT 84070

801.262.7299 PHONE
 866.792.0093 FAX
www.ChemtechFord.com

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum).
 Client agrees to pay collection costs and attorney's fees.

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM



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LABORATORIES

Chemtech-Ford, Inc.
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Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

COMPANY: Deseret Power Electric Cooperative
ADDRESS: 12500 East 25500 South
CITY/STATE/ZIP: Vernal, UT 84078-8525
PHONE #: 435-781-5706
CONTACT: Tyler Esplin
EMAIL: tesplin@deseretspower.com
PROJECT: CCR Sampling 2024 Fall
PO Number: 187398
INVOICE EMAIL ADDRESS: _____

RUSH Due Date*:	QC Level
	QC 2

* Expedited turnaround subject
to additional charge

QC levels definition:
QC1: none (default if blank)
QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC,
your sample selected
QC4: 40% surcharge. Add raw data

Sample condition		Delivery Method	
☒ Custody Seal	☒ Correct Containers	☐ UPS	☐ USPS
☒ Container Intact	☒ Sufficient Sample Volume	☐ FedEx	☐ Chemtech-Ford Courier
☒ COC/Labels Agree	☐ Headspace Present (VOC)	☒ Walk-in	☐ Customer Courier
☒ Received on Ice	☐ Temperature Blank		
	☒ Received within Holding Time		

Lab Use Only	CLIENT SAMPLE INFORMATION				
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	
-1	1. FA-UG1 ✓✓	10-13-25	12:54	W	
-2	2. FA-UG2 ✓✓	10-13-25	09:25	W	
-3	3. FA-DG2 ✓✓	10-15-25	08:39	W	
-4	4. FA-DG3 ✓✓	10-14-25	14:23	W	
-5	5. FA-DG4 ✓✓	10-14-25	10:48	W	
-6	6. FA-DG5 ✓✓	10-14-25	08:44	W	
-7	7. BA-UG1 ✓✓	10-15-25	10:30	W	
-8	8. BA-DG1 ✓✓	10-15-25	13:11	W	
-9	9. BA-DG2 ✓✓	10-15-25	14:49	W	
-10	10. BA-DG3 ✓✓	10-16-25	08:43	W	

TESTS REQUESTED													
Chloride	Fluoride	Sulfate	TDS	Hg 245.1	200.7: B, Ca	200.7: Ba, Li, Mo	200.8: Sb, As, Be, Cd Ce, Cr, Pb, Se	Ti	Metals by 200.8	200.7: Mg, K, Na	Alkalinity		
X	X	X	X	X	X	X	X		X	X	X		
X	X	X	X	X	X	X	X		X	X	X		
X	X	X	X	X	X	X	X		X	X	X		
X	X	X	X	X	X	X	X		X	X	X		
X	X	X	X	X	X	X	X		X	X	X		
X	X	X	X	X	X	X	X		X	X	X		
X	X	X	X	X	X	X	X		X	X	X		
X	X	X	X	X	X	X	X		X	X	X		
X	X	X	X	X	X	X	X		X	X	X		
X	X	X	X	X	X	X	X		X	X	X		
X	X	X	X	X	X	X	X		X	X	X		

Bottle type

Lot #

Sampled by: [print] <u>Trenton Keller</u>	Sampled by: [signature] <u>Trenton Keller</u>	ON ICE	NOT ON ICE	Temp (C°): <u>3.6°C</u>
Special Instructions:		Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.		
Relinquished by: [signature] <u>Trenton Keller</u>	Date/Time <u>10-17-25 11:09</u>	Received by: [signature] <u>Denise Brun</u>	Date/Time <u>10/17/25 11:09</u>	
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time	
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time	

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

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www.chemtechford.com

* Expedited turnaround subject to additional charge

QC levels definition:

- QC1: none (default if blank)
- QC2: Batch QC, random sample
- QC3: 25% surcharge. Narrative plus Batch QC, your sample selected
- QC4: 40% surcharge. Add raw data

[illegible]

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

CHAIN OF CUSTODY - SAMPLE SUBMITTAL FORM



CHEMTECH-FORD
LABORATORIES

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Sandy, UT 84070
Phone: 801-262-7299
www.chemtechford.com

COMPANY: Deseret Power
ADDRESS: 12500 E 25500 W
CITY/STATE/ZIP: Vernal, UT 84078
PHONE #: 435-781-5735
CONTACT: Trenton Keller
EMAIL: tkeller@deseretpower.com
PROJECT: Annual GW Glycol Testing
PO Number: 192639
INVOICE EMAIL ADDRESS:

RUSH Due Date*:	QC Level

* Expedited turnaround subject
to additional charge

QC levels definition:
QC1: none (default if blank)
QC2: Batch QC, random sample
QC3: 25% surcharge. Narrative plus Batch QC,
your sample selected
QC4: 40% surcharge. Add raw data

Sample condition		Delivery Method	
☒ Custody Seal	☒ Correct Containers	UPS	USPS
☒ Container Intact	☒ Sufficient Sample Volume	FedEx	Chemtech-Ford Courier
☒ COC/Labels Agree	Headspace Present (VOC)	Walk-in	Customer Courier
☒ Received on Ice	Temperature Blank		
	Received within Holding Time		

25J1607

Lab Use Only	CLIENT SAMPLE INFORMATION			
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX
-1	1. P-46	10-16	14:07	
-2	2. P-50	10-16	14:15	
-3	3. P/B-38	10-16	14:31	
-4	4. P/B-39	10-16	14:58	
	5.			
	6.			
	7.			
	8.			
	9.			
	10.			

TESTS REQUESTED													
Glycol Scan													

Bottle type

Lot #

Sampled by: [print] Trenton Keller
Sampled by: [signature] Trenton Keller

Special Instructions:

ON ICE NOT ON ICE Temp (C°): 3.6

Samples received outside the EPA recommended
temperature range of 0-6 C° may be rejected.

Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
[signature]	10-17-25 11:09	Denise Brun	10/17/25 11:09
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time
Relinquished by: [signature]	Date/Time	Received by: [signature]	Date/Time

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.



Appendix B

**Alternative Source Demonstrations
(ASDs)**



Alternative Source Demonstration: Fall 2024 Monitoring Event

Bonanza Power Plant



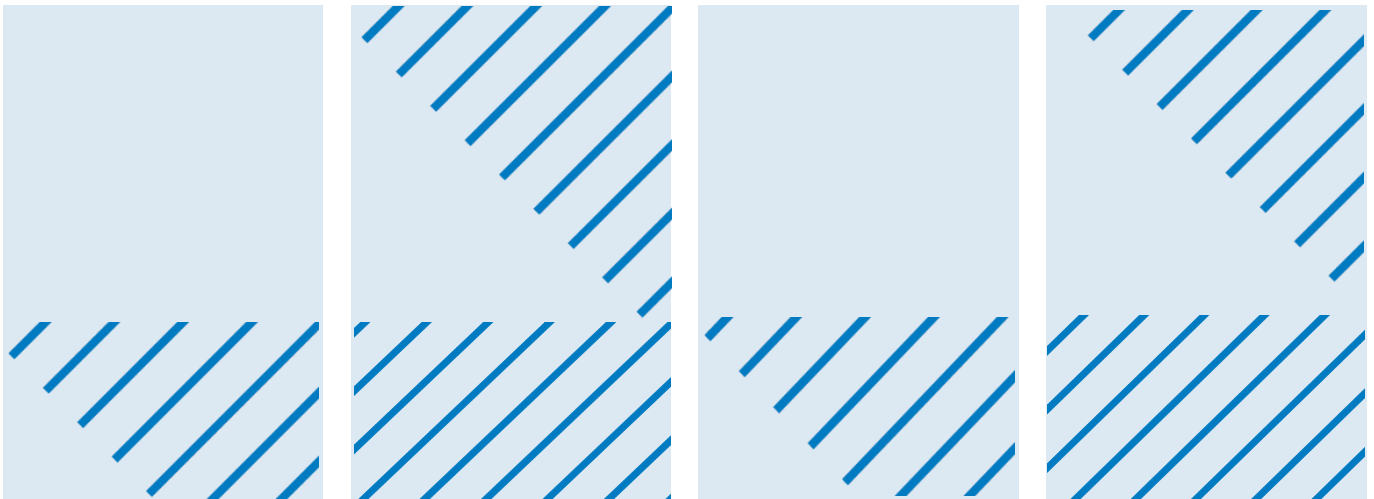
Prepared for
Deseret Power

Prepared by
Barr Engineering Co.

May 2025

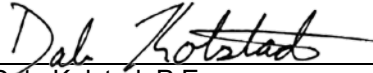
170 South Main Street, Suite 500
Salt Lake City, UT 84101
801.333.8400

barr.com



Certification

I certify that the written demonstration provided above are supported by the data that is accurate and consistent with our review of the groundwater data collected to date and as required under the CCR Rule (§257.94(e)(2)).



Dale Kolstad, P.E.
P.E #: 11117963-2202

May 5, 2025
Date

Contributing authors and reviewers for this work includes the following:

- Kaela Nerhus, MS, Geologist. Performed evaluation of soil and groundwater data, geochemical assessment, and statistical analysis.
- Kathryn Johnson, PhD, Senior Geochemist. Reviewed soil and groundwater data and geochemical assessment.
- Alexander Reimers, MS, Hydrogeologist. Performed groundwater flow assessment and modeling.
- Amir Safi, PhD, Senior Water Resources Engineer. Performed unsaturated flow modeling.
- Jim Aiken, MS, RG, PG. Senior Hydrogeologist. Reviewed groundwater flow assessment and modeling, soil and groundwater data interpretations, and statistical analysis.

Alternative Source Demonstration:

Fall 2024 Monitoring Event

May 2025



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Appendices

Appendix A	Boring Logs
Appendix B	Lab Reports

Abbreviations

ASD	alternative source demonstration
bgs	below ground surface
$\text{Ca}_5(\text{PO}_4)_3\text{F}$	fluorapatite
$\text{Ca}_5(\text{PO}_4)_3(\text{F}, \text{Cl}, \text{OH})$	apatite
CaF_2	fluorite
$\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$	gypsum
CCR	coal combustion residuals
CFR	Code of Federal Regulations
CSM	conceptual site model
EPA	Environmental Protection Agency
FA	Fly Ash
ft	feet
gal/day	gallons per day
KF	carobbiite
mg/L	milligrams per liter
Na_3AlF_6	cryolite
NaCl	halite
NaHCO_3	nahcolite
NEP	North Evaporation Pond
pSSI	potential statistically significant increase
SPLP	synthetic precipitation leaching procedure
SSI	statistically significant increase
s.u.	standard units
TDS	total dissolved solids
USGS	United States Geological Survey

1 Introduction

Deseret Power Electric Cooperative, Bonanza Power Plant near Vernal, UT, has implemented a Detection Monitoring Program in accordance with the U.S. Environmental Protection Agency (EPA) Coal Combustion Residuals (CCR) Rule (40 CFR Parts 257 and 261).

The fall 2024 detection monitoring event occurred on October 15 and 22, 2024. The final laboratory report was received on November 25, 2024, for the Fly Ash (FA) Landfill Area. A potential statistically significant increase (pSSI) was identified for fluoride at well FA-DG4 at the Fly Ash Landfill Area. An SSI was verified for fluoride at well FA-DG4 on February 4, 2025.

1.1 Purpose

Previous Alternative Source Demonstrations (ASDs) completed for FA-DG4 for fluoride (Barr, 2019; Barr, 2020a; Barr, 2020b; Barr, 2021; Barr, 2023b; Barr, 2024a) concluded that the fluoride was due to a source other than the FA Landfill and identified the North Evaporation Pond (NEP) as a potential source along with natural variability. Both regional and site geochemical data supported this conclusion. This report furthers the assessment of groundwater quality done for the previous ASDs, incorporating additional investigatory data and modeling results.

In addition, this report is intended to provide written documentation of a FA Landfill Area-wide ASD for fluoride at all FA downgradient wells including FA-DG4. The report provides a certification of accuracy for this ASD as described in the CCR Rule (§257.94(e)(2)).

1.2 Potential Alternative Sources Review

Based on the rule (above), five categories were evaluated for this ASD. These include:

1. A source other than the CCR unit
2. Sampling (or sampling equipment) methods
3. Laboratory methods
4. Statistical methods
5. Natural variation in groundwater quality

As part of the ASD, site-specific data was evaluated to identify potential causes for elevated fluoride concentrations in the FA-DG4 monitoring well. The following potential sources were selected for investigation:

1. A source other than the CCR unit
2. Natural variation in groundwater quality

Mechanisms for fluoride transport to groundwater include (1) dissolution of naturally occurring fluoride containing minerals in the soil, (2) seepage from the NEP, and (3) seepage from the FA Landfill. Each source and transport mechanism, including changes to the groundwater flow regime since monitoring began were considered as possible explanations for changes in the fluoride concentrations observed at FA-DG4.

2 Hydrogeologic Setting

The Site is located in a low area within the Uinta Basin and is surrounded by bedrock uplands. The geology underlying the FA Landfill and the surrounding area consists primarily of very fine-grained sand and silt with occasional traces of clay to a depth of at least 44 feet below ground surface (bgs) (Appendix A). These sediments are unconsolidated and geologically recent deposits, having been transported by alluvial and colluvial processes from the surrounding hills and cliffs of the Uinta Formation. They form both alluvial fan and desert wash-type deposits that can form into or override playa lacustrine deposits, which in arid climates are often associated with evaporitic minerals (Nilsen, 1988).

The Uinta Formation bedrock is comprised of fluvial to lacustrine deposits associated with Lake Uinta (Sprinkel, 2007 and Naftz, 1996). Rock types within the Formation are described as soft, shale, mudstone, or claystone with minor sandstone and tuffaceous interbeds. The first and second hypersaline phases of the ancient Lake Uinta caused large depositions of Eocene-aged evaporites, particularly in the area of the Bonanza Power Plant (Vanden Berg and Birgenheier, 2017; Birdwell et al., 2019).

Evaporite minerals typically associated with evaporites in this region include soluble halide and carbonate minerals, such as fluorite (CaF_2), carobbiite (KF), that are often associated with gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$), mixed calcium magnesium sulfate minerals, halite (NaCl) and nahcolite (NaHCO_3 , a source of baking soda), all of which are soluble in groundwater. Evaporite deposits can also be associated with fluoride in detrital minerals derived from carbonate, metamorphic and igneous rocks. Detrital fluoride occurs with sodic minerals like cryolite (Na_3AlF_6) and with phosphate minerals such as apatite ($\text{Ca}_5(\text{PO}_4)_3(\text{F}, \text{Cl}, \text{OH})$) and fluorapatite ($\text{Ca}_5(\text{PO}_4)_3\text{F}$), are found in fine grained silt and shales of playa lakes (Hurlbut and Klein, 1977).

The locations of the monitoring-wells and site features in the area around the FA Landfill are shown on Figure 1. In general, groundwater flows from the northwest under the FA Landfill Area to the south-southeast. Sources of potential recharge to the groundwater in the FA Landfill Area are infiltration through native soils, seepage from the bottom of the NEP, and seepage from the base of the FA Landfill. The NEP is a non-CCR pond that receives process water from the plant. The NEP has an earthen liner that limits, but does not eliminate, the seepage flux (rate of infiltration) from the bottom of the NEP into underlying soils. The FA Landfill is composed of dry fly ash that is stacked above the ground surface.

The monitoring network consists of two upgradient wells and four downgradient wells. Upgradient well FA-UG1 is located to the north of the FA Landfill to monitor groundwater flowing into the FA Landfill Area. Upgradient well FA-UG2 is located near the NEP to monitor groundwater quality that may be influenced by the NEP in the FA Landfill Area. The upgradient monitoring wells are not directly downgradient of other CCR units at the facility.

The four downgradient wells are located along the southern perimeter of the FA Landfill Area, extending from the eastern edge of the saturated zone (near the dry line) to the west toward the NEP. The downgradient wells are separated from other CCR units by a groundwater divide created by the pump-back system that maintains gradient control under the main power block in order to prevent subsidence (Figure 1; Loughlin Associates, 2017). This pumpback system influences groundwater flow southeast of the FA Landfill. The pumpback system is not operated continuously, which causes fluctuations in groundwater elevations and slight changes in flow direction in the vicinity of the FA Landfill downgradient wells. Additional information on the pumpback system and groundwater flow are included in the Groundwater Monitoring System Certification (Burns and McDonnell, 2017) and the Annual Review of Groundwater Levels (Loughlin, 2020).

3 Conceptual Site Model

The conceptual site model (CSM) for fluoride near the FA Landfill is illustrated in Figure 2. The CSM of water quality in the FA Landfill downgradient monitoring wells considers the sources of fluoride, mechanisms of release from the sources, the groundwater flow system and mixing that can occur, and the effects of the pumpback system on the groundwater flow paths. Potential sources of fluoride include evaporites naturally occurring within soils, the water in the NEP, and the ash within the FA Landfill.

The CSM source terms are informed by data from the following and discussed in Section 4:

- Water quality analysis of CCR constituents at the monitoring wells
- Complete cation and anion analysis of 2018 samples from the monitoring wells
- Analysis of samples from standing water in the NEP
- Synthetic Precipitation Leaching Procedure (SPLP) analysis of material from the FA Landfill sampled in 2019
- Soil quality analysis of native soils from two soil borings completed in 2024 near FA-UG2 and FA-DG2

The CSM transport terms are informed by data and modeling from the following and discussed in Section 5:

- A Hydrus 1-D model for estimating seepage from the FA Landfill
- A water balance for estimating seepage from the NEP
- A groundwater flow map used to show flow paths toward downgradient wells

4 Sources of Fluoride

Sources of fluoride to the groundwater system that are monitored with the FA Landfill Area downgradient monitoring wells are described herein.

4.1 Naturally Occurring Fluoride in Soils

The soils in the FA Landfill Area, derived from the Uinta Formation, contain evaporates, including fluoride containing minerals. Evaporite deposits of variable salt composition are likely irregularly distributed within soils. The salts can dissolve into groundwater depending on the hydrogeologic and geochemical conditions. Site-specific fluoride variability within soils was further investigated.

Two soil borings were advanced near FA-UG2 (upgradient) and FA-DG2 (downgradient) using rotasonic drilling methods in November 2024 for the purpose of evaluating the naturally occurring fluoride in soil. The boring locations, TB-24-Geo1 (near FA-DG2) and TB-24-Geo2 (near FA-UG2), are shown on Figure 1. The boring logs in Appendix A describe the soils as interbedded silts and very fine to fine-grained silty sand overlying weathered claystone. Samples were collected for chemical analysis.

The presence of fluoride in the soil was assessed by chemical analysis of samples from the borings. The analytical results are summarized in Attached Table 1; the analytical lab reports are in Appendix B. Total fluoride and other total major ion concentrations in soil were measured in each major unit encountered with depth. The analysis used EPA methods 9056A, 6010D, and 9045D after acid digestion using EPA method 3050B. The soils were dominated by calcium and alkalinity (alkalinity measurements were too great to measure exactly or estimate – see Appendix B). pH values generally increased through depth at both sampling locations and ranged from 8.4 to 10.4 s.u. Fluoride and calcium also varied through depth and between locations as shown in Figure 3. The relationship between fluoride and calcium in TB-24-Geo1 suggests that fluoride is present as the mineral fluorite (CaF_2).

Fluoride concentrations ranged from 2.2 to 7.9 mg/kg at TB-24-Geo1 and 2.0 to 3.7 mg/kg at TB-24-Geo2. Fluoride concentrations in the soil above and below the water table were generally greater at downgradient location TB-24-Geo1 than at the upgradient location TB-24-Geo2.

Evaporite minerals were observed in the soil from the borings at both the upgradient and downgradient locations (Appendix A). Effervescence was noted suggesting the presence of carbonate minerals.

4.2 Fluoride in the NEP

The NEP is not a CCR pond. The concentration of fluoride in process water in the NEP increases as pond water evaporates. Seepage of this water out of the bottom of the NEP through the clay liner transports the constituents of the process water, including high fluoride concentrations.

Twelve surface water samples were collected from the NEP between 2018-2024. The water in the NEP is alkaline (mean pH of 8.5) with the total dissolved solids (TDS) dominated by sodium, magnesium, and sulfate with a significant contribution from chloride. Fluoride concentrations in the NEP vary as a function of the water level in the NEP. The measured concentrations ranged from 19.8 to 60.6 mg/L with an average of 38.7 mg/L, which is substantially higher than fluoride concentrations measured at the downgradient wells, FA-DG4 and FA-DG3 as shown in Figure 4 and pictured on the CSM in Figure 2.

4.3 Fluoride in the Fly Ash Landfill

Fluoride may be present in fly ash, but fluoride content varies based on the composition of the coal burned, ash particle size, or the efficiency of electrostatic precipitators (Prasad and Mondal, 2006). To assess the site-specific fluoride levels in the FA Landfill, measuring the fluoride that may leach from the fly ash is appropriate.

Borings were advanced within the Fly Ash Landfill in December 2019 at the locations shown on Figure 1. Moisture content is low through the FA Landfill, ranging from 15.3 to 25.9 percent (GeoStrata, 2016). Composite samples from the CCR material were collected from several intervals between the surface and the bottom of the borings (90 feet below the surface) at locations S1 and S2. A grab sample from the bottom of boring S1 (89.5 to 90 feet below the surface) was also collected to represent ash from a previously closed non-CCR unit within the landfill footprint. These three samples were leached using the SPLP, in which the samples were mixed with a slightly acidic solution designed to simulate rainwater that might percolate through the ash. The leachate from this procedure was analyzed for the same parameters used to evaluate groundwater. The results of the analysis were included in Table 2 and Attachment A of the Fall 2019 ASD (Barr, 2020a).

Fluoride concentrations in the SPLP extracts of CCR material were measured at less than 0.4 mg/L. The mean pH of the CCR extracts was 8.6 s.u. with TDS comprised almost completely of calcium and sulfate.

To further assess potential CCR leachate influence on groundwater, an assessment of the potential to generate seepage from the FA Landfill was performed, as was a model simulation used to estimate seepage from the NEP and mixing of potential fluoride sources in groundwater.

5 Transport Mechanisms

The mechanisms involved with the transport of fluoride from the FA Landfill and the NEP as well as the groundwater flow paths as illustrated in the conceptual site model are described herein.

5.1 FA Landfill Seepage

To assess the potential for vertical fluid flux to be generated from the base of the FA Landfill to the underlying groundwater table over the past decade, a transient infiltration analysis was conducted using the HYDRUS-1D model. This analysis evaluated whether very conservative infiltration and flow conditions at the top of and within the landfill could generate seepage through its base. If no significant seepage is observed at the base of the landfill under these conditions, it suggests that actual seepage over the assessment period is unlikely under field conditions.

The assessment period spanned from January 2016 to April 2025, with model simulations conducted over this timeframe based on climate and soil data availability. To simulate very conservative infiltration conditions, the model excluded evaporation and assumed that all precipitation and snowmelt infiltrated into the ash. This approach intentionally overestimates infiltration to assess whether any seepage might reach the groundwater table under extreme assumptions. Further, the upper range of the ash hydraulic conductivities were used to accelerate the rate of fluid movement through the ash landfill profile. The following sections detail the model setup and analysis of the results, where "flux" refers to the potential for seepage under these extreme conditions.

5.1.1 Model discretization

The vertical extent of the model spans from the surface of the FA Landfill (5157ft) to the groundwater table (at ~5040 ft), covering the unsaturated zone. The domain was divided into eight numerical layers, informed by geotechnical logs S1 and FA-UG2 (Attached Table 2):

- Layers 1–5 represent the FA Landfill, approximately 87.5 feet thick, with stratigraphy characterized by color, gypsum content, and cementation
- Layers 6–8 represent approximately 25 feet of native soils interpreted to continue beneath the landfill, based on the log from FA-UG2. These include silty sand, poorly graded sand, and silty sand again. Layer 8 terminates at the groundwater table.

5.1.2 Hydraulic Characteristics

Hydraulic properties for each layer were assigned based on Carsel and Parrish (1988), a widely recognized source for estimating van Genuchten-Mualem parameters for various soil textures in unsaturated flow models. These parameters include residual and saturated water contents, van Genuchten α and n , and pore connectivity (l) and saturated hydraulic conductivity.

The saturated hydraulic conductivity was assigned considering values from other literature sources. Fly ash is known to have low permeability ($1.0\text{E-}11$ to $1.0\text{E-}05$ m/s), which can be reduced when mixed with additives such as lime and cement (Chakradhar and Katoch, 2016; Zabielska-Adamska, 2020). This was considered when assigning hydraulic conductivity to layers 1 to 5. For native soils (layers 6–8), the saturated hydraulic conductivity was based on ranges from Cabalar and Akbulut (2016), spanning from $1.0\text{E-}08$ to $5.0\text{E-}04$ m/s.

For this study, only the upper limit of saturated hydraulic conductivity was considered in the modeling to evaluate the seepage rate under extreme permeability conditions.

5.1.3 Soil Moisture

Initial moisture content in the FA Landfill was assigned using field data collected by Geostrata (2016). Data from boring B1 showed moisture increasing with depth, from 15.3 percent at the surface to 25.9 percent at the base of the landfill. These values are below the estimated saturated water content of between 35 percent and 40 percent for the ash and were assigned to layers 1–5. In the absence of site-specific data for the native soil layers (6–8), an average moisture content of 20 percent was assumed, representing a moderately moist condition.

5.1.4 Climate Data

Due to limited on-site monitoring, historical daily climate data were obtained from external sources. PRISM Climate Group provided high-resolution daily precipitation data (4 km grid). NOAA's Jensen station provided daily snow depth records for the modeling period.

To simulate a conservative (worst-case) infiltration scenario:

- Snow was treated as additional precipitation, with a 1-week lag to simulate delayed snowmelt infiltration.
- Evaporation was excluded from the model, maximizing net infiltration.

5.1.5 Boundary Conditions

Boundary conditions were assigned to the top and bottom of the model extent. The top boundary of the model was defined as a time-variable flux, responding to precipitation and snowmelt. The bottom boundary was defined as a constant head condition at 5040 feet, simulating the groundwater table.

5.1.6 Results and Discussion

Figure 5 illustrates the simulated flux rates at the base of each model layer with the upper limit of saturated hydraulic conductivity and extreme infiltration conditions. Key observations include:

- Layer 1 (surface of FA Landfill) shows strong fluctuations in flux in response to climate variation. These fluctuations diminish with depth and are not evident within the modeled timeframe at Layer 8, which is near the groundwater table.
- Even under very conservative assumptions (including high hydraulic conductivity values, exclusion of evaporation, and full snowmelt contribution) simulated flux near the groundwater table remained negligible (<1 percent of precipitation and snowmelt).

This analysis suggests that seepage from the FA Landfill to the groundwater table between 2016 and 2025 is unlikely, even under exaggerated wetting conditions. While the model was not designed to estimate actual flux rates, it was used to evaluate the potential for seepage under highly conservative assumptions. The absence of notable modeled seepage at the base of the landfill supports the conclusion that seepage during the assessment period is unlikely, which aligns with findings from previous studies (e.g., ASD investigation on FA-DG4), reinforcing the conclusion that fluoride detected in groundwater in

the downgradient wells is unlikely to be attributed to leaching of fly ash and seepage from the bottom of the FA Landfill.

5.2 NEP Seepage

Barr estimated the NEP seepage rate to the groundwater system using a water balance approach. Water balance components and value estimates, provided by Deseret, including recent plant process water flow rates and evaporation rates based on NEP design, (Table 1) show water output from the NEP as evaporation and water input into the NEP as pumpback wells, precipitation, and plant process water. The net difference between input and output is assumed to be seepage to groundwater. Assuming that the bottom of the NEP is flat, the net difference volume rate was divided by the NEP area to estimate a groundwater seepage rate. The estimated seepage rate is approximately 6.35E-07 cm/s. This is a reasonable value for an earthen bentonite-soil liner permeated with this type of water.

Table 1 NEP Water Balance Estimates and Seepage Rate

NEP Parameter	Value
Area	5,138,061 ft ²
Evaporation ¹	274,000 gal/day
Pumpback Wells ¹	58,000 gal/day
Precipitation ²	70,148 gal/day
Plant Process Water ¹	216,000 gal/day
Net Difference	70,148 gal/day
Net Difference	9,377 ft ³ /day
Estimated NEP Seepage Rate	0.0018 ft/day
Estimated NEP Seepage Rate	6.35E-07 cm/s

[1] Based on data provided by Deseret

[2] Assuming 8 inches per year of precipitation (PRISM Dataset)

Results from this water balance effort suggest that the NEP is contributing water to the groundwater system through seepage. This result is also evident in the observed groundwater contours surrounding the NEP. General groundwater flow direction in the center of the valley is from north to south with local flow directions being influenced by sources such as seepage from ponds and by sinks such as pumpback wells. Figure 1 shows observed groundwater flowing from under the NEP toward the FA Landfill downgradient monitoring wells (i.e. FA-DG5).

5.3 Groundwater Flow

Groundwater flow was interpreted using groundwater contours for October 2024 (Figure 1). Figure 1 shows groundwater flow is generally north to south-southeast in the FA Landfill area. The flow path is bounded east and west by dry areas consisting of low permeability bedrock as shown in Figure 1. Groundwater is interpreted to infiltrate through soils in a wash area upgradient of the FA Landfill and flow to the south under the FA Landfill through the bedrock valley. Negligible infiltration through the FA Landfill to groundwater occurs (as demonstrated in Section 5.1).

As shown on hydrographs, groundwater elevations have been variable in the monitoring wells (Figure 6). Generally, groundwater elevations have been declining across the site in recent years. Several

downgradient monitoring wells have fluoride concentrations either increasing (FA-DG4) or decreasing (FA-DG2 and FA-DG3), which may correspond to the declining groundwater elevations or changes in groundwater flow from operation of the pumpback system.

Based on the above information, it can be concluded that the NEP and pumpback system alter the groundwater flow paths. Conceptually, the addition of water from the NEP creates a mounding of groundwater to the east while the pumpback system creates a drawdown zone to south of the landfill. Because groundwater flows from areas of higher head to lower head pressure, a portion of the groundwater under the landfill and near the NEP is pulled eastward and groundwater interacting with native geology near FA-DG2 is pulled to the southwest.

Because the pumpback system is comprised of multiple well points it is common for variations in flow direction to occur due to one or more pumps switching off or undergoing repairs. These intermittent pump cycles necessarily result in changes in groundwater flow direction. These changes in flow direction can then move water containing fluoride leached from either the native geology or coming from the NEP to move across the downgradient edge of the landfill toward FA-DG4 from both the east and west over time.

In summary, groundwater quality at the downgradient monitoring wells is expected to be influenced by mixing groundwater from upgradient of the FA Landfill, NEP seepage impacted groundwater, and groundwater interacting with native geology to the east of the landfill area (near FA-DG2) based on the operation of the pumpback system.

6 Groundwater Analysis

The following assesses the impact of natural variability as well as NEP seepage and FA Landfill seepage on the groundwater conditions monitored with the downgradient monitoring well system.

6.1 Natural Variability

The fluoride concentrations in FA Landfill monitoring wells vary by approximately an order of magnitude (Figure 4). The concentration is lowest in the upgradient fly ash wells (averages of 1.8 and 0.6 mg/L in FA-UG1 and FA-UG2, respectively measured between 2016 and 2024) and are the highest in FA-DG2 (average of 55 mg/L measured between 2016 and 2024). Average concentrations in FA-DG3 (10.84 mg/L) exceed the average fluoride concentrations measured in FA-DG4 (2.94 mg/L) (Figure 4). The higher fluoride concentrations at FA-DG2 and FA-DG3 compared to FA-DG4 show the variability in fluoride concentrations in groundwater in the area.

As presented in Section 4.1, the analysis of soil from the 2024 boring TB-24-Geo1 (near FA-DG2) demonstrated (1) that fluoride concentrations in soil near FA-DG4 are greater than near FA-UG2 and (2) the natural variability in downgradient soil (range of 2.2 to 7.9 mg/kg over 44 feet). Fluoride concentrations in groundwater would be affected by the concentration of fluoride in the soil that interacts with the groundwater and other geochemical conditions such as calcium concentration. Groundwater elevations have fluctuated and declined at most downgradient wells (Figure 6). The soil fluoride concentrations in contact with the groundwater will change as the groundwater elevation changes.

Natural fluoride variability has been documented within the region, providing another line of evidence for variable fluoride concentrations in groundwater at the Site. A search for fluoride concentrations in groundwater within 50 miles of the site yielded 965 records from the Water Quality Portal (NWQMC et al., 2019). Concentrations ranged from below detection to 450 mg/L, with a lowest detected value of 0.03 mg/L and a 95th percentile of approximately 18 mg/L. Because the regional concentrations are elevated well above the concentrations observed at FA-DG4, it adds to the weight of evidence that supports the hypothesis that natural variability is a likely contributor to the SSI at this well. In addition, the natural variation hypothesis is also supported by a number of studies that have noted the spatial variability of groundwater compositions in this area including the mineralogical controls on groundwater composition discussed in Section 4.1 (Wallace, 2012; Naftz, 1996; Holmes and Kimball, 1987; Lindskov and Kimball, 1984).

- Hypothesis: Natural variation in fluoride concentrations and evaporites within native geology at the site and in the region contributes to the elevated fluoride concentrations observed in FA-DG4.
- Analysis: Fluoride concentrations were measured in soils near FA-UG2 and FA-DG2 to evaluate site-specific fluoride heterogeneity within the native soils. Additionally, the groundwater fluoride concentrations in all wells within the groundwater monitoring network were compared to publicly available fluoride data and published regional geology and groundwater chemistry studies.
- Result: Fluoride concentrations vary widely in groundwater and soil at site at the downgradient monitoring wells and regionally due to the region's geologic history. In addition, the data suggest that declining groundwater elevation at FA-DG4 relates to higher fluoride concentration in the soil in contact with the groundwater. Therefore, natural variation cannot be ruled out and likely contributes to the SSI observed in FA-DG4.

6.2 Model of Mixing Upgradient Groundwaters

To further test the hypothesis presented by the CSM (Figure 2) that the water quality at downgradient wells is influenced by NEP and upgradient water, along with local soil interaction, a groundwater mixing model using the geochemical modeling software PHREEQC (Parkhurst and Appelo, 2013) was developed to simulate the quality of groundwater downgradient at FA-DG4. The chemistry of groundwater from the different sources is represented as:

- Unimpacted upgradient groundwater (FA-UG1)
- Upgradient groundwater with water quality influenced by seepage from the NEP (FA-UG2)
- Groundwater local to the monitoring wells with water quality affected by dissolution of evaporites containing fluoride (FA-DG2)

The model used groundwater concentrations of major cations and anions measured in April 2018 samples from the monitoring wells because April 2018 is the most recent sampling event with major ion data. However, average boron and fluoride concentrations from 2020 to 2024 were used to better represent current conditions.

The CSM and the mixing model hypothesis is supported by the Piper plot of the major chemistry of the SPLP leachates of samples from the FA Landfill, NEP surface water, and groundwater quality from the monitoring wells as shown in Figure 7. The anions in NEP water and at the monitoring wells are comprised of sulfate, bicarbonate, and chloride. This composition contrasts with the FA Landfill SPLP extracts in which the anions are all sulfate with essentially no bicarbonate or chloride. Despite the differences in TDS, the proportions of cations and anions at FA-UG1 and FA-DG2 are similar. The ion proportions in FA-DG3 and FA-DG4 plot between FA-UG1 and NEP water with FA-DG4 closer to NEP water than FA-DG3.

The PHREEQC model tested several mixing ratios of FA-UG1, FA-UG2, and FA-DG2 waters. A mixing ratio of 65 percent FA-UG1, 21 percent FA-UG2, and 14 percent FA-DG2 water produced results comparable to the fluoride and boron concentrations at FA-DG4 in October 2024. The model results are summarized in Attached Table 3. The model specified equilibrium conditions of calcite and CO₂ in the mixed groundwater to fit the calcite and CO₂ conditions of the water quality measured at FA-DG4.

The model results for major ions are compared with the measured data on the Piper plot (Figure 7). The plot shows that the model accurately predicts the proportions of anions at FA-DG4 but slightly overestimates magnesium and underestimates sodium. In addition, the equilibrium conditions for gypsum and magnesite predicted by the model generally match the conditions calculated in the water quality measured in FA-DG4, as shown in Attached Table 3. Overall, the alignment between the predicted and measured concentrations at FA-DG4 validates the reasonableness of the model.

Concentrations of boron, a relatively conservative tracer, and fluoride predicted by the mixing model water are comparable to the measured concentrations at FA-DG4. Total dissolved solids and major ion concentrations are not as closely predicted by the mixing model because the model does not account for salts in the soils dissolving into the mixed groundwater as it flows towards FA-DG4.

The correspondence between the water quality measured at FA-DG4 and the model support the hypothesis that downgradient groundwater quality can be explained by the contribution of upgradient water sources and the interaction with native materials.

- Hypothesis: Groundwater impacted by flux from the NEP represented by FA-UG2, upgradient groundwater represented by FA-UG1, and groundwater from FA-DG2 are mixing at the location of FA-DG4 and contributing to the SSI for fluoride in the FA-DG4 monitoring well.
- Analysis: A mixing model of the concentrations from monitoring wells FA-UG1, FA-UG2, and FA-DG2 were used to evaluate whether the water quality at FA-DG4 can be represented as a mixture of groundwater of different chemical composition that flow along different flow paths toward FA-DG4.
- Result: The model demonstrated that the concentrations of fluoride and boron in FA-DG4 can be explained by mixing groundwaters from upgradient sources FA-UG1 and FA-UG2 with downgradient water represented by FA-DG2. Groundwater at FA-UG2 impacted by the NEP is the primary source of boron and the groundwater at FA-DG2 is the primary source of fluoride. As changes occur through time of the (1) proportions of these upgradient groundwater types that mix at FA-DG4 and (2) water quality of each of the groundwater types, the concentrations measured at FA-DG4 will change. Therefore, the natural variability of the input terms represented in the mixing model likely contribute to the SSI observed in FA-DG4.

6.3 Fluoride from the FA Landfill

The composition of CCR leachate was compared to downgradient water quality to evaluate whether the CCR leachate is impacting the groundwater.

The Piper plot (Figure 7) shows that the major ion compositions of the SPLP leachate of CCR material is different from the ion composition of groundwater collected from downgradient monitoring wells. Calcium and sulfate are the dominant ions in the CCR extracts, whereas sodium with sulfate, bicarbonate, and chloride are the dominant ions in groundwater from FA-DG4.

In addition to differences in major ion compositions between CCR leachates and downgradient groundwater, the low concentrations of fluoride (<0.04 mg/L) and boron (0.5 – 2 mg/L) in the SPLP leachates of CCR material (Attached Table 4) combined with negligible fluid flux through the FA Landfill to the water table (Section 5.1) suggests that the CCR unit is an implausible source of fluoride and boron measured in the groundwater at FA-DG4. For illustrative purposes, assuming the extreme situation in which the groundwater at FA-DG4 was 100 percent seepage from the FA Landfill, the fluoride concentration in the flux from the CCR material would have to be 2 orders of magnitude higher than measured in the SPLP extracts to account for the fluoride concentration measured at FA-DG4. The data refute the hypothesis that the release is due to the CCR unit.

- Hypothesis: The water quality of groundwater at FA-DG4 is impacted by flux from the CCR material in FA Landfill.
- Analysis: Leaching tests were performed on samples collected from borings advanced into the CCR unit, and the resulting samples were analyzed for major ions and CCR parameters. A transient infiltration analysis through the FA Landfill was simulated.
- Result: The analysis showed that:
 1. Concentrations of leachable fluoride from CCR material in the FA Landfill is two orders of magnitude less than fluoride concentration measured at FA-DG4,

2. Concentrations of leachable boron from CCR material in the FA Landfill is an order of magnitude less than fluoride concentration measured at FA-DG4,
3. The major ion composition of CCR material is different from the major ion composition in the downgradient groundwater, and
4. The modeled fluid flux through the FA Landfill is negligible and does not reach the groundwater table under very conservative assumptions.
5. Taken together, the findings from the analysis demonstrate that seepage from the FA Landfill is implausible, and therefore, the landfill is not a likely source of a release.

7 Summary and Conclusions

The following are lines of evidence indicating the SSI for fluoride from the fall 2024 monitoring event at FA-DG4 is due to a “source other than” the Fly Ash Landfill and/or due to natural variation:

1. Fluoride is present in native geology based on both regional data and confirmed by site-specific sampling from borings placed near monitoring wells at the FA Landfill.
2. Fluoride concentrations in the NEP ranged from 19.8 mg/L to 59.3 mg/L from April 2020 through October 2024. The concentration of fluoride in the pond and the driving head varies as a function of the volume of process water added to the pond and the rate of evaporation, so seepage to groundwater is not constant over time, causing variations in the mass contributed to the flow system. The NEP has an estimated seepage rate of $63.5\text{E-}07 - 3.88\text{E-}06$ cm/s.
3. Hydrus 1-D seepage modeling based site-specific input data indicates that the FA Landfill is unlikely to contribute sufficient volume of leachate to result in the concentrations observed at FA-DG4. Other sources, such as seepage from the NEP and naturally occurring fluoride present in the native geology, are much more likely than not to be the primary sources of fluoride in FA-DG4 and other downgradient wells.
4. The fluoride concentrations in the SPLP leachate representing groundwater chemistry of the fly ash (<0.4 mg/L) are not sufficient to account for the fluoride concentrations at FA-DG4. This finding, combined with the unsaturated modeling described above, further supports the observation that seepage from the landfill is not a plausible source of the increasing fluoride concentrations observed at FA-DG4.
5. Fluoride concentrations measured in soil vary from upgradient to downgradient locations and with depth due to the heterogenous nature of the geologic depositional environment. The highest fluoride concentration was measured in soils collected from TB-24-Geo1 near FA-DG2 at a depth near the water table.
6. In addition to the NEP, infiltration through native geology and interaction of fluoride in the geology from water table fluctuations at FA-DG2 and FA-DG3 are also a source of fluoride to groundwater at FA-DG4. This is due to the operations of the pumpback system, which can cause flow from the east from FA-DG2 and FA-DG3 toward FA-DG4 (Section 5.3). The fluoride concentrations from April 2020 through October 2024 at FA-DG2 (37.1 mg/L – 52.3 mg/L) and at FA-DG3 (5.61 mg/L – 10.1 mg/L) are greater than measured at FA-DG4 (<1 mg/L – 7.7 mg/L).
7. The results from the geochemical mixing model suggest that the groundwater at FA-DG4 is primarily composed of upgradient water represented by FA-UG1 with lesser proportions of NEP influenced water (FA-UG2) and local groundwater represented by FA-DG2 water interacting with native geology.

The foregoing ASD establishes lines of evidence that meet the alternative source requirements of the CCR Rule §257.94(e)(2). Specifically, the SSI for fluoride from the fall 2024 monitoring event at FA-DG4 is due to a “source other than” the Fly Ash Landfill and/or to natural variation based on both site-specific and regional data.

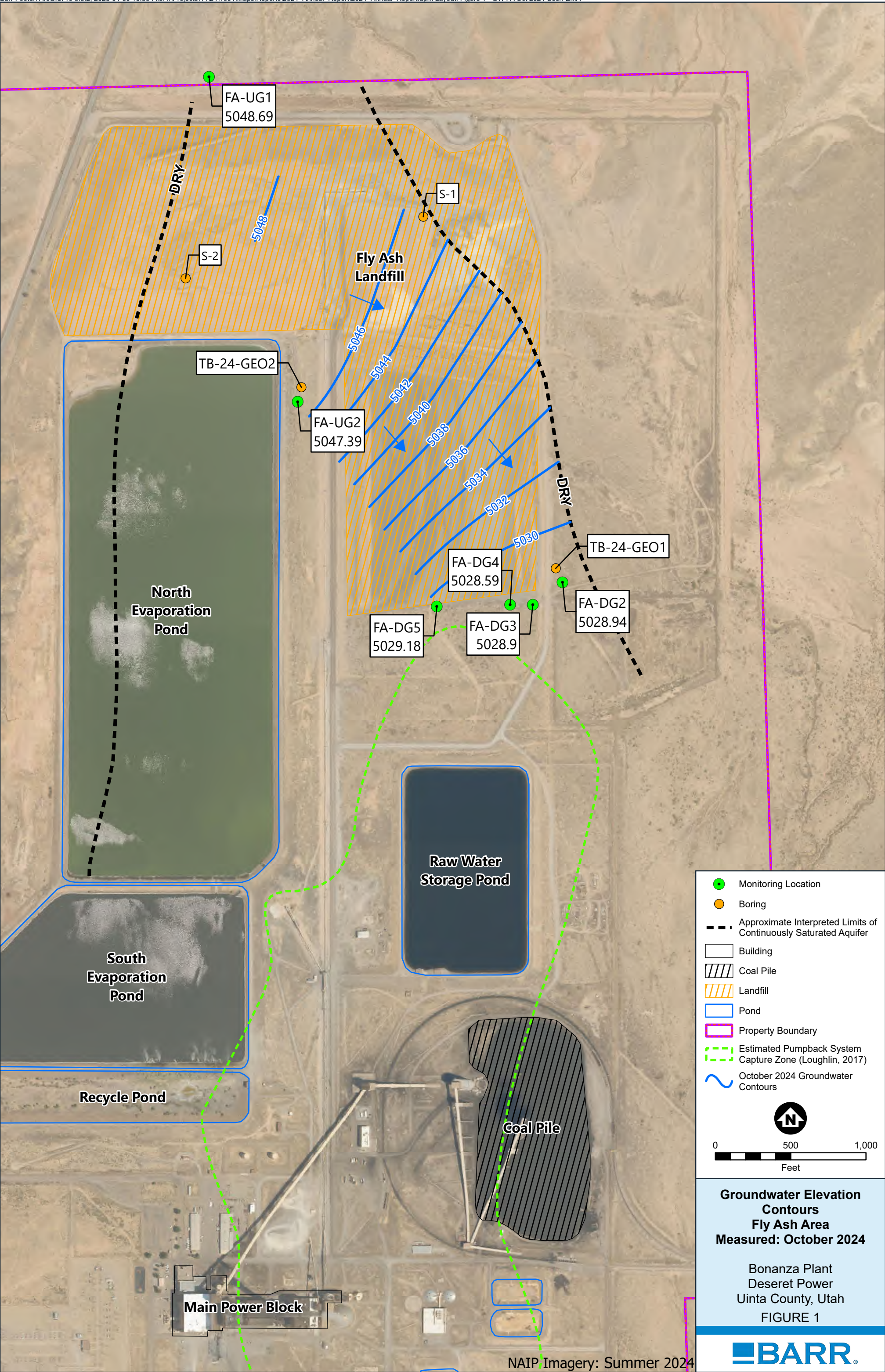
8 References

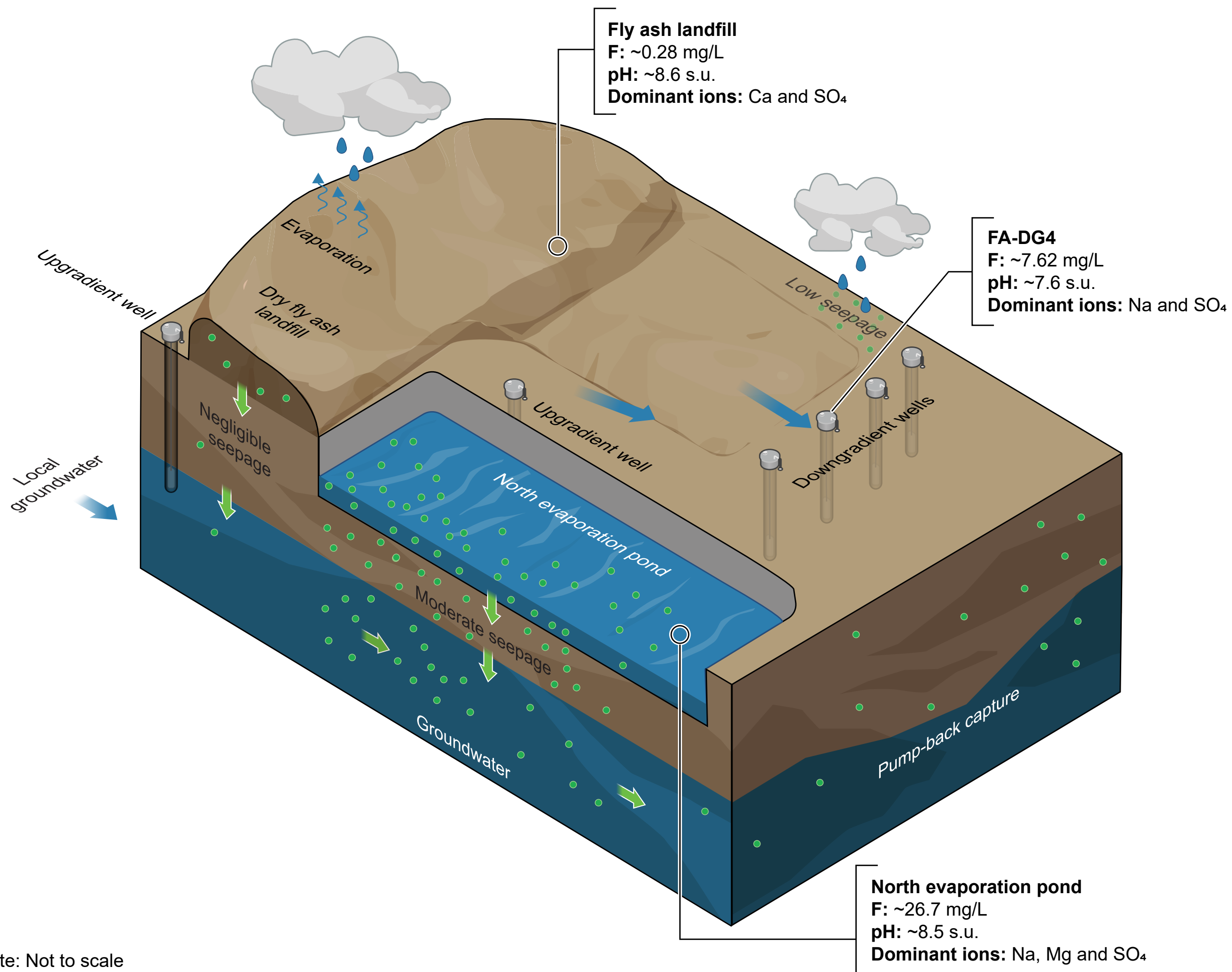
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Figures

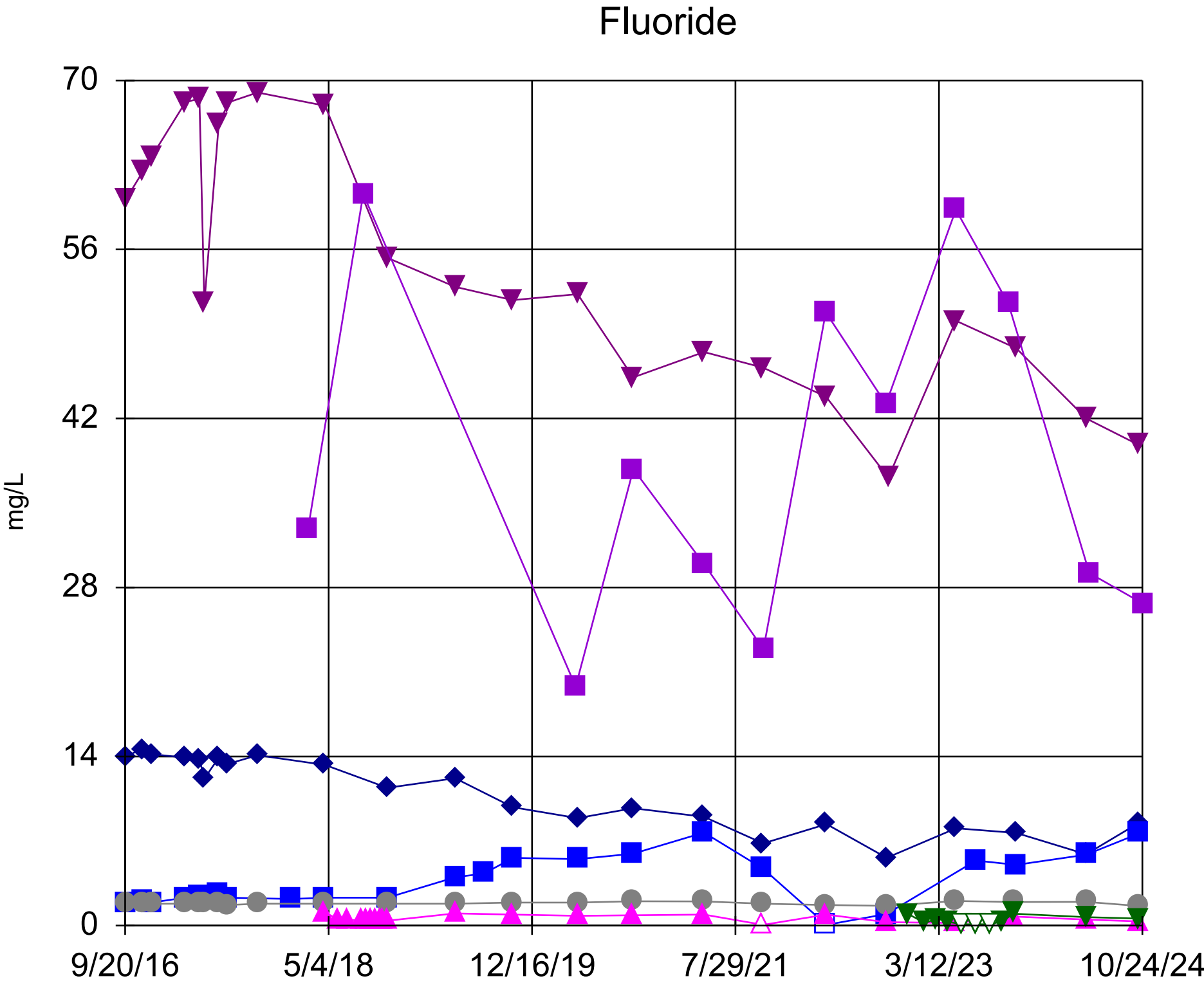




Note: Not to scale

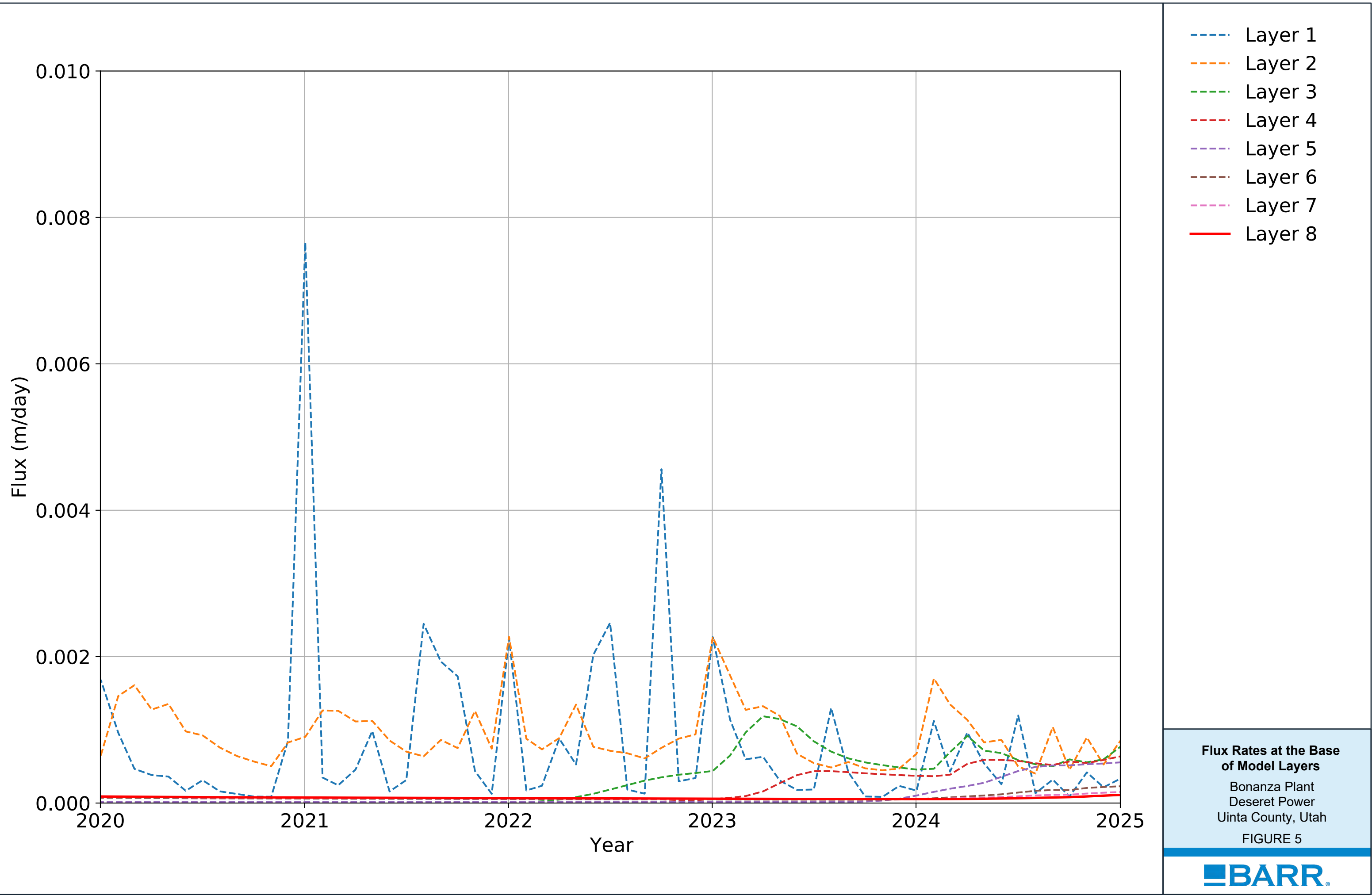
- Fluoride
- ↓ Fluoride seepage
- ↓ Groundwater flow

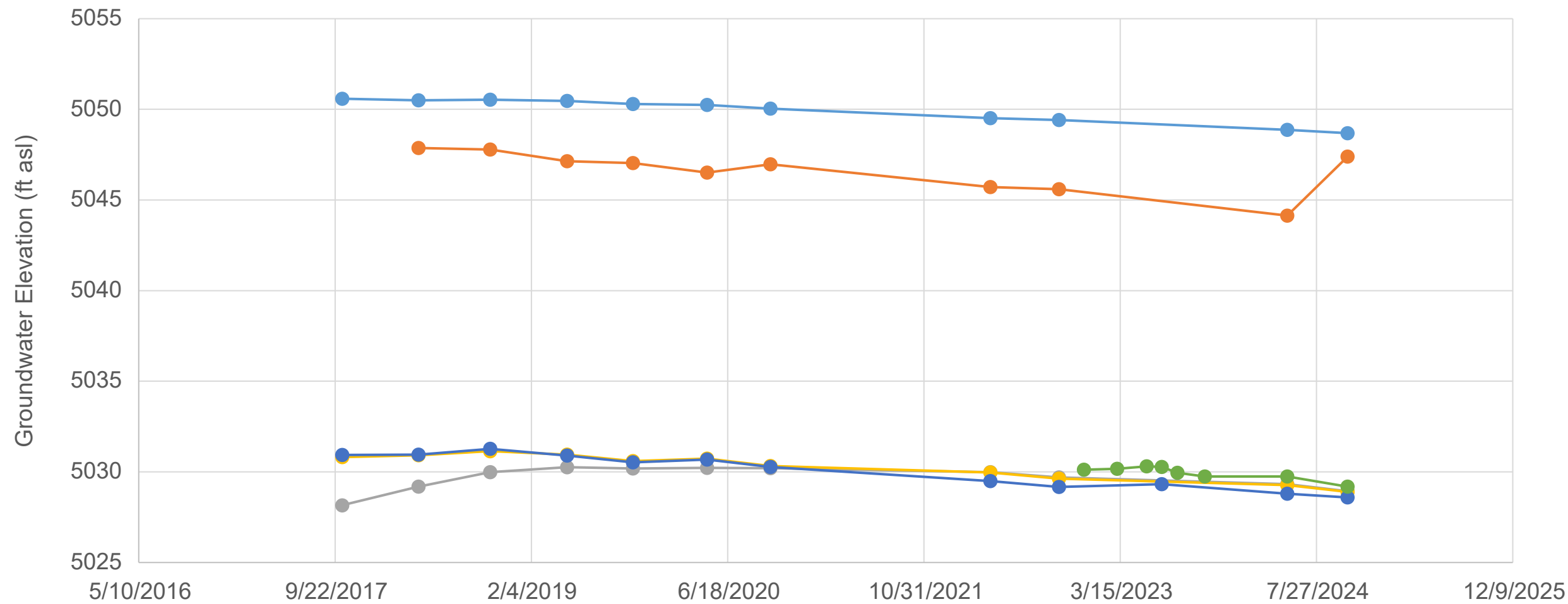
**Conceptual Site Model
Fly Ash Area**
Bonanza Plant
Deseret Power
Uinta County, Utah
FIGURE 2



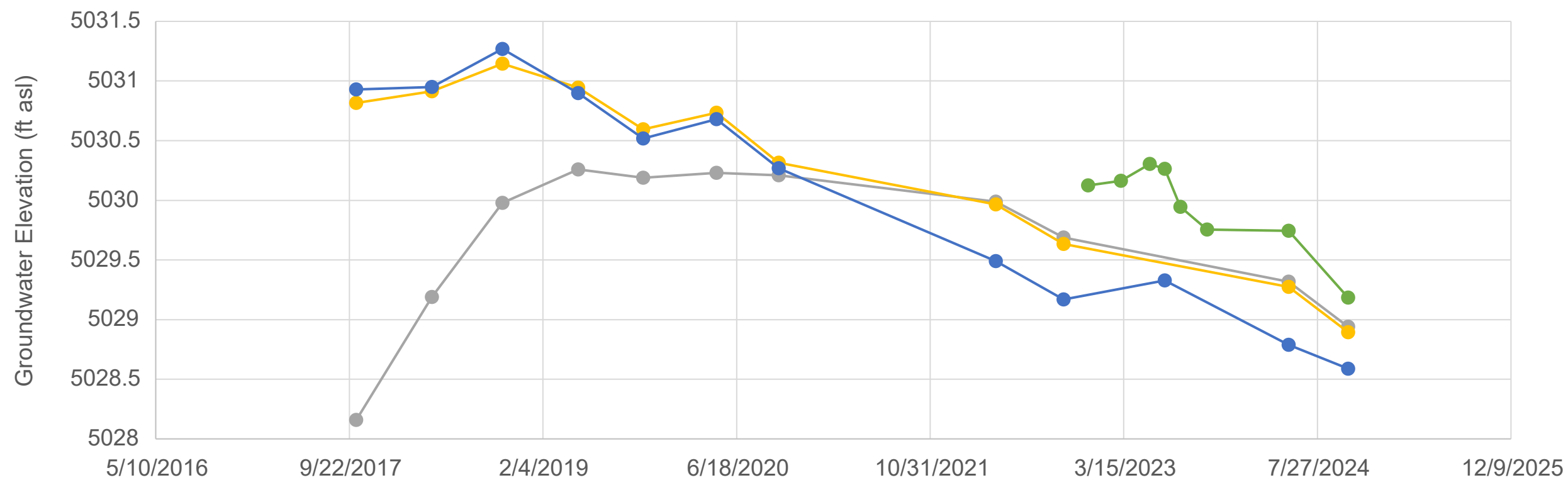
- ▼ FA-DG2
- ◆ FA-DG3
- FA-DG4
- FA-UG1 (bg)
- ▲ FA-UG2 (bg)
- ▼ FA-DG5
- NEP (bg)

Time Series Analysis Run 4/22/2025 11:07 PM View: FA App IV
Bonanza Client: Deseret Power Data: DeseretBonanza_SanitasCCR





Downgradient Wells



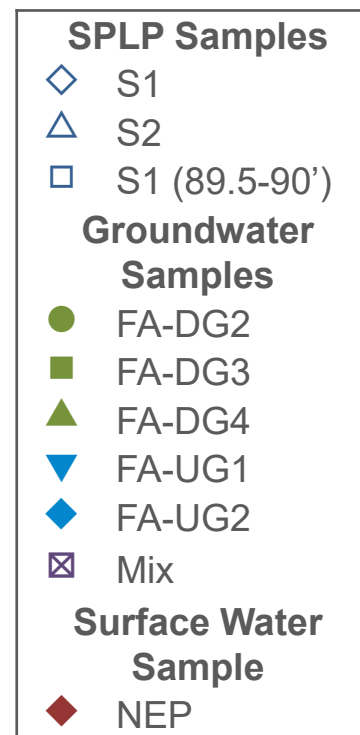
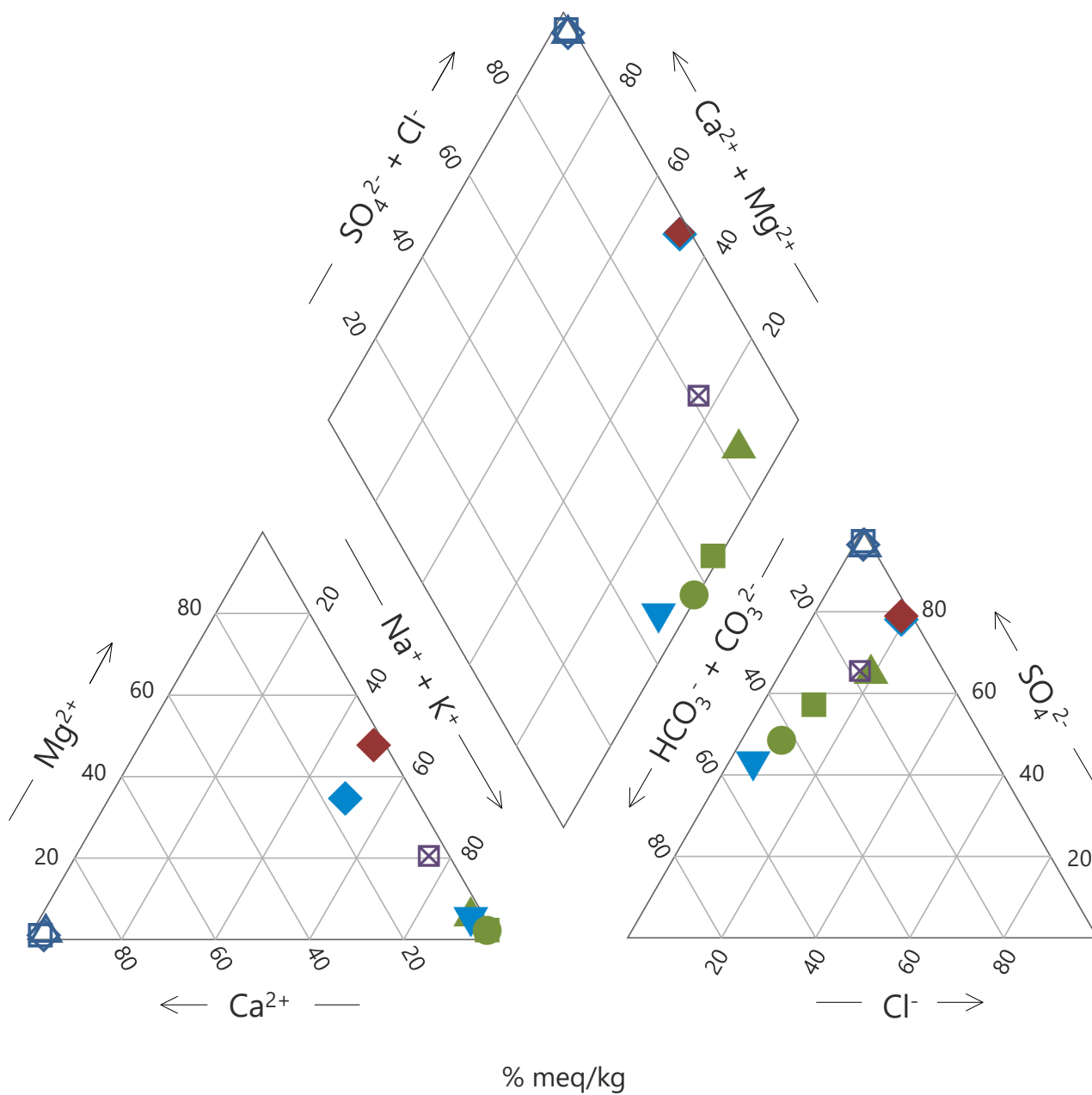
- FA-UG1
- FA-UG2
- FA-DG2
- FA-DG3
- FA-DG4
- FA-DG5

Hydrograph

Bonanza Plant
Deseret Power
Uinta County, Utah

FIGURE 6





Piper Diagram
Deseret Power
Bonanza Plant
FIGURE 7



Attached Tables

Table 1
Soil Analytical Results
Deseret Power Bonanza Plant

Location	TB-24-Geo1	TB-24-Geo1	TB-24-Geo1	TB-24-Geo1	TB-24-Geo1	TB-24-Geo1	TB-24-Geo2	TB-24-Geo2	TB-24-Geo2	TB-24-Geo2
Depth	0 - 3 ft	3 - 5.5 ft	5.5 - 16 ft	18.5 - 27.5 ft	36 - 39 ft	39 - 44 ft	0 - 10 ft	10 - 18 ft	18 - 36.5 ft	36.5 - 40 ft
Date	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024
Parameter [mg/kg unless otherwise noted]										
Fluoride	4.50	2.40	6.50	2.20	7.90	6.70	2.00	2.20	3.70	2.60
Chloride	18.8	<12	24.5	<10.2	72.3	17.4	25.2	<10.9	66.4	<10.5
Sulfate	<66.8	<59.9	62.7	88.1	724	205	191	<54.5	358	<52.4
Boron	<9.6	<8.5	<7.5	<7.4	11.8	12.2	<7.5	<8.0	<7.7	<7.8
Calcium	34800	19900	36000	23800	34200	43800	28900	31900	20100	41900
Magnesium	8420	3380	9000	3180	8600	11400	5220	6910	2690	8550
Potassium	1560	672	1830	615	1540	2020	904	1340	571	1350
Sodium	93.8	79.3	515	488	1850	2270	162	478	168	726
pH (s.u.)	8.4	9.1	9.4	10.3	9.9	10.4	8.6	9.8	9.1	10.0

Table 2
Summary of Hydrus Model Layers and Material Properties
Deseret Power Bonanza Plant

Layer	Hydraulic conductivity	Elevation (ft)	Soil Description
	<i>Upper limit</i>		
1	1.0E-05	5152	Black, fine-grained, loose surface ash, with some weak to moderate cementation.
2	1.0E-07	5122	Black, consistent grain size (fine), mostly dry to moist, with sparse gypsum and scattered cemented chunks or ash balls.
3	1.0E-08	5086	Black, frequent gypsum presence, some blocky textures, and weak to moderate cementation.
4	1.0E-08	5076.5	Black, very fine to fine grained, weak to moderate cementation and blocky structures.
5	1.0E-09	5069.5	Grey/black, moist, claylike cohesive materials.
6	5.0E-06	5051	Light Brown Silty, Fine Sand - Loose to Medium Dense ; Grades with some medium sand; fine to medium grained.
7	5.35E-04	5046.2	Grades with less silt, light brown fine to medium sand with some silt and trace coarse sand - medium dense.
8	5.0E-06	5044	Brown Silty fine to medium sand, moist - medium dense

Table 3
Geochemical Mixing Model Results
Deseret Power Bonanza Plant

		Saturation Indices ¹						Concentration									
Solution	Mixing Ratio	CO2(g)	Calcite	Fluorite	Gypsum	Magnesite	pH	Alkalinity, total	Boron ²	Calcium	Chloride	Fluoride ²	Potassium	Magnesium	Sodium	Sulfate	TDS
	%						s.u.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
FA-UG1	65	-2.18	-0.24	-1.52	-1.97	-1.04	7.8	538	0.69	11.5	39.1	1.86	1.50	7.41	420	388	1408
FA-UG2	21	-1.74	-0.16	-1.71	0.16	-0.52	7.0	369	49.2	575	1604	0.63	8.21	854	2546	7964	13970
FA-DG2	14	-3.08	0.20	-0.32	-2.79	0.42	9.2	2571	7.5	1.2	446	45.7	6.67	6.77	3477	3231	9793
Mix	N/A	-1.73	-0.07	0.03	-0.89	-0.23	7.4	721	11.8	70.7	425	7.74	3.63	185	1294	2377	5096
FA-DG4	N/A	-1.73	-0.07	-0.12	-0.94	-0.49	7.5	935	11.6	54.5	854	7.73	5.04	76.7	2289	3626	7859

Notes:

¹Saturation Indices (SIs) of a mineral expresses its equilibrium condition relative to the aqueous chemistry.
An SI of zero represents theoretical equilibrium.
An SI of greater than zero represents supersaturation and the mineral should precipitate if kinetics are favorable.
An SI of less than zero represents undersaturated conditions and the mineral should dissolve if it is present and the kinetics are favorable.

²Average boron and fluoride concentrations between 2020 and 2024 were used as model inputs to represent recent water quality.
Model results were compared against October 2024 boron and fluoride concentrations at FA-DG4.

Table 4
Synthetic Precipitation Leaching Procedure Results
Deseret Power Bonanza Plant

Location	S1	S1	S2
Depth	89.5 - 90 ft	0 - 90 ft	0 - 90 ft
Date	12/17/2019	12/17/2019	12/17/2019
Parameter [mg/l unless otherwise noted]			
SPLP General Parameters			
Alkalinity, Bicarbonate, as CaCO ₃ (reprep)	26	25	20
Alkalinity, Carbonate as CaCO ₃ (reprep)	< 10.0	12	20
Alkalinity, Hydroxide as CaCO ₃ (reprep)	< 10.0	< 10.0	< 10.0
Alkalinity, Total, as CaCO ₃ (reprep)	30	37	40
Chloride	3.05	8.93	11.4
Fluoride	0.185	0.288	0.38
pH (reprep) [pH units]	8.59	8.65	9.19
Sulfate	1,500	1,500	1,580
SPLP Metals			
Antimony	< 0.0300	< 0.0300	< 0.0300
Arsenic	< 0.0200	< 0.0200	< 0.0200
Beryllium	< 0.0100	< 0.0100	< 0.0100
Boron	0.554	1	2
Cadmium	< 0.00350	< 0.00350	< 0.00350
Calcium	652	622	656
Calcium (reprep)	708	633	677
Chromium	< 0.100	< 0.100	< 0.100
Cobalt	< 0.0200	< 0.0200	< 0.0200
Lead	< 0.0100	< 0.0100	< 0.0100
Lithium	< 0.100	< 0.100	< 0.100
Magnesium	< 1.00	1.15	5.15
Mercury	< 0.00100	< 0.00100	< 0.00100
Molybdenum	0.322	0.0623	0.104
Potassium	< 1.00	1.24	1.45
Selenium	0.0137	< 0.0100	0.0306
Sodium	24.6	27.1	30.9
Thallium	< 0.0100	< 0.0100	< 0.0100



Appendix A Boring Logs

Appendix A

Boring Logs





Barr Engineering Co.
170 South Main Street Suite 500
Salt Lake City, UT 84101
Telephone: 801-333-8400

LOG OF BORING TB-24-GEO1

SHEET 1 OF 1

Project: Deseret Power
Project No.: 44241001
Location: Bonanza, UT
Coordinates: NAD 1983 StatePlane Utah North FIPS 4301 Feet
Surface Elevation: 5061.1 ft
Drilling Method: Sonic
Sampling Method: Sonic
Completion Depth: 44.0 ft

Depth, feet	Sample Type & Recovery	Sample No.	U C S	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation, feet
0					SILT (ML): Brown (7.5YR 5/6); dry; strong HCl reaction; 90% silt, 5% very fine sand; roots abundant. 1.4-2.0'- sand content increases to 60% fine sand, 40% fines.	5060
5		1	ML		SILTY SAND (SM): Yellow Brown (5YR 5/6); dry; subangular; 80% very fine to fine sand, 20% silt; trace roots; subangular grains; subrounded-rounded quartz grains; white evaporite grains. 4.5-4.8'- silt lens.	
		2	SM		SILT (ML): Redish Brown (; dry; strong HCl reaction; massive; 95% silt, 5% very fine sand, trace medium sand. 9.5-10'- silty sand lens.	5055
10		3	ML		14'- harder silt fragments, drier. 15-16'- sand content increases with depth.	5050
15		4	SM		SILTY SAND (SM): Brown (7.5YR 5/4); dry; 65% fine sand, 35% silty fines; trace medium to coarse sand and white evaporite; subrounded.	5045
20			ML SM		SILT (ML): Brown (7.5YR 5/4); dry; 95% fines, 5% very fine sand. SILTY SAND (SM): Brown (7.5YR 5/4); dry; 70% very fine to medium sand, 30% fines, trace subangular feldspar, quartz, fine gravel. SILTY SAND (SM): Yellow Red (5YR 5/6); moist; 60% fine to medium sand, 40% fines, trace subrounded fine gravel.	5040
25		5	SM		22'- Color change to Light Yellow Brown (10YR 6/4); fine sand with trace medium sand.	5035
30			ML		SILT (ML): Light Yellow Brown (10YR 6/4); moist; very soft; low plasticity; slow dilatancy; weak HCl reaction; thinly bedded; some clay. 29.8'- 1" SM lense, dry, Dark Gray (10YR 6/4), 60% very fine to fine sand with trace medium sand, 40% fines with a strong HCl reaction.	5030
35		6	SM		SILTY SAND (SM): Brown (7.5 YR 5/4); moist; subangular; strong HCl reaction; 65% very fine to fine sand, 35% fines; Silt increases with depth.	
			ML		SILT (ML): Brown (7.5YR 5/4); dry; soft; massive; cohesive. 36'- moist.	5025
40		7			CLAYSTONE: Light Yellow Brown (2.5Y 6/4); dry; hard; strong HCl reaction; strong cementation; conchoidal fracture with very moderate weathering. 39-40.5'- light yellowish brown, with red and olive grey mottling. 40.5-42'- Dark Red Brown (2.5 YR 3/4); matrix with yellow, purple, and grey mottling; moderately weathered. 42-44'- reddish brown, yellow, and grey mottling; Red matrix; some weak HCl reaction on fresh rock; mildly weathered.	5020
45					End of boring 44.0 feet	5015
50						

Date Boring Started: 11/5/24 4:30 pm
Date Boring Completed: 11/6/24 10:45 am
Logged By: KJN3
Drilling Contractor: Cascade
Drill Rig: Sonic

Remarks: Driller possible void zone at 35'. Backfilled with native material. EOB at 44' due to bedrock encounter.

Additional data may have been collected in the field which is not included on this log.

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Barr Engineering Co.
170 South Main Street Suite 500
Salt Lake City, UT 84101
Telephone: 801-333-8400

LOG OF BORING TB-24-GEO2

SHEET 1 OF 1

Project: Deseret Power
Project No.: 44241001
Location: Bonanza, UT
Coordinates: NAD 1983 StatePlane Utah North FIPS 4301 Feet
Surface Elevation: 5078.1 ft
Drilling Method: Sonic
Sampling Method: Sonic
Completion Depth: 40.0 ft

Depth, feet	Sample Type & Recovery	Sample No.	U S C S	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation, feet
0					SANDY SILT (ML): Brown (10YR 5/3); dry; strong HCl reaction; 35-80% silty fines, 15% very fine sand grades to 40% very fine sand.	
		1	ML		SILT (ML): Brown (10YR 5/3); dry; strong HCl reaction; 5% very fine sand; fine roots.	
5		7	SM		SILTY SAND (SM): Brown (7.5YR 5/4); dry; strong HCl reaction; 60% very fine sand, 40% silt; angular to subrounded; fine roots to 4', trace medium sand. 4-5.5'- white; fine sand, evaporites; silt decreases to 15% very fine and fine sand with trace medium sand. 5.5-7.5'- 40% silt, 60% fine sand, trace medium sand.	5075
		2	SM		7.5-8'- 20% fines, fine sand with trace medium sand.	5070
10					SANDY SILT (ML): Brown (7.5YR 5/4); moist; strong HCl reaction; 60-90% silty fines, 10-15% very fine to fine sand increasing to 40% from 14-18'; trace medium sand.	
15		3	ML			5065
			SM		SILTY SAND (SM): Brown (7.5YR 5/4); dry to moist; angular; 85% fine sand, 15% fines; trace evaporites.	5060
20					SILTY SAND (SM): Strong Brown (7.5YR 5/6); moist; weak HCl reaction; 55% fine sand, 45% silty fines; trace medium sand.	
25		4	SM		23.6-23.8'- silt content increases to 55%; grain size coarsens with depth to fine and medium sand with trace coarse sand.	5055
30					29.5-30'-sandy silt (ML); cohesive; moist; hard; 1cm grey sand pockets.	5050
35		5			32-35'- dry claystone fragments; very weathered.	5045
		6			CLAYSTONE: Brown (7.5YR 5/4); dry; hard; red yellow mottling; strong HCl reaction; massive; moderately weathered.	5040
40					End of boring 40.0 feet	5035
45						

Date Boring Started: 11/6/24 2:30 pm
Date Boring Completed: 11/6/24 4:15 pm
Logged By: KJN3
Drilling Contractor: Cascade
Drill Rig: Sonic

Remarks: Driller reported hard drilling at 37'. Backfilled with native material.
EOB at 40' due to bedrock encounter.

Additional data may have been collected in the field which is not included on this log.

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Appendix B Lab Reports

Appendix B

Lab Reports





December 12, 2024

Anna Schneider
Barr Engineering Company
4300 MarketPointe Dr
Suite 200
Minneapolis, MN 55435

RE: Project: 44241010.04 Deseret Power
Pace Project No.: 10715613

Dear Anna Schneider:

Enclosed are the analytical results for sample(s) received by the laboratory on November 13, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Beaver
- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Hansen
martha.hansen@pacelabs.com
(612)607-6451
Project Manager

Enclosures

cc: Barr DM, Barr Engineering
Accounts Payable, Barr Engineering



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

DoD Certification via A2LA #: 2926.01

EPA Region 8 Tribal Water Systems+Wyoming DW
Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

GMP+ Certification #: GMP050884

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

ISO/IEC 17025 Certification via A2LA #: 2926.01

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification (A2LA) #: R-036

North Dakota Certification (MN) #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Oklahoma Certification #: 9507

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification via A2LA #: 2926.01

USDA Permit #: P330-19-00208

Pace Analytical Services Beaver

225 Industrial Park Road, Beaver, WV 25813

Virginia VELAP 460148

West Virginia DEP 060

West Virginia DHHR 00412CM

North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839

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SAMPLE SUMMARY

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10715613001	TB-24-Geo1_0-3	Solid	11/05/24 16:25	11/13/24 08:50
10715613002	TB-24-Geo1_3-5.5	Solid	11/05/24 16:30	11/13/24 08:50
10715613003	TB-24-Geo1_5.5-16	Solid	11/06/24 11:45	11/13/24 08:50
10715613004	TB-24-Geo1_18.5-27.5	Solid	11/06/24 11:50	11/13/24 08:50
10715613005	TB-24-Geo1_36-39	Solid	11/06/24 11:55	11/13/24 08:50
10715613006	TB-24-Geo1_39-44	Solid	11/06/24 12:00	11/13/24 08:50
10715613007	TB-24-Geo2_0-10	Solid	11/06/24 16:45	11/13/24 08:50
10715613008	TB-24-Geo2_10-18	Solid	11/06/24 16:50	11/13/24 08:50
10715613009	TB-24-Geo2_18-36.5	Solid	11/06/24 16:55	11/13/24 08:50
10715613010	TB-24-Geo2_36.5-40	Solid	11/06/24 17:00	11/13/24 08:50

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SAMPLE ANALYTE COUNT

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10715613001	TB-24-Geo1_0-3	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613002	TB-24-Geo1_3-5.5	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613003	TB-24-Geo1_5.5-16	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613004	TB-24-Geo1_18.5-27.5	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613005	TB-24-Geo1_36-39	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613006	TB-24-Geo1_39-44	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613007	TB-24-Geo2_0-10	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613008	TB-24-Geo2_10-18	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613009	TB-24-Geo2_18-36.5	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613010	TB-24-Geo2_36.5-40	EPA 9056A	MAT	3	PASI-BV

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SAMPLE ANALYTE COUNT

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M

PASI-BV = Pace Analytical Services - Beaver

PASI-M = Pace Analytical Services - Minneapolis

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PROJECT NARRATIVE

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Date: December 12, 2024

Case Narrative

WET Chemistry

2320B Alkalinity

The laboratory was unable to analyze the samples submitted for method 2320B alkalinity. Alkalinity analysis involves the titration of samples with sulfuric acid (H_2SO_4) to end points of pH 4.5 s.u. for total alkalinity. The laboratory attempted titration at two separate attempts using the maximum titrant volume of 50mL allowed per the method, once at the standard titrant of 0.02N H_2SO_4 and again using 0.1N H_2SO_4 . In both attempts, the samples over-titrated. The laboratory was unable to achieve the necessary endpoint required by the method and analysis could not be performed nor could a true concentration be mathematically determined. The instrument also did not record pH data values due to the inability of the samples to the inability to titrate. The laboratory also needed to replace an electrode on the instrument after attempting analysis.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_0-3 Lab ID: 10715613001 Collected: 11/05/24 16:25 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	18.8	mg/kg	13.4	6.0	1	11/21/24 09:10	11/21/24 14:59	16887-00-6	
Fluoride	4.5	mg/kg	2.7	1.3	1	11/21/24 09:10	11/21/24 14:59	16984-48-8	
Sulfate	<66.8	mg/kg	66.8	13.4	1	11/21/24 09:10	11/21/24 14:59	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<9.6	mg/kg	9.6	1.1	1	11/19/24 11:47	11/21/24 13:39	7440-42-8	
Calcium	34800	mg/kg	31.9	4.0	1	11/19/24 11:47	11/21/24 13:39	7440-70-2	P6
Magnesium	8420	mg/kg	31.9	1.1	1	11/19/24 11:47	11/21/24 13:39	7439-95-4	P6
Potassium	1560	mg/kg	160	8.3	1	11/19/24 11:47	11/21/24 13:39	7440-09-7	M1
Sodium	93.8	mg/kg	63.9	1.9	1	11/19/24 11:47	11/21/24 13:39	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	25.1	%	0.10	0.10	1		11/18/24 10:07		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	8.4	Std. Units	0.10	0.10	1		11/26/24 14:30		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_3-5.5 Lab ID: 10715613002 Collected: 11/05/24 16:30 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	<12.0	mg/kg	12.0	5.4	1	11/21/24 09:10	11/21/24 15:18	16887-00-6	
Fluoride	<2.4	mg/kg	2.4	1.2	1	11/21/24 09:10	11/21/24 15:18	16984-48-8	
Sulfate	<59.9	mg/kg	59.9	12.0	1	11/21/24 09:10	11/21/24 15:18	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<8.5	mg/kg	8.5	0.97	1	11/19/24 11:47	11/21/24 13:51	7440-42-8	
Calcium	19900	mg/kg	28.5	3.6	1	11/19/24 11:47	11/21/24 13:51	7440-70-2	
Magnesium	3380	mg/kg	28.5	0.96	1	11/19/24 11:47	11/21/24 13:51	7439-95-4	
Potassium	672	mg/kg	142	7.4	1	11/19/24 11:47	11/21/24 13:51	7440-09-7	
Sodium	79.3	mg/kg	57.0	1.7	1	11/19/24 11:47	11/21/24 13:51	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	16.5	%	0.10	0.10	1		11/18/24 10:07		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	9.1	Std. Units	0.10	0.10	1		11/26/24 14:31		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_5.5-16 Lab ID: 10715613003 Collected: 11/06/24 11:45 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	24.5	mg/kg	10.4	4.7	1	11/21/24 09:10	11/21/24 15:37	16887-00-6	
Fluoride	6.5	mg/kg	2.1	1.0	1	11/21/24 09:10	11/21/24 15:37	16984-48-8	
Sulfate	62.7	mg/kg	51.9	10.4	1	11/21/24 09:10	11/21/24 15:37	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<7.5	mg/kg	7.5	0.85	1	11/19/24 11:47	11/21/24 13:53	7440-42-8	
Calcium	36000	mg/kg	24.9	3.1	1	11/19/24 11:47	11/21/24 13:53	7440-70-2	
Magnesium	9000	mg/kg	24.9	0.84	1	11/19/24 11:47	11/21/24 13:53	7439-95-4	
Potassium	1830	mg/kg	125	6.4	1	11/19/24 11:47	11/21/24 13:53	7440-09-7	
Sodium	515	mg/kg	49.8	1.4	1	11/19/24 11:47	11/21/24 13:53	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	3.6	%	0.10	0.10	1		11/18/24 10:08		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	9.4	Std. Units	0.10	0.10	1		11/26/24 14:33		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_18.5-27.5 Lab ID: 10715613004 Collected: 11/06/24 11:50 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	<10.2	mg/kg	10.2	4.6	1	11/21/24 09:10	11/21/24 15:56	16887-00-6	
Fluoride	2.2	mg/kg	2.0	1.0	1	11/21/24 09:10	11/21/24 15:56	16984-48-8	
Sulfate	88.1	mg/kg	50.8	10.2	1	11/21/24 09:10	11/21/24 15:56	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<7.4	mg/kg	7.4	0.84	1	11/19/24 11:47	11/21/24 13:54	7440-42-8	
Calcium	23800	mg/kg	24.6	3.1	1	11/19/24 11:47	11/21/24 13:54	7440-70-2	
Magnesium	3180	mg/kg	24.6	0.83	1	11/19/24 11:47	11/21/24 13:54	7439-95-4	
Potassium	615	mg/kg	123	6.4	1	11/19/24 11:47	11/21/24 13:54	7440-09-7	
Sodium	488	mg/kg	49.3	1.4	1	11/19/24 11:47	11/21/24 13:54	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	1.6	%	0.10	0.10	1		11/18/24 10:08		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	10.3	Std. Units	0.10	0.10	1		11/26/24 14:34		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_36-39 Lab ID: 10715613005 Collected: 11/06/24 11:55 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	72.3	mg/kg	11.7	5.3	1	11/21/24 09:10	11/21/24 16:14	16887-00-6	
Fluoride	7.9	mg/kg	2.3	1.2	1	11/21/24 09:10	11/21/24 16:14	16984-48-8	
Sulfate	724	mg/kg	58.6	11.7	1	11/21/24 09:10	11/21/24 16:14	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	11.8	mg/kg	8.7	1.0	1	11/19/24 11:47	11/21/24 13:56	7440-42-8	
Calcium	34200	mg/kg	29.1	3.7	1	11/19/24 11:47	11/21/24 13:56	7440-70-2	
Magnesium	8600	mg/kg	29.1	0.98	1	11/19/24 11:47	11/21/24 13:56	7439-95-4	
Potassium	1540	mg/kg	146	7.5	1	11/19/24 11:47	11/21/24 13:56	7440-09-7	
Sodium	1850	mg/kg	58.2	1.7	1	11/19/24 11:47	11/21/24 13:56	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	14.6	%	0.10	0.10	1		11/18/24 10:08		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	9.9	Std. Units	0.10	0.10	1		11/26/24 14:36		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_39-44 Lab ID: 10715613006 Collected: 11/06/24 12:00 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions Analytical Method: EPA 9056A Preparation Method: EPA 9056A Pace Analytical Services - Beaver									
Chloride	17.4	mg/kg	10.4	4.7	1	11/21/24 09:10	11/21/24 17:13	16887-00-6	
Fluoride	6.7	mg/kg	2.1	1.0	1	11/21/24 09:10	11/21/24 17:13	16984-48-8	
Sulfate	205	mg/kg	51.9	10.4	1	11/21/24 09:10	11/21/24 17:13	14808-79-8	
6010D MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Minneapolis									
Boron	12.2	mg/kg	7.7	0.88	1	11/19/24 11:47	11/21/24 13:58	7440-42-8	
Calcium	43800	mg/kg	25.8	3.3	1	11/19/24 11:47	11/21/24 13:58	7440-70-2	
Magnesium	11400	mg/kg	25.8	0.87	1	11/19/24 11:47	11/21/24 13:58	7439-95-4	
Potassium	2020	mg/kg	129	6.7	1	11/19/24 11:47	11/21/24 13:58	7440-09-7	
Sodium	2270	mg/kg	51.5	1.5	1	11/19/24 11:47	11/21/24 13:58	7440-23-5	
Dry Weight / %M by ASTM D2974 Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis									
Percent Moisture	3.6	%	0.10	0.10	1		11/18/24 10:08		N2
9045D pH Analytical Method: EPA 9045D Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	10.4	Std. Units	0.10	0.10	1		11/26/24 14:37		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo2_0-10 Lab ID: 10715613007 Collected: 11/06/24 16:45 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	25.2	mg/kg	10.2	4.6	1	11/21/24 09:10	11/21/24 17:32	16887-00-6	
Fluoride	<2.0	mg/kg	2.0	1.0	1	11/21/24 09:10	11/21/24 17:32	16984-48-8	
Sulfate	191	mg/kg	51.2	10.2	1	11/21/24 09:10	11/21/24 17:32	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<7.5	mg/kg	7.5	0.85	1	11/19/24 11:47	11/21/24 13:59	7440-42-8	
Calcium	28900	mg/kg	25.0	3.2	1	11/19/24 11:47	11/21/24 13:59	7440-70-2	
Magnesium	5220	mg/kg	25.0	0.84	1	11/19/24 11:47	11/21/24 13:59	7439-95-4	
Potassium	904	mg/kg	125	6.5	1	11/19/24 11:47	11/21/24 13:59	7440-09-7	
Sodium	162	mg/kg	50.0	1.4	1	11/19/24 11:47	11/21/24 13:59	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	2.4	%	0.10	0.10	1		11/18/24 10:08		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	8.6	Std. Units	0.10	0.10	1		11/26/24 14:38		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo2_10-18 Lab ID: 10715613008 Collected: 11/06/24 16:50 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	<10.9	mg/kg	10.9	4.9	1	11/21/24 09:10	11/21/24 17:52	16887-00-6	
Fluoride	<2.2	mg/kg	2.2	1.1	1	11/21/24 09:10	11/21/24 17:52	16984-48-8	
Sulfate	<54.5	mg/kg	54.5	10.9	1	11/21/24 09:10	11/21/24 17:52	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<8.0	mg/kg	8.0	0.92	1	11/19/24 11:47	11/21/24 14:01	7440-42-8	
Calcium	31900	mg/kg	26.8	3.4	1	11/19/24 11:47	11/21/24 14:01	7440-70-2	
Magnesium	6910	mg/kg	26.8	0.90	1	11/19/24 11:47	11/21/24 14:01	7439-95-4	
Potassium	1340	mg/kg	134	6.9	1	11/19/24 11:47	11/21/24 14:01	7440-09-7	
Sodium	478	mg/kg	53.5	1.6	1	11/19/24 11:47	11/21/24 14:01	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	8.2	%	0.10	0.10	1		11/18/24 10:09		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	9.8	Std. Units	0.10	0.10	1		11/26/24 14:40		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo2_18-36.5 Lab ID: 10715613009 Collected: 11/06/24 16:55 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	66.4	mg/kg	10.9	4.9	1	11/21/24 09:10	11/21/24 18:12	16887-00-6	
Fluoride	3.7	mg/kg	2.2	1.1	1	11/21/24 09:10	11/21/24 18:12	16984-48-8	
Sulfate	358	mg/kg	54.7	10.9	1	11/21/24 09:10	11/21/24 18:12	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<7.7	mg/kg	7.7	0.88	1	11/19/24 11:47	11/21/24 14:03	7440-42-8	
Calcium	20100	mg/kg	25.6	3.2	1	11/19/24 11:47	11/21/24 14:03	7440-70-2	
Magnesium	2690	mg/kg	25.6	0.86	1	11/19/24 11:47	11/21/24 14:03	7439-95-4	
Potassium	571	mg/kg	128	6.6	1	11/19/24 11:47	11/21/24 14:03	7440-09-7	
Sodium	168	mg/kg	51.2	1.5	1	11/19/24 11:47	11/21/24 14:03	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	8.6	%	0.10	0.10	1		11/18/24 10:09		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	9.1	Std. Units	0.10	0.10	1		11/26/24 14:41		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo2_36.5-40 Lab ID: 10715613010 Collected: 11/06/24 17:00 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	<10.5	mg/kg	10.5	4.7	1	11/21/24 09:10	11/21/24 18:31	16887-00-6	
Fluoride	2.6	mg/kg	2.1	1.0	1	11/21/24 09:10	11/21/24 18:31	16984-48-8	
Sulfate	<52.4	mg/kg	52.4	10.5	1	11/21/24 09:10	11/21/24 18:31	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<7.8	mg/kg	7.8	0.89	1	11/19/24 11:47	11/21/24 14:04	7440-42-8	
Calcium	41900	mg/kg	25.9	3.3	1	11/19/24 11:47	11/21/24 14:04	7440-70-2	
Magnesium	8550	mg/kg	25.9	0.87	1	11/19/24 11:47	11/21/24 14:04	7439-95-4	
Potassium	1350	mg/kg	130	6.7	1	11/19/24 11:47	11/21/24 14:04	7440-09-7	
Sodium	726	mg/kg	51.9	1.5	1	11/19/24 11:47	11/21/24 14:04	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	4.6	%	0.10	0.10	1		11/18/24 10:09		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	10.0	Std. Units	0.10	0.10	1		11/26/24 14:46		

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QUALITY CONTROL DATA

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

QC Batch:	710982	Analysis Method:	EPA 9056A
QC Batch Method:	EPA 9056A	Analysis Description:	BVR 9056A IC Anions
		Laboratory:	Pace Analytical Services - Beaver
Associated Lab Samples:	10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010		

METHOD BLANK: 3462805

Matrix: Solid

Associated Lab Samples: 10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/kg	<10.0	10.0	4.5	11/21/24 19:10	
Fluoride	mg/kg	<2.0	2.0	1.0	11/21/24 19:10	
Sulfate	mg/kg	<50.0	50.0	10.0	11/21/24 19:10	

LABORATORY CONTROL SAMPLE: 3462806

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/kg	250	245	98	80-120	
Fluoride	mg/kg	20	20.6	103	80-120	
Sulfate	mg/kg	500	492	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3462807 3462808

Parameter	Units	30736163001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/kg	390	1370	1370	1650	1550	92	85	80-120	7	20	
Fluoride	mg/kg	20.4	109	109	85.5	82.2	60	56	80-120	4	20	M1
Sulfate	mg/kg	894	2730	2730	3060	2930	79	74	80-120	4	20	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 44241010.04 Deseret Power
Pace Project No.: 10715613

QC Batch:	979871	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050B	Analysis Description:	6010D Solids
		Laboratory:	Pace Analytical Services - Minneapolis

Associated Lab Samples: 10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010

METHOD BLANK: 5119797 Matrix: Solid
Associated Lab Samples: 10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/kg	<7.3	7.3	0.83	11/21/24 13:36	
Calcium	mg/kg	<24.2	24.2	3.1	11/21/24 13:36	
Magnesium	mg/kg	<24.2	24.2	0.82	11/21/24 13:36	
Potassium	mg/kg	<121	121	6.3	11/21/24 13:36	
Sodium	mg/kg	<48.4	48.4	1.4	11/21/24 13:36	

LABORATORY CONTROL SAMPLE: 5119798

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/kg	48.6	49.8	103	80-120	
Calcium	mg/kg	972	983	101	80-120	
Magnesium	mg/kg	972	953	98	80-120	
Potassium	mg/kg	972	993	102	80-120	
Sodium	mg/kg	972	1000	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5119799 5119800

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max	
		10715613001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec	% Rec		RPD	RPD Qual
Boron	mg/kg	<9.6	61.4	63.3	68.6	69.3	104	102	75-125	1	20	
Calcium	mg/kg	34800	1230	1270	40500	37800	460	233	75-125	7	20	P6
Magnesium	mg/kg	8420	1230	1270	11600	10400	260	160	75-125	11	20	P6
Potassium	mg/kg	1560	1230	1270	4060	3630	203	164	75-125	11	20	M1
Sodium	mg/kg	93.8	1230	1270	1460	1480	111	109	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

QC Batch:	980135	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight / %M by ASTM D2974
		Laboratory:	Pace Analytical Services - Minneapolis
Associated Lab Samples:	10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010		

SAMPLE DUPLICATE: 5121586

Parameter	Units	10715592002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	0.47	0.48	3	30	N2

SAMPLE DUPLICATE: 5121763

Parameter	Units	10715613002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.5	17.6	7	30	N2

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

QC Batch: 981680

Analysis Method: EPA 9045D

QC Batch Method: EPA 9045D

Analysis Description: 9045D pH

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010

LABORATORY CONTROL SAMPLE: 5129183

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH at 25 Degrees C	Std. Units	5	5.0	101	98-102	

SAMPLE DUPLICATE: 5129184

Parameter	Units	10715718001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	12.3	12.4	0	3	

SAMPLE DUPLICATE: 5129185

Parameter	Units	10715718002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	12.4	12.4	0	3	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 10715613

[1] The enclosed data is not intended for regulatory compliance; certification was waived by the client.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10715613001	TB-24-Geo1_0-3	EPA 9056A	710982	EPA 9056A	711103
10715613002	TB-24-Geo1_3-5.5	EPA 9056A	710982	EPA 9056A	711103
10715613003	TB-24-Geo1_5.5-16	EPA 9056A	710982	EPA 9056A	711103
10715613004	TB-24-Geo1_18.5-27.5	EPA 9056A	710982	EPA 9056A	711103
10715613005	TB-24-Geo1_36-39	EPA 9056A	710982	EPA 9056A	711103
10715613006	TB-24-Geo1_39-44	EPA 9056A	710982	EPA 9056A	711103
10715613007	TB-24-Geo2_0-10	EPA 9056A	710982	EPA 9056A	711103
10715613008	TB-24-Geo2_10-18	EPA 9056A	710982	EPA 9056A	711103
10715613009	TB-24-Geo2_18-36.5	EPA 9056A	710982	EPA 9056A	711103
10715613010	TB-24-Geo2_36.5-40	EPA 9056A	710982	EPA 9056A	711103
10715613001	TB-24-Geo1_0-3	EPA 3050B	979871	EPA 6010D	980629
10715613002	TB-24-Geo1_3-5.5	EPA 3050B	979871	EPA 6010D	980629
10715613003	TB-24-Geo1_5.5-16	EPA 3050B	979871	EPA 6010D	980629
10715613004	TB-24-Geo1_18.5-27.5	EPA 3050B	979871	EPA 6010D	980629
10715613005	TB-24-Geo1_36-39	EPA 3050B	979871	EPA 6010D	980629
10715613006	TB-24-Geo1_39-44	EPA 3050B	979871	EPA 6010D	980629
10715613007	TB-24-Geo2_0-10	EPA 3050B	979871	EPA 6010D	980629
10715613008	TB-24-Geo2_10-18	EPA 3050B	979871	EPA 6010D	980629
10715613009	TB-24-Geo2_18-36.5	EPA 3050B	979871	EPA 6010D	980629
10715613010	TB-24-Geo2_36.5-40	EPA 3050B	979871	EPA 6010D	980629
10715613001	TB-24-Geo1_0-3	ASTM D2974	980135		
10715613002	TB-24-Geo1_3-5.5	ASTM D2974	980135		
10715613003	TB-24-Geo1_5.5-16	ASTM D2974	980135		
10715613004	TB-24-Geo1_18.5-27.5	ASTM D2974	980135		
10715613005	TB-24-Geo1_36-39	ASTM D2974	980135		
10715613006	TB-24-Geo1_39-44	ASTM D2974	980135		
10715613007	TB-24-Geo2_0-10	ASTM D2974	980135		
10715613008	TB-24-Geo2_10-18	ASTM D2974	980135		
10715613009	TB-24-Geo2_18-36.5	ASTM D2974	980135		
10715613010	TB-24-Geo2_36.5-40	ASTM D2974	980135		
10715613001	TB-24-Geo1_0-3	EPA 9045D	981680		
10715613002	TB-24-Geo1_3-5.5	EPA 9045D	981680		
10715613003	TB-24-Geo1_5.5-16	EPA 9045D	981680		
10715613004	TB-24-Geo1_18.5-27.5	EPA 9045D	981680		
10715613005	TB-24-Geo1_36-39	EPA 9045D	981680		
10715613006	TB-24-Geo1_39-44	EPA 9045D	981680		
10715613007	TB-24-Geo2_0-10	EPA 9045D	981680		
10715613008	TB-24-Geo2_10-18	EPA 9045D	981680		
10715613009	TB-24-Geo2_18-36.5	EPA 9045D	981680		
10715613010	TB-24-Geo2_36.5-40	EPA 9045D	981680		

REPORT OF LABORATORY ANALYSIS

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Barr Engineering Co. Chain of Custody

Sample Origination State

☐ CO ☐ MI ☐ MN ☐ MO ☐ ND ☐ NV ☐ TX ☒ UT ☐ WI

WO#: 10715613



10715613

Requested

Soil

COC Number: **No 592433**

COC 1 of 1

Matrix Code: Preservative Code:

GW = Groundwater A = None
SW = Surface Water B = HCl
DW = Drinking Water C = HNO₃
PW = Pore Water D = H₂SO₄
WW = Waste Water E = NaOH
WQ = TB, FB, EB, etc. F = MeOH
W = Unspecified G = NaHSO₄
S = Soil/Solid H = Na₂S₂O₃
SD = Sediment I = Ascorbic Acid
SQ = MeOH blank J = Zn Acetate
OTH = Other (Oil, etc.) K = Other

Preservative Code

Field Filtered Y/N

REPORT TO		INV		Collection Date		Collection Time		Matrix Code		Perform MS/MSD Y / N		Total Number Of Containers		6010 Metals, PM, Dry wt		alkalinity		IC anion - Cl, F, SO ₄		% Solids	
Company:	Address:	Company:	Address:	Unit (m./ft. or in.)	Start	Stop	Unit (m./ft. or in.)	Start	Stop	Matrix Code	Perform MS/MSD Y / N	Total Number Of Containers	6010 Metals, PM, Dry wt	alkalinity	IC anion - Cl, F, SO ₄	% Solids					
Company: Barr Eng. Co	Address: 4300 Market Pointe Dr. Ste 200	Company: Same	Address: Same	Unit (m./ft. or in.)	Start	Stop	Unit (m./ft. or in.)	Start	Stop	Matrix Code	Perform MS/MSD Y / N	Total Number Of Containers	6010 Metals, PM, Dry wt	alkalinity	IC anion - Cl, F, SO ₄	% Solids					
Address: Minneapolis, MN																					
Name: Terri Olson																					
email: toolson@barr.com																					
Copy to: BarrDM@barr.com																					
Project Name: Desert Power																					
1. TB-24-Geo1	0	3	FT	11/05/2024	16:25	S	N	3													
2. TB-24-Geo1	3	5.5		11/06/2024	16:30			3													
3. TB-24-Geo1	5.5	16			11:45			3													
4. TB-24-Geo1	18.5	27.5			11:50			3													
5. TB-24-Geo1	36	39			11:55			3													
6. TB-24-Geo1	39	44			12:00			3													
7. TB-24-Geo2	0	10			16:45			3													
8. TB-24-Geo2	10	18			16:50			3													
9. TB-24-Geo2	18	36.5			16:55			3													
10. TB-24-Geo2	36.5	40			17:00			3													
E2: 3168620 10																					

BARR USE ONLY		Relinquished by: Kaela Nerhus		On Ice? ☒ Y ☐ N	Date: 11/12/24	Time: 1400	Received by: [Signature]		Date: 11/13/24	Time: 850
Sampled by: KJN3		Relinquished by:		On Ice? ☐ Y ☐ N	Date:	Time:	Received by:		Date:	Time:
Barr Proj. Manager: SM32		Samples Shipped VIA: ☐ Ground Courier ☐ Air Carrier		Air Bill Number:		Requested Due Date: ☒ Standard Turn Around Time				
Barr DQ Manager: TAO		☐ Sampler ☒ Other: FedEx				☐ Rush (mm/dd/yyyy)				
Lab Name: Pace		Lab WO:		Temperature on Receipt (°C): 49		Custody Seal Intact? ☒ Y ☐ N ☐ None				
Lab Location: MPLS										

ENV-FRM-MIN4-0150 v17 Sample Condition Upon Receipt

CLIENT NAME: Barr Engineering Co.

PROJECT #:

WO#: 10715613

COURIER: ☐ Client ☐ Commercial ☒ FedEx ☐ Pace
☐ SpeedDee ☐ UPS ☐ USPS

PM MKH

Due Date: 11/27/24

CLIENT: BARR

TRACKING NUMBER: 6289 8669 9571 ☐ See Exceptions form ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present: ☒ YES ☐ NO Seals Intact: ☒ YES ☐ NO Biological Tissue Frozen: ☐ YES ☐ NO ☒ N/A
Packing Material: ☒ Bubble Bags ☐ Bubble Wrap ☐ None ☐ Other Temp Blank: ☒ YES ☐ NO Type of Ice: ☐ Blue ☐ Dry ☒ Wet
Thermometer: ☐ T1 (0461) ☐ T2 (0436) ☒ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235)
☐ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252 (1710) ☐ Melted ☐ None

Did Samples Originate in West Virginia: ☐ YES ☒ NO Were All Container Temps taken: ☐ YES ☐ NO ☒ N/A
Correction Factor: -0.2 Cooler Temp Read w/Temp Blank: 5.1 °C Average Corrected Temp (no Temp Blank Only): 4.9 °C
Cooler Temp Corrected w/Temp Blank: 4.9 °C
NOTE: Temp should be above freezing to 6°C. ☐ See Exceptions Form ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: ☐ N/A - Water Sample/Other (describe): Initials & Date of Person Examining Contents: JMA 11/19/24
Did Samples originate from one of the following states (check maps) - AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA: ☐ YES ☒ NO Did samples originate from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☒ NO
NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

LOCATION (check one):	YES	NO	N/A	COMMENT(S)								
☐ DULUTH ☒ MINNEAPOLIS ☐ VIRGINIA												
Chain of Custody Present and Filled Out?	☒	☐		1.								
Chain of Custody Relinquished?	☒	☐		2.								
Sampler Name and/or Signature on COC?	☒	☐	☐	3.								
Samples Arrived within Hold Time?	☒	☐		4. If Fecal: ☐ <8 hrs ☐ >8 hr, <24 hr ☐ No								
Short Hold Time Analysis (<72 hr)?	☐	☒		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/E. coli ☐ Other:								
Rush Turn Around Time Requested?	☐	☒		6.								
Sufficient Sample Volume?	☒	☐		7.								
Correct Containers Used?	☒	☐	☐	8.								
- Pace Containers Used?	☒	☐										
Containers Intact?	☒	☐		9.								
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☒	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO								
Is sufficient information available to reconcile the samples to the COC? NOTE: If ID/Date/Time don't match fill out section 11. Matrix: ☐ Oil ☒ Soil ☐ Water ☐ Other	☒	☐		11. If NO, write ID/Date/Time of container below: ☐ See Exceptions form ENV-FRM-MIN4-0142								
All containers needing acid/base preservation have been checked? All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil & Grease, DRO/8015 (water) and Dioxins/PFAS NOTE: If adding preservation to the container, verify with the PM first. Clients may require adding preservative to the field and equipment blanks when this occurs.	☐	☐	☒	12. Sample #: ☐ HNO ₃ ☐ H ₂ SO ₄ ☐ NaOH ☐ Zinc Acetate Positive for Residual Chlorine: ☐ YES ☐ NO pH Paper Lot # <table border="1" style="width: 100%;"> <tr> <th>Residual Chlorine</th> <th>0-6 Roll</th> <th>0-6 Strip</th> <th>0-14 Strip</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table> ☐ See Exceptions form ENV-FRM-MIN4-0142	Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip				
Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip									
Headspace in Methyl Mercury Container?	☐	☐	☒	13.								
Extra labels present on soil VOA or WIDRO containers?	☐	☐	☒	14.								
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☒	☐ See Exceptions form ENV-FRM-MIN4-0140								
Trip Blanks Present?	☐	☒	☐	15.								
Trip Blank Custody Seals Present?	☐	☐	☒	Pace Trip Blank Lot # (if purchased):								

CLIENT NOTIFICATION / RESOLUTION

FIELD DATA REQUIRED: ☐ YES ☐ NO

Person Contacted: _____ Date & Time: _____

Comments / Resolution: _____

Project Manager Review: [Signature] Date: 11/19/24

NOTE: When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: JMAW Line: 4

30736109

WO# : 30736109

PM: ARG

Due Date: 12/06/24

CLIENT: PACE_10_MIMN

LIMS30 Lab Sample Condition Upon Receipt (West Virgin

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ 3rd Party Courier ☐ Pace ☐ Other _____

Tracking #: _____

Custody Seal on Cooler/Box/Containers Present: ☒ yes ☐ no

Seals intact: ☒ yes ☐ no

Thermometer Used

24

Type of Ice: ☒ Wet ☐ Blue ☐ None

Cooler Temperature

Observed Temp

.5

°C

Correction Factor: 0

°C

Final Temp: .5

°C

Thermal Preservation Requirement Met Yes ☒ No ☐

pH paper Lot#

204524

Date and Initials of person examining

contents: PC 11/20/24

	Yes	No	N/A	
Chain of Custody Present:	\			1.
Chain of Custody Filled Out:	\			2.
Chain of Custody Relinquished:	\			3.
Sampler Name & Signature on COC:	\			4.
Sample Labels match COC:	\			5.
-Includes date/time/ID				
Matrix: Solid				
Samples Arrived within Hold Time:	\			6.
Short Hold Time Analysis (<72hr remaining):		\		7.
Rush Turn Around Time Requested:		\		8.
Sufficient Volume:	\			9.
Correct Containers Used:	\			10.
-Pace Containers Used:	\			
Containers Intact:	\			11.
Orthophosphate field filtered:			\	12.
Hex Cr Aqueous sample field filtered:			\	13.
-pH adjusted within 24 hours? (If yes, indicate acid lot #)			\	
Filtered volume received for Dissolved tests:			\	14.
All containers have been checked for chemical preservation:			\	15.
exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix				
All containers meet method/chemical preservation requirements:			\	
Initial when completed				PC
Date:				11/20/24
Tests not preserved:				
Headspace in VOA Vials:			\	16.
Trip Blank Present:			\	17.
Initial when completed				PC
Date:				10/20/24

Comments:

*PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen.



Alternative Source Demonstration: Spring 2025 Monitoring Event

Bonanza Power Plant



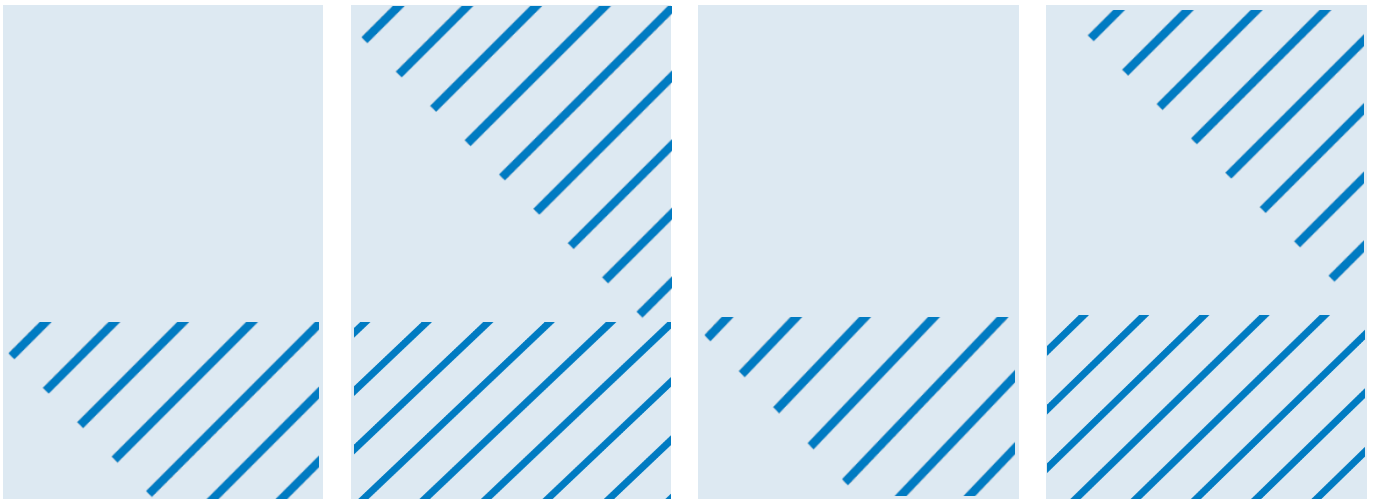
Prepared for
Deseret Power

Prepared by
Barr Engineering Co.

December 2025

170 South Main Street, Suite 500
Salt Lake City, UT 84101
801.333.8400

barr.com



Certification

I certify that the written demonstration provided above are supported by the data that is accurate and consistent with our review of the groundwater data collected to date and as required under the CCR Rule (§257.94(e)(2)).



Dale Kolstad, P.E.
P.E #: 11117963-2202

December 1, 2025

Date

Contributing authors and reviewers for this work includes the following:

- Kaela Nerhus, MS, Geologist. Performed evaluation of soil and groundwater data, geochemical assessment, and statistical analysis.
- Kathryn Johnson, PhD, Senior Geochemist. Reviewed soil and groundwater data and geochemical assessment.
- Alexander Reimers, MS, Hydrogeologist. Performed groundwater flow assessment and modeling.
- Amir Safi, PhD, Senior Water Resources Engineer. Performed unsaturated flow modeling.
- Jim Aiken, MS, RG, PG. Senior Hydrogeologist. Reviewed groundwater flow assessment and modeling, soil and groundwater data interpretations, and statistical analysis.

Alternative Source Demonstration:

Spring 2025 Monitoring Event

December 2025



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Attached Tables

Attached Table 1	Analytical Soil Results
Attached Table 2	Summary of Hydrus Model Layers and Material Properties
Attached Table 3	Geochemical Mixing Model Results
Attached Table 4	Synthetic Precipitation Leaching Procedure Results

Appendices

Appendix A	Boring Logs
Appendix B	Lab Reports

Abbreviations

ASD	alternative source demonstration
bgs	below ground surface
$\text{Ca}_5(\text{PO}_4)_3\text{F}$	fluorapatite
$\text{Ca}_5(\text{PO}_4)_3(\text{F}, \text{Cl}, \text{OH})$	apatite
CaF_2	fluorite
$\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$	gypsum
CCR	coal combustion residuals
CFR	Code of Federal Regulations
CSM	conceptual site model
EPA	Environmental Protection Agency
FA	Fly Ash
ft	feet
gal/day	gallons per day
KF	carobbiite
mg/L	milligrams per liter
Na_3AlF_6	cryolite
NaCl	halite
NaHCO_3	nahcolite
NEP	North Evaporation Pond
pSSI	potential statistically significant increase
SPLP	synthetic precipitation leaching procedure
SSI	statistically significant increase
s.u.	standard units
TDS	total dissolved solids
USGS	United States Geological Survey

1 Introduction

Deseret Power Electric Cooperative, Bonanza Power Plant near Vernal, UT, has implemented a Detection Monitoring Program in accordance with the U.S. Environmental Protection Agency (EPA) Coal Combustion Residuals (CCR) Rule (40 CFR Parts 257 and 261).

The spring 2025 detection monitoring event occurred on May 12 – 14, 2025. The final laboratory report was received on June 4, 2025, for the Fly Ash (FA) Landfill Area. A potential statistically significant increase (pSSI) was identified for fluoride at well FA-DG4 at the Fly Ash Landfill Area. An SSI was verified for fluoride at well FA-DG4 on September 2, 2025.

1.1 Purpose

Previous Alternative Source Demonstrations (ASDs) completed for FA-DG4 for fluoride (Barr, 2019; Barr, 2020a; Barr, 2020b; Barr, 2021; Barr, 2023b; Barr, 2024a) concluded that the fluoride was due to a source other than the FA Landfill and identified the North Evaporation Pond (NEP) as a potential source along with natural variability. Both regional and site geochemical data supported this conclusion. This report furthers the assessment of groundwater quality done for the previous ASDs, incorporating additional investigatory data and modeling results.

In addition, this report is intended to provide written documentation of a FA Landfill Area-wide ASD for fluoride at all FA downgradient wells including FA-DG4. The report provides a certification of accuracy for this ASD as described in the CCR Rule (§257.94(e)(2)).

1.2 Potential Alternative Sources Review

Based on the rule (above), five categories were evaluated for this ASD. These include:

1. A source other than the CCR unit
2. Sampling (or sampling equipment) methods
3. Laboratory methods
4. Statistical methods
5. Natural variation in groundwater quality

As part of the ASD, site-specific data was evaluated to identify potential causes for elevated fluoride concentrations in the FA-DG4 monitoring well. The following potential sources were selected for investigation:

1. A source other than the CCR unit
2. Natural variation in groundwater quality

Mechanisms for fluoride transport to groundwater include (1) dissolution of naturally occurring fluoride containing minerals in the soil, (2) seepage from the NEP, and (3) seepage from the FA Landfill. Each source and transport mechanism, including changes to the groundwater flow regime since monitoring began were considered as possible explanations for changes in the fluoride concentrations observed at FA-DG4.

2 Hydrogeologic Setting

The Site is located in a low area within the Uinta Basin and is surrounded by bedrock uplands. The geology underlying the FA Landfill and the surrounding area consists primarily of very fine-grained sand and silt with occasional traces of clay to a depth of at least 44 feet below ground surface (bgs) (Appendix A). These sediments are unconsolidated and geologically recent deposits, having been transported by alluvial and colluvial processes from the surrounding hills and cliffs of the Uinta Formation. They form both alluvial fan and desert wash-type deposits that can form into or override playa lacustrine deposits, which in arid climates are often associated with evaporitic minerals (Nilsen, 1988).

The Uinta Formation bedrock is comprised of fluvial to lacustrine deposits associated with Lake Uinta (Sprinkel, 2007 and Naftz, 1996). Rock types within the formation are described as soft, shale, mudstone, or claystone with minor sandstone and tuffaceous interbeds. The first and second hypersaline phases of the ancient Lake Uinta caused large depositions of Eocene-aged evaporites, particularly in the area of the Bonanza Power Plant (Vanden Berg and Birgenheier, 2017; Birdwell et al., 2019).

Evaporite minerals typically associated with evaporites in this region include soluble halide and carbonate minerals, such as fluorite (CaF_2), carobbiite (KF), that are often associated with gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$), mixed calcium magnesium sulfate minerals, halite (NaCl) and nahcolite (NaHCO_3 , a source of baking soda), all of which are soluble in groundwater. Evaporite deposits can also be associated with fluoride in detrital minerals derived from carbonate, metamorphic and igneous rocks. Detrital fluoride occurs with sodic minerals like cryolite (Na_3AlF_6) and with phosphate minerals such as apatite ($\text{Ca}_5(\text{PO}_4)_3(\text{F}, \text{Cl}, \text{OH})$) and fluorapatite ($\text{Ca}_5(\text{PO}_4)_3\text{F}$), are found in fine grained silt and shales of playa lakes (Hurlbut and Klein, 1977).

The locations of the monitoring-wells and site features in the area around the FA Landfill are shown on Figure 1. In general, groundwater flows from the northwest under the FA Landfill Area to the south-southeast. Sources of potential recharge to the groundwater in the FA Landfill Area are infiltration through native soils, seepage from the bottom of the NEP, and seepage from the base of the FA Landfill. The NEP is a non-CCR pond that receives process water from the plant. The NEP has an earthen liner that limits, but does not eliminate, the seepage flux (rate of infiltration) from the bottom of the NEP into underlying soils. The FA Landfill is composed of dry fly ash that is stacked above the ground surface.

The monitoring network consists of two upgradient wells and four downgradient wells. Upgradient well FA-UG1 is located to the north of the FA Landfill to monitor groundwater flowing into the FA Landfill Area. Upgradient well FA-UG2 is located near the NEP to monitor groundwater quality that may be influenced by the NEP in the FA Landfill Area. The upgradient monitoring wells are not directly downgradient of other CCR units at the facility.

The four downgradient wells are located along the southern perimeter of the FA Landfill Area, extending from the eastern edge of the saturated zone (near the dry line) to the west toward the NEP. The downgradient wells are separated from other CCR units by a groundwater divide created by the pump-back system that maintains gradient control under the main power block in order to prevent subsidence (Figure 1; Loughlin Associates, 2017). This pumpback system influences groundwater flow southeast of the FA Landfill. The pumpback system is not operated continuously, which causes fluctuations in groundwater elevations and slight changes in flow direction in the vicinity of the FA Landfill downgradient wells. Additional information on the pumpback system and groundwater flow are included in the Groundwater Monitoring System Certification (Burns and McDonnell, 2017) and the Annual Review of Groundwater Levels (Loughlin, 2020).

3 Conceptual Site Model

The conceptual site model (CSM) for fluoride near the FA Landfill is illustrated in Figure 2. The CSM of water quality in the FA Landfill downgradient monitoring wells considers the sources of fluoride, mechanisms of release from the sources, the groundwater flow system and mixing that can occur, and the effects of the pumpback system on the groundwater flow paths. Potential sources of fluoride include evaporites naturally occurring within soils, the water in the NEP, and the ash within the FA Landfill.

The CSM source terms are informed by data from the following and discussed in Section 4:

- Water quality analysis of CCR constituents at the monitoring wells
- Complete cation and anion analysis of 2018 samples from the monitoring wells
- Analysis of samples from standing water in the NEP
- Synthetic Precipitation Leaching Procedure (SPLP) analysis of material from the FA Landfill sampled in 2019
- Soil quality analysis of native soils from two soil borings completed in 2024 near FA-UG2 and FA-DG2

The CSM transport terms are informed by data and modeling from the following and discussed in Section 5:

- A Hydrus 1-D model for estimating seepage from the FA Landfill
- A water balance for estimating seepage from the NEP
- A groundwater flow map used to show flow paths toward downgradient wells

4 Sources of Fluoride

Sources of fluoride to the groundwater system that are monitored with the FA Landfill Area downgradient monitoring wells are described herein.

4.1 Naturally Occurring Fluoride in Soils

The soils in the FA Landfill Area, derived from the Uinta Formation, contain evaporates, including fluoride containing minerals. Evaporite deposits of variable salt composition are likely irregularly distributed within soils. The salts can dissolve into groundwater depending on the hydrogeologic and geochemical conditions. Site-specific fluoride variability within soils was further investigated.

Two soil borings were advanced near FA-UG2 (upgradient) and FA-DG2 (downgradient) using rotasonic drilling methods in November 2024 for the purpose of evaluating the naturally occurring fluoride in soil. The boring locations, TB-24-Geo1 (near FA-DG2) and TB-24-Geo2 (near FA-UG2), are shown on Figure 1. The boring logs in Appendix A describe the soils as interbedded silts and very fine to fine-grained silty sand overlying weathered claystone. Samples were collected for chemical analysis.

The presence of fluoride in the soil was assessed by chemical analysis of samples from the borings. The analytical results are summarized in Attached Table 1; the analytical lab reports are in Appendix B. Total fluoride and other total major ion concentrations in soil were measured in each major unit encountered with depth. The analysis used EPA methods 9056A, 6010D, and 9045D after acid digestion using EPA method 3050B. The soils were dominated by calcium and alkalinity (alkalinity measurements were too great to measure exactly or estimate – see Appendix B). pH values generally increased through depth at both sampling locations and ranged from 8.4 to 10.4 s.u. Fluoride and calcium also varied through depth and between locations as shown in Figure 3. The relationship between fluoride and calcium in TB-24-Geo1 suggests that fluoride is present as the mineral fluorite (CaF_2).

Fluoride concentrations ranged from 2.2 to 7.9 mg/kg at TB-24-Geo1 and 2.0 to 3.7 mg/kg at TB-24-Geo2. Fluoride concentrations in the soil above and below the water table were generally greater at downgradient location TB-24-Geo1 than at the upgradient location TB-24-Geo2.

Evaporite minerals were observed in the soil from the borings at both the upgradient and downgradient locations (Appendix A). Effervescence was noted suggesting the presence of carbonate minerals.

4.2 Fluoride in the NEP

The NEP is not a CCR pond. The concentration of fluoride in process water in the NEP increases as pond water evaporates. Seepage of this water out of the bottom of the NEP through the clay liner transports the constituents of the process water, including high fluoride concentrations.

Thirteen surface water samples were collected from the NEP between 2018-2025. The water in the NEP is alkaline (mean pH of 8.5) with the total dissolved solids (TDS) dominated by sodium, magnesium, and sulfate with a significant contribution from chloride. Fluoride concentrations in the NEP vary as a function of the water level in the NEP. The measured concentrations ranged from 19.8 to 60.6 mg/L with an average of 40.1 mg/L, which is substantially higher than fluoride concentrations measured at the downgradient wells, FA-DG4 and FA-DG3 as shown in Figure 4 and pictured on the CSM in Figure 2.

4.3 Fluoride in the Fly Ash Landfill

Fluoride may be present in fly ash, but fluoride content varies based on the composition of the coal burned, ash particle size, or the efficiency of electrostatic precipitators (Prasad and Mondal, 2006). To assess the site-specific fluoride levels in the FA Landfill, measuring the fluoride that may leach from the fly ash is appropriate.

Borings were advanced within the Fly Ash Landfill in December 2019 at the locations shown on Figure 1. Moisture content is low through the FA Landfill, ranging from 15.3 to 25.9 percent (GeoStrata, 2016). Composite samples from the CCR material were collected from several intervals between the surface and the bottom of the borings (90 feet below the surface) at locations S1 and S2. A grab sample from the bottom of boring S1 (89.5 to 90 feet below the surface) was also collected to represent ash from a previously closed non-CCR unit within the landfill footprint. These three samples were leached using the SPLP, in which the samples were mixed with a slightly acidic solution designed to simulate rainwater that might percolate through the ash. The leachate from this procedure was analyzed for the same parameters used to evaluate groundwater. The results of the analysis were included in Table 2 and Attachment A of the Fall 2019 ASD (Barr, 2020a).

Fluoride concentrations in the SPLP extracts of CCR material were measured at less than 0.4 mg/L. The mean pH of the CCR extracts was 8.6 s.u. with TDS comprised almost completely of calcium and sulfate.

To further assess potential CCR leachate influence on groundwater, an assessment of the potential to generate seepage from the FA Landfill was performed, as was a model simulation used to estimate seepage from the NEP and mixing of potential fluoride sources in groundwater.

5 Transport Mechanisms

The mechanisms involved with the transport of fluoride from the FA Landfill and the NEP as well as the groundwater flow paths as illustrated in the conceptual site model are described herein.

5.1 FA Landfill Seepage

To assess the potential for vertical fluid flux to be generated from the base of the FA Landfill to the underlying groundwater table over the past decade, a transient infiltration analysis was conducted using the HYDRUS-1D model. This analysis evaluated whether very conservative infiltration and flow conditions at the top of and within the landfill could generate seepage through its base. If no significant seepage is observed at the base of the landfill under these conditions, it suggests that actual seepage over the assessment period is unlikely under field conditions.

The assessment period spanned from January 2016 to April 2025, with model simulations conducted over this timeframe based on climate and soil data availability. To simulate very conservative infiltration conditions, the model excluded evaporation and assumed that all precipitation and snowmelt infiltrated into the ash. This approach intentionally overestimates infiltration to assess whether any seepage might reach the groundwater table under extreme assumptions. Further, the upper range of the ash hydraulic conductivities were used to accelerate the rate of fluid movement through the ash landfill profile. The following sections detail the model setup and analysis of the results, where "flux" refers to the potential for seepage under these extreme conditions.

5.1.1 Model discretization

The vertical extent of the model spans from the surface of the FA Landfill (5157 ft) to the groundwater table (at ~5040 ft), covering the unsaturated zone. The domain was divided into eight numerical layers, informed by geotechnical logs S1 and FA-UG2 (Attached Table 2):

- Layers 1–5 represent the FA Landfill, approximately 87.5 feet thick, with stratigraphy characterized by color, gypsum content, and cementation
- Layers 6–8 represent approximately 25 feet of native soils interpreted to continue beneath the landfill, based on the log from FA-UG2. These include silty sand, poorly graded sand, and silty sand again. Layer 8 terminates at the groundwater table.

5.1.2 Hydraulic Characteristics

Hydraulic properties for each layer were assigned based on Carsel and Parrish (1988), a widely recognized source for estimating van Genuchten-Mualem parameters for various soil textures in unsaturated flow models. These parameters include residual and saturated water contents, van Genuchten α and n , and pore connectivity (l) and saturated hydraulic conductivity.

The saturated hydraulic conductivity was assigned considering values from other literature sources. Fly ash is known to have low permeability ($1.0\text{E-}11$ to $1.0\text{E-}05$ m/s), which can be reduced when mixed with additives such as lime and cement (Chakradhar and Katoch, 2016; Zabielska-Adamska, 2020). This was considered when assigning hydraulic conductivity to layers 1 to 5. For native soils (layers 6–8), the saturated hydraulic conductivity was based on ranges from Cabalar and Akbulut (2016), spanning from $1.0\text{E-}08$ to $5.0\text{E-}04$ m/s.

For this study, only the upper limit of saturated hydraulic conductivity was considered in the modeling to evaluate the seepage rate under extreme permeability conditions.

5.1.3 Soil Moisture

Initial moisture content in the FA Landfill was assigned using field data collected by Geotrata (2016). Data from boring B1 showed moisture increasing with depth, from 15.3 percent at the surface to 25.9 percent at the base of the landfill. These values are below the estimated saturated water content of between 35 percent and 40 percent for the ash and were assigned to layers 1–5. In the absence of site-specific data for the native soil layers (6–8), an average moisture content of 20 percent was assumed, representing a moderately moist condition.

5.1.4 Climate Data

Due to limited on-site monitoring, historical daily climate data were obtained from external sources. PRISM Climate Group provided high-resolution daily precipitation data (4 km grid). NOAA's Jensen station provided daily snow depth records for the modeling period.

To simulate a conservative (worst-case) infiltration scenario:

- Snow was treated as additional precipitation, with a 1-week lag to simulate delayed snowmelt infiltration.
- Evaporation was excluded from the model, maximizing net infiltration.

5.1.5 Boundary Conditions

Boundary conditions were assigned to the top and bottom of the model extent. The top boundary of the model was defined as a time-variable flux, responding to precipitation and snowmelt. The bottom boundary was defined as a constant head condition at 5040 ft, simulating the groundwater table.

5.1.6 Results and Discussion

Figure 5 illustrates the simulated flux rates at the base of each model layer with the upper limit of saturated hydraulic conductivity and extreme infiltration conditions. Key observations include:

- Layer 1 (surface of FA Landfill) shows strong fluctuations in flux in response to climate variation. These fluctuations diminish with depth and are not evident within the modeled timeframe at Layer 8, which is near the groundwater table.
- Even under very conservative assumptions (including high hydraulic conductivity values, exclusion of evaporation, and full snowmelt contribution) simulated flux near the groundwater table remained negligible (<1 percent of precipitation and snowmelt).

This analysis suggests that seepage from the FA Landfill to the groundwater table between 2016 and 2025 is unlikely, even under exaggerated wetting conditions. While the model was not designed to estimate actual flux rates, it was used to evaluate the potential for seepage under highly conservative assumptions. The absence of notable modeled seepage at the base of the landfill supports the conclusion that seepage during the assessment period is unlikely, which aligns with findings from previous studies (e.g., ASD investigation on FA-DG4), reinforcing the conclusion that fluoride detected in groundwater in

the downgradient wells is unlikely to be attributed to leaching of fly ash and seepage from the bottom of the FA Landfill.

5.2 NEP Seepage

Barr estimated the NEP seepage rate to the groundwater system using a water balance approach. Water balance components and value estimates, provided by Deseret, including recent plant process water flow rates and evaporation rates based on NEP design, (Table 1) show water output from the NEP as evaporation and water input into the NEP as pumpback wells, precipitation, and plant process water. The net difference between input and output is assumed to be seepage to groundwater. Assuming that the bottom of the NEP is flat, the net difference volume rate was divided by the NEP area to estimate a groundwater seepage rate. The estimated seepage rate is approximately 6.35E-07 cm/s. This is a reasonable value for an earthen bentonite-soil liner permeated with this type of water.

Table 1 NEP Water Balance Estimates and Seepage Rate

NEP Parameter	Value
Area	5,138,061 ft ²
Evaporation ¹	274,000 gal/day
Pumpback Wells ¹	58,000 gal/day
Precipitation ²	70,148 gal/day
Plant Process Water ¹	216,000 gal/day
Net Difference	70,148 gal/day
Net Difference	9,377 ft ³ /day
Estimated NEP Seepage Rate	0.0018 ft/day
Estimated NEP Seepage Rate	6.35E-07 cm/s

[1] Based on data provided by Deseret

[2] Assuming 8 inches per year of precipitation (PRISM Dataset)

Results from this water balance effort suggest that the NEP is contributing water to the groundwater system through seepage. This result is also evident in the observed groundwater contours surrounding the NEP. General groundwater flow direction in the center of the valley is from north to south with local flow directions being influenced by sources such as seepage from ponds and by sinks such as pumpback wells. Figure 1 shows observed groundwater flowing from under the NEP toward the FA Landfill downgradient monitoring wells (i.e. FA-DG5).

5.3 Groundwater Flow

Groundwater flow was interpreted using groundwater contours for May 2025 (Figure 1). Figure 1 shows groundwater flow is generally north to south-southeast in the FA Landfill area. The flow path is bounded east and west by dry areas consisting of low permeability bedrock as shown in Figure 1. Groundwater is interpreted to infiltrate through soils in a wash area upgradient of the FA Landfill and flow to the south under the FA Landfill through the bedrock valley. Negligible infiltration through the FA Landfill to groundwater occurs (as demonstrated in Section 5.1).

As shown on hydrographs, groundwater elevations have been variable in the monitoring wells (Figure 6). Generally, groundwater elevations have been declining across the site in recent years. Several

downgradient monitoring wells have fluoride concentrations either increasing (FA-DG4) or decreasing (FA-DG2 and FA-DG3), which may correspond to the declining groundwater elevations or changes in groundwater flow from operation of the pumpback system.

Based on the above information, it can be concluded that the NEP and pumpback system alter the groundwater flow paths. Conceptually, the addition of water from the NEP creates a mounding of groundwater to the east while the pumpback system creates a drawdown zone to south of the landfill. Because groundwater flows from areas of higher head to lower head pressure, a portion of the groundwater under the landfill and near the NEP is pulled eastward and groundwater interacting with native geology near FA-DG2 is pulled to the southwest.

Because the pumpback system is comprised of multiple well points it is common for variations in flow direction to occur due to one or more pumps switching off or undergoing repairs. These intermittent pump cycles necessarily result in changes in groundwater flow direction. These changes in flow direction can then move water containing fluoride leached from either the native geology or coming from the NEP to move across the downgradient edge of the landfill toward FA-DG4 from both the east and west over time.

In summary, groundwater quality at the downgradient monitoring wells is expected to be influenced by mixing groundwater from upgradient of the FA Landfill, NEP seepage impacted groundwater, and groundwater interacting with native geology to the east of the landfill area (near FA-DG2) based on the operation of the pumpback system.

6 Groundwater Analysis

The following assesses the impact of natural variability as well as NEP seepage and FA Landfill seepage on the groundwater conditions monitored with the downgradient monitoring well system.

6.1 Natural Variability

The fluoride concentrations in FA Landfill monitoring wells vary by approximately an order of magnitude (Figure 4). The concentration is lowest in the upgradient fly ash wells (averages of 1.8 and 0.6 mg/L in FA-UG1 and FA-UG2, respectively measured between 2016 and 2025) and are the highest in FA-DG2 (average of 54 mg/L measured between 2016 and 2025). Average concentrations in FA-DG3 (10.73 mg/L) exceed the average fluoride concentrations measured in FA-DG4 (3.82 mg/L) (Figure 4). The higher fluoride concentrations at FA-DG2 and FA-DG3 compared to FA-DG4 show the variability in fluoride concentrations in groundwater in the area.

As presented in Section 4.1, the analysis of soil from the 2024 boring TB-24-Geo1 (near FA-DG2) demonstrated (1) that fluoride concentrations in soil near FA-DG4 are greater than near FA-UG2 and (2) the natural variability in downgradient soil (range of 2.2 to 7.9 mg/kg over 44 feet). Fluoride concentrations in groundwater would be affected by the concentration of fluoride in the soil that interacts with the groundwater and other geochemical conditions such as calcium concentration. Groundwater elevations have fluctuated and declined at most downgradient wells (Figure 6). The soil fluoride concentrations in contact with the groundwater will change as the groundwater elevation changes.

Natural fluoride variability has been documented within the region, providing another line of evidence for variable fluoride concentrations in groundwater at the Site. A search for fluoride concentrations in groundwater within 50 miles of the site yielded 965 records from the Water Quality Portal (NWQMC et al., 2019). Concentrations ranged from below detection to 450 mg/L, with a lowest detected value of 0.03 mg/L and a 95th percentile of approximately 18 mg/L. Because the regional concentrations are elevated well above the concentrations observed at FA-DG4, it adds to the weight of evidence that supports the hypothesis that natural variability is a likely contributor to the SSI at this well. In addition, the natural variation hypothesis is also supported by a number of studies that have noted the spatial variability of groundwater compositions in this area including the mineralogical controls on groundwater composition discussed in Section 4.1 (Wallace, 2012; Naftz, 1996; Holmes and Kimball, 1987; Lindskov and Kimball, 1984).

- Hypothesis: Natural variation in fluoride concentrations and evaporites within native geology at the site and in the region contributes to the elevated fluoride concentrations observed in FA-DG4.
- Analysis: Fluoride concentrations were measured in soils near FA-UG2 and FA-DG2 to evaluate site-specific fluoride heterogeneity within the native soils. Additionally, the groundwater fluoride concentrations in all wells within the groundwater monitoring network were compared to publicly available fluoride data and published regional geology and groundwater chemistry studies.
- Result: Fluoride concentrations vary widely in groundwater and soil at site at the downgradient monitoring wells and regionally due to the region's geologic history. In addition, the data suggest that declining groundwater elevation at FA-DG4 relates to higher fluoride concentration in the soil in contact with the groundwater. Therefore, natural variation cannot be ruled out and likely contributes to the SSI observed in FA-DG4.

6.2 Model of Mixing Upgradient Groundwaters

To further test the hypothesis presented by the CSM (Figure 2) that the water quality at downgradient wells is influenced by NEP and upgradient water, along with local soil interaction, a groundwater mixing model using the geochemical modeling software PHREEQC (Parkhurst and Appelo, 2013) was developed to simulate the quality of groundwater downgradient at FA-DG4. The chemistry of groundwater from the different sources is represented as:

- Unimpacted upgradient groundwater (FA-UG1)
- Upgradient groundwater with water quality influenced by seepage from the NEP (FA-UG2)
- Groundwater local to the monitoring wells with water quality affected by dissolution of evaporites containing fluoride (FA-DG2)

The model used groundwater concentrations of major cations and anions measured in May 2025 samples from the monitoring wells. The model was also run using samples from April 2018 because April 2018 was the most recent sampling event with major ion data prior to May 2025.

The CSM and the mixing model hypothesis is supported by the Piper plot of the major chemistry of the SPLP leachates of samples from the FA Landfill, NEP surface water, and groundwater quality from the monitoring wells as shown in Figure 7. The anions in NEP water and at the monitoring wells are comprised of sulfate, bicarbonate, and chloride. This composition contrasts with the FA Landfill SPLP extracts in which the anions are all sulfate with essentially no bicarbonate or chloride. Despite the differences in TDS, the proportions of cations and anions at FA-UG1 and FA-DG2 are similar. The ion proportions in FA-DG3 and FA-DG4 plot between FA-UG1 and NEP water with FA-DG4 closer to NEP water than FA-DG3.

The PHREEQC model tested several mixing ratios of FA-UG1, FA-UG2, and FA-DG2 waters. A mixing ratio of 65 percent FA-UG1, 19 percent FA-UG2, and 16 percent FA-DG2 water produced results comparable to the fluoride and boron concentrations at FA-DG4 in May 2025. The model results are summarized in Attached Table 3. The model specified equilibrium conditions of calcite and CO₂ in the mixed groundwater to fit the calcite and CO₂ conditions of the water quality measured at FA-DG4. A mixing ratio using sample results from April 2018 of 65 percent FA-UG1, 21 percent FA-UG2, and 14 percent FA-DG2 water produced results comparable to the fluoride and boron concentrations at FA-DG4 in May 2025. A larger proportion of water is coming from FA-DG2 in May 2025 compared to April 2018. The model results for major ions in May 2025 are compared with the measured data on the Piper plot (Figure 7). The plot shows that the model accurately predicts the proportions of anions at FA-DG4 but slightly overestimates magnesium and underestimates sodium. In addition, the equilibrium conditions for gypsum and fluorite predicted by the model generally match the conditions calculated in the water quality measured in FA-DG4, as shown in Attached Table 3. Overall, the alignment between the predicted and measured concentrations at FA-DG4 validates the reasonableness of the model.

Concentrations of boron, a relatively conservative tracer, and fluoride predicted by the mixing model water are comparable to the measured concentrations at FA-DG4. Total dissolved solids and major ion concentrations are not as closely predicted by the mixing model because the model does not account for salts in the soils dissolving into the mixed groundwater as it flows towards FA-DG4.

The correspondence between the water quality measured at FA-DG4 and the model support the hypothesis that downgradient groundwater quality can be explained by the contribution of upgradient water sources and the interaction with native materials.

- Hypothesis: Groundwater impacted by flux from the NEP represented by FA-UG2, upgradient groundwater represented by FA-UG1, and groundwater from FA-DG2 are mixing at the location of FA-DG4 and contributing to the SSI for fluoride in the FA-DG4 monitoring well.
- Analysis: A mixing model of the concentrations from monitoring wells FA-UG1, FA-UG2, and FA-DG2 were used to evaluate whether the water quality at FA-DG4 can be represented as a mixture of groundwater of different chemical composition that flow along different flow paths toward FA-DG4.
- Result: The model demonstrated that the concentrations of fluoride and boron in FA-DG4 can be explained by mixing groundwaters from upgradient sources FA-UG1 and FA-UG2 with downgradient water represented by FA-DG2. Groundwater at FA-UG2 impacted by the NEP is the primary source of boron and the groundwater at FA-DG2 is the primary source of fluoride. As changes occur through time of the (1) proportions of these upgradient groundwater types that mix at FA-DG4 and (2) water quality of each of the groundwater types, the concentrations measured at FA-DG4 will change. Therefore, the natural variability of the input terms represented in the mixing model likely contribute to the SSI observed in FA-DG4.

6.3 Fluoride from the FA Landfill

The composition of CCR leachate was compared to downgradient water quality to evaluate whether the CCR leachate is impacting the groundwater.

The Piper plot (Figure 7) shows that the major ion compositions of the SPLP leachate of CCR material is different from the ion composition of groundwater collected from downgradient monitoring wells. Calcium and sulfate are the dominant ions in the CCR extracts, whereas sodium with sulfate, bicarbonate, and chloride are the dominant ions in groundwater from FA-DG4.

In addition to differences in major ion compositions between CCR leachates and downgradient groundwater, the low concentrations of fluoride (<0.04 mg/L) and boron (0.5 – 2 mg/L) in the SPLP leachates of CCR material (Attached Table 4) combined with negligible fluid flux through the FA Landfill to the water table (Section 5.1) suggests that the CCR unit is an implausible source of fluoride and boron measured in the groundwater at FA-DG4. For illustrative purposes, assuming the extreme situation in which the groundwater at FA-DG4 was 100 percent seepage from the FA Landfill, the fluoride concentration in the flux from the CCR material would have to be 2 orders of magnitude higher than measured in the SPLP extracts to account for the fluoride concentration measured at FA-DG4. The data refute the hypothesis that the release is due to the CCR unit.

- Hypothesis: The water quality of groundwater at FA-DG4 is impacted by flux from the CCR material in FA Landfill.
- Analysis: Leaching tests were performed on samples collected from borings advanced into the CCR unit, and the resulting samples were analyzed for major ions and CCR parameters. A transient infiltration analysis through the FA Landfill was simulated.
- Result: The analysis showed that:

1. Concentrations of leachable fluoride from CCR material in the FA Landfill is two orders of magnitude less than fluoride concentration measured at FA-DG4,
2. Concentrations of leachable boron from CCR material in the FA Landfill is an order of magnitude less than fluoride concentration measured at FA-DG4,
3. The major ion composition of CCR material is different from the major ion composition in the downgradient groundwater, and
4. The modeled fluid flux through the FA Landfill is negligible and does not reach the groundwater table under very conservative assumptions.
5. Taken together, the findings from the analysis demonstrate that seepage from the FA Landfill is implausible, and therefore, the landfill is not a likely source of a release.

7 Summary and Conclusions

The following are lines of evidence indicating the SSI for fluoride from the spring 2025 monitoring event at FA-DG4 is due to a “source other than” the Fly Ash Landfill and/or due to natural variation:

1. Fluoride is present in native geology based on both regional data and confirmed by site-specific sampling from borings placed near monitoring wells at the FA Landfill.
2. Fluoride concentrations in the NEP ranged from 19.8 mg/L to 59.3 mg/L from April 2020 through May 2025. The concentration of fluoride in the pond and the driving head varies as a function of the volume of process water added to the pond and the rate of evaporation, so seepage to groundwater is not constant over time, causing variations in the mass contributed to the flow system. The NEP has an estimated seepage rate of $63.5\text{E-}07 - 3.88\text{E-}06$ cm/s.
3. Hydrus 1-D seepage modeling based site-specific input data indicates that the FA Landfill is unlikely to contribute sufficient volume of leachate to result in the concentrations observed at FA-DG4. Other sources, such as seepage from the NEP and naturally occurring fluoride present in the native geology, are much more likely than not to be the primary sources of fluoride in FA-DG4 and other downgradient wells.
4. The fluoride concentrations in the SPLP leachate representing groundwater chemistry of the fly ash (<0.4 mg/L) are not sufficient to account for the fluoride concentrations at FA-DG4. This finding, combined with the unsaturated modeling described above, further supports the observation that seepage from the landfill is not a plausible source of the increasing fluoride concentrations observed at FA-DG4.
5. Fluoride concentrations measured in soil vary from upgradient to downgradient locations and with depth due to the heterogenous nature of the geologic depositional environment. The highest fluoride concentration was measured in soils collected from TB-24-Geo1 near FA-DG2 at a depth near the water table.
6. In addition to the NEP, infiltration through native geology and interaction of fluoride in the geology from water table fluctuations at FA-DG2 and FA-DG3 are also a source of fluoride to groundwater at FA-DG4. This is due to the operations of the pumpback system, which can cause flow from the east from FA-DG2 and FA-DG3 toward FA-DG4 (Section 5.3). The fluoride concentrations from April 2020 through May 2025 at FA-DG2 (37.1 mg/L – 52.3 mg/L) and at FA-DG3 (5.61 mg/L – 10.1 mg/L) are greater than measured at FA-DG4 (<1 mg/L – 8.14 mg/L).
7. The results from the geochemical mixing model suggest that the groundwater at FA-DG4 is primarily composed of upgradient water represented by FA-UG1 with lesser proportions of NEP influenced water (FA-UG2) and local groundwater represented by FA-DG2 water interacting with native geology.

The foregoing ASD establishes lines of evidence that meet the alternative source requirements of the CCR Rule §257.94(e)(2). Specifically, the SSI for fluoride from the spring 2025 monitoring event at FA-DG4 is due to a “source other than” the Fly Ash Landfill and/or to natural variation based on both site-specific and regional data.

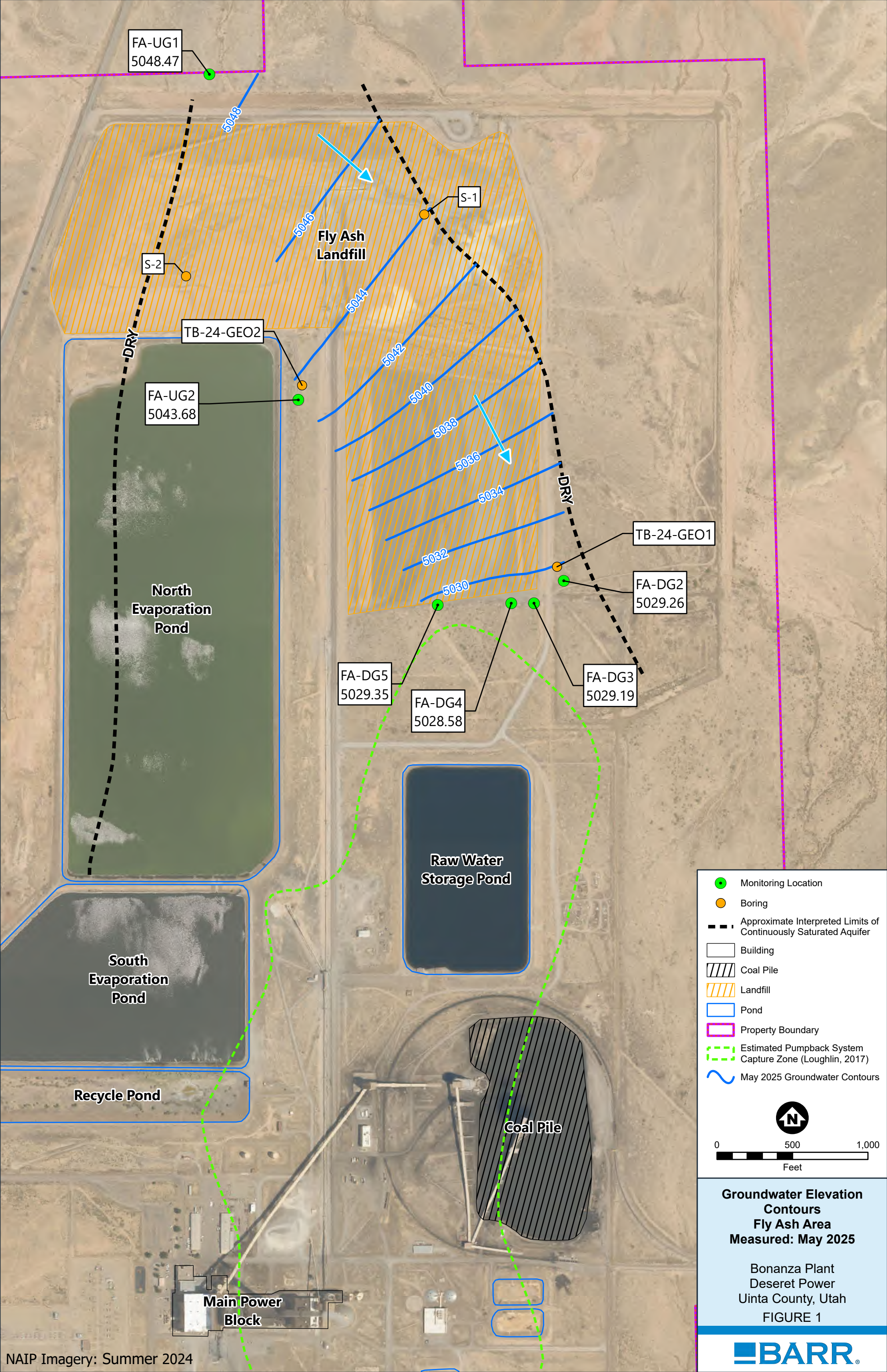
8 References

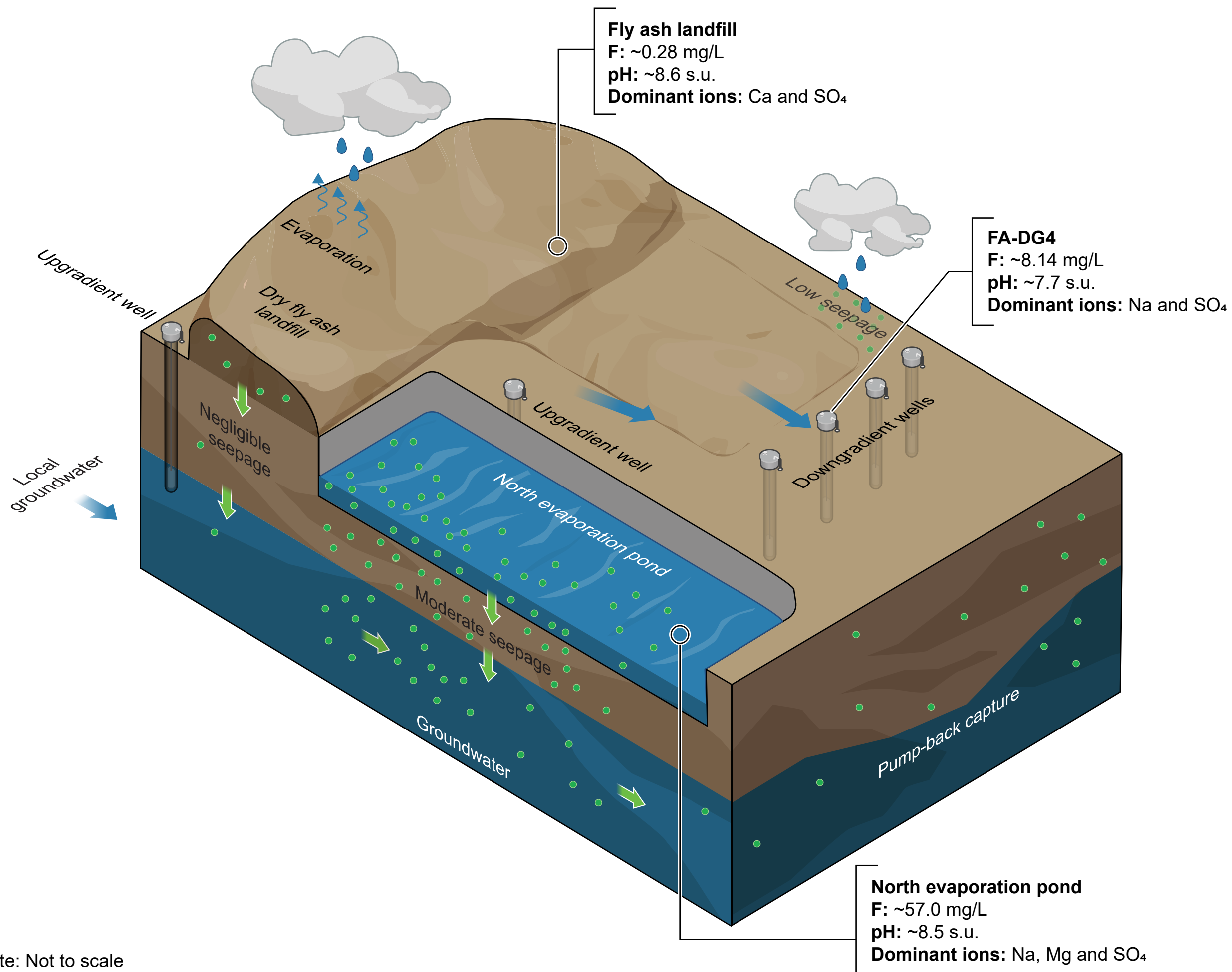
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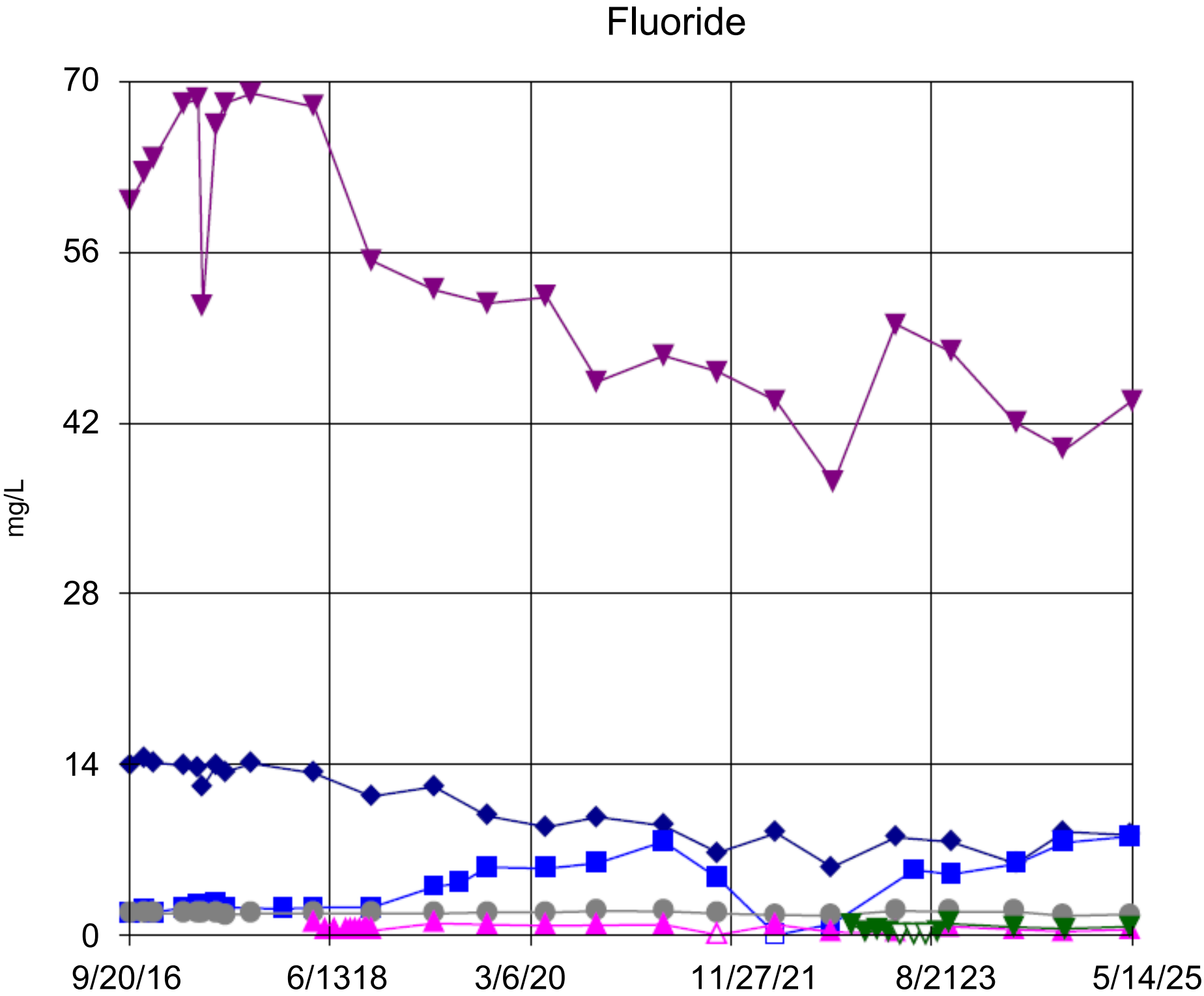
Figures

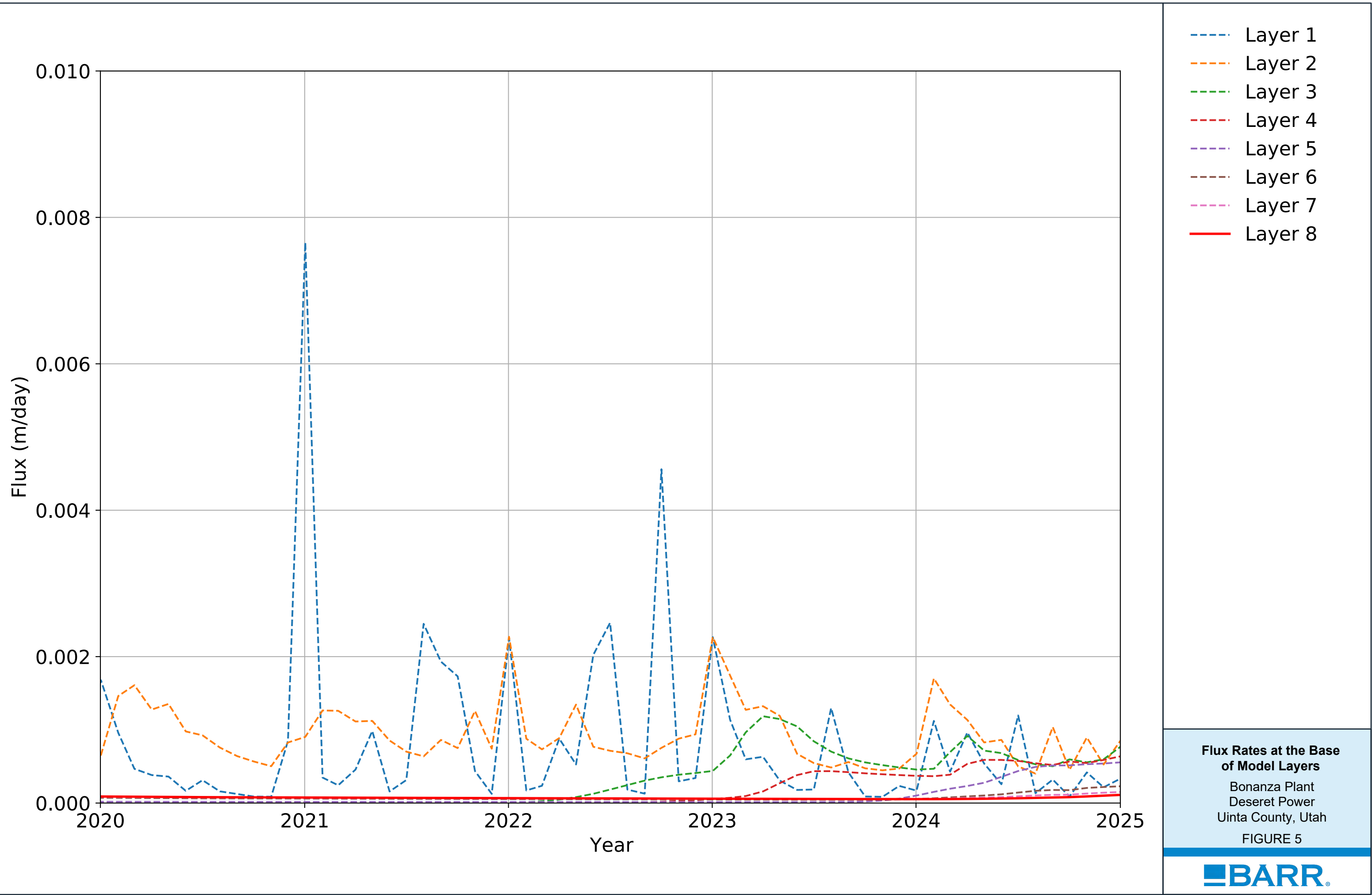


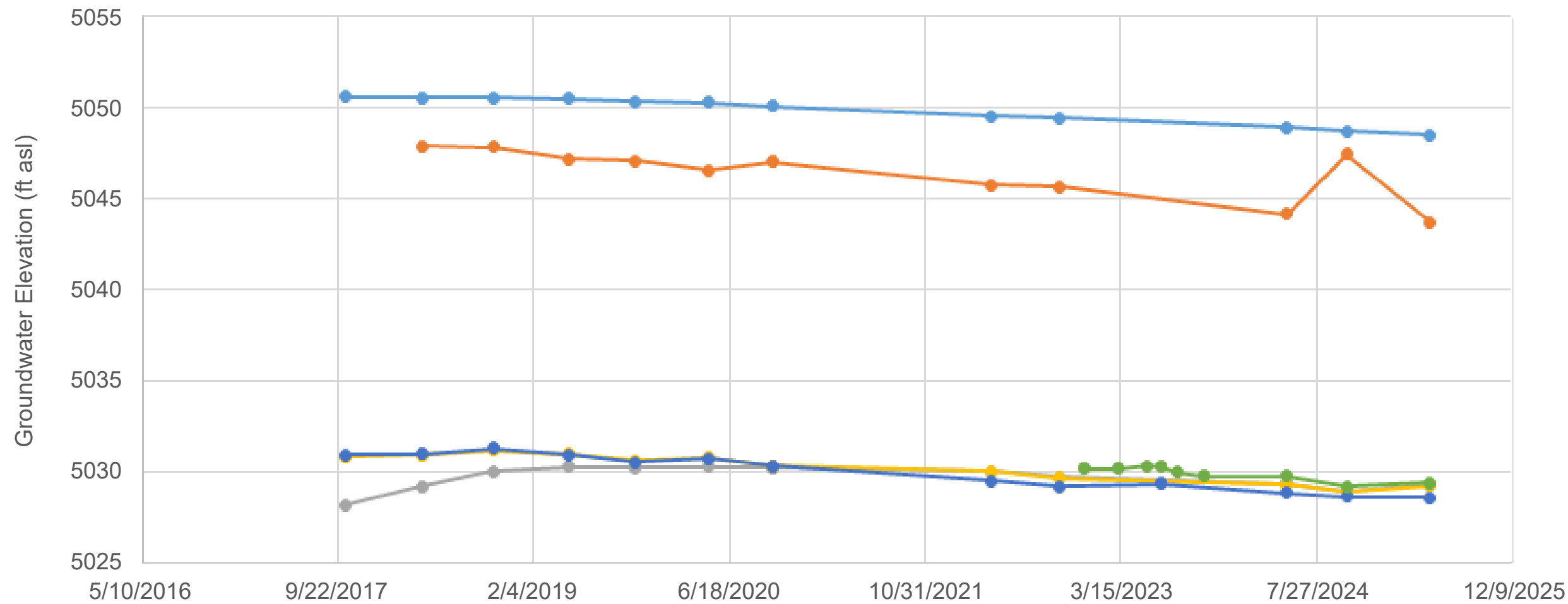


- Fluoride
- ↓ Fluoride seepage
- ↓ Groundwater flow

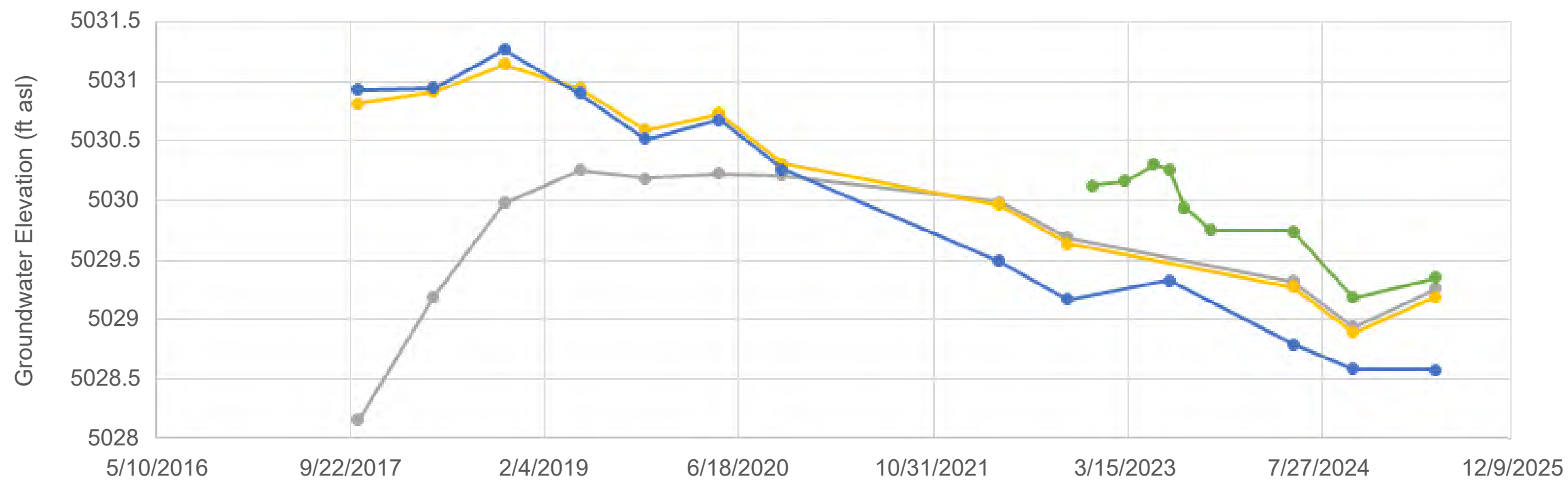
**Conceptual Site Model
Fly Ash Area**
Bonanza Plant
Deseret Power
Uinta County, Utah
FIGURE 2







Downgradient Wells



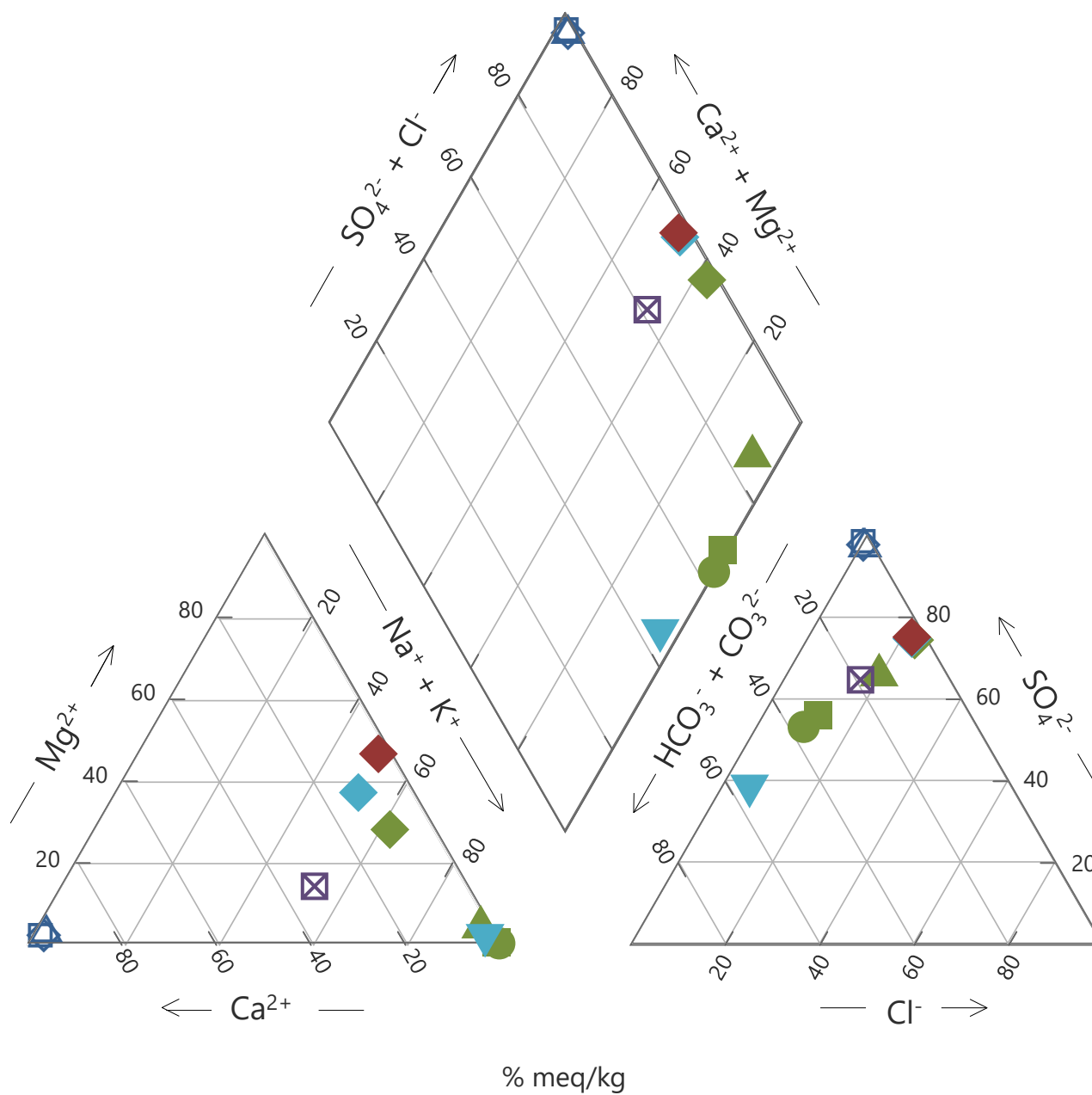
- FA-UG1
- FA-UG2
- FA-DG2
- FA-DG3
- FA-DG4
- FA-DG5

Hydrograph

Bonanza Plant
Deseret Power
Uinta County, Utah

FIGURE 6





SPLP Samples

- ◇ S1
- △ S2
- S1 (89.5-90')

Groundwater Samples

- FA-DG2
- FA-DG3
- ▲ FA-DG4
- ◆ FA-DG5
- ▼ FA-UG1
- ◆ FA-UG2
- ⊠ Mix

Surface Water Sample

- ◆ NEP

Piper Diagram
 Deseret Power
 Bonanza Plant
 FIGURE 7



Attached Tables

Table 1
Soil Analytical Results
Deseret Power Bonanza Plant

Location	TB-24-Geo1	TB-24-Geo1	TB-24-Geo1	TB-24-Geo1	TB-24-Geo1	TB-24-Geo1	TB-24-Geo2	TB-24-Geo2	TB-24-Geo2	TB-24-Geo2
Depth	0 - 3 ft	3 - 5.5 ft	5.5 - 16 ft	18.5 - 27.5 ft	36 - 39 ft	39 - 44 ft	0 - 10 ft	10 - 18 ft	18 - 36.5 ft	36.5 - 40 ft
Date	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024	11/6/2024
Parameter [mg/kg unless otherwise noted]										
Fluoride	4.50	2.40	6.50	2.20	7.90	6.70	2.00	2.20	3.70	2.60
Chloride	18.8	<12	24.5	<10.2	72.3	17.4	25.2	<10.9	66.4	<10.5
Sulfate	<66.8	<59.9	62.7	88.1	724	205	191	<54.5	358	<52.4
Boron	<9.6	<8.5	<7.5	<7.4	11.8	12.2	<7.5	<8.0	<7.7	<7.8
Calcium	34800	19900	36000	23800	34200	43800	28900	31900	20100	41900
Magnesium	8420	3380	9000	3180	8600	11400	5220	6910	2690	8550
Potassium	1560	672	1830	615	1540	2020	904	1340	571	1350
Sodium	93.8	79.3	515	488	1850	2270	162	478	168	726
pH (s.u.)	8.4	9.1	9.4	10.3	9.9	10.4	8.6	9.8	9.1	10.0

Table 2
Summary of Hydrus Model Layers and Material Properties
Deseret Power Bonanza Plant

Layer	Hydraulic conductivity	Elevation (ft)	Soil Description
	<i>Upper limit</i>		
1	1.0E-05	5152	Black, fine-grained, loose surface ash, with some weak to moderate cementation.
2	1.0E-07	5122	Black, consistent grain size (fine), mostly dry to moist, with sparse gypsum and scattered cemented chunks or ash balls.
3	1.0E-08	5086	Black, frequent gypsum presence, some blocky textures, and weak to moderate cementation.
4	1.0E-08	5076.5	Black, very fine to fine grained, weak to moderate cementation and blocky structures.
5	1.0E-09	5069.5	Grey/black, moist, claylike cohesive materials.
6	5.0E-06	5051	Light Brown Silty, Fine Sand - Loose to Medium Dense ; Grades with some medium sand; fine to medium grained.
7	5.35E-04	5046.2	Grades with less silt, light brown fine to medium sand with some silt and trace coarse sand - medium dense.
8	5.0E-06	5044	Brown Silty fine to medium sand, moist - medium dense

Table 3
Geochemical Mixing Model Results
Deseret Power Bonanza Plant

		Saturation Indices ¹						Concentration									
Solution	Mixing Ratio	CO2(g)	Calcite	Fluorite	Gypsum	Magnesite	pH	Alkalinity, total	Boron	Calcium	Chloride	Fluoride	Potassium	Magnesium	Sodium	Sulfate	TDS
	%						s.u.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
FA-UG1	65	-2.49	-0.06	-1.74	-2.19	-0.92	8.1	489	0.86	8.0	35.2	1.75	1.4	5.2	414	327	1030
FA-UG2	19	-1.53	-0.12	-2.09	0.13	-0.46	6.9	381	55.5	561	1850	0.495	8.5	1120	2920	8490	16,800
FA-DG2	16	-2.77	-0.02	-0.50	-2.76	0.33	9.0	3710	8.09	<2.0	707	43.8	7.2	7.7	4510	5130	13,300
Mix	N/A	-1.89	0.10	-0.16	-1.06	0.11	7.6	820	12.6	48.8	495	8.34	3.7	220	1566	2682	5857
FA-DG4	N/A	-1.89	0.10	-0.21	-1.03	-0.35	7.7	912	12.3	45.6	878	8.14	5.1	73.1	2780	4020	8680

Notes:

¹Saturation Indices (SIs) of a mineral expresses its equilibrium condition relative to the aqueous chemistry.

An SI of zero represents theoretical equilibrium.

An SI of greater than zero represents supersaturation and the mineral should precipitate if kinetics are favorable.

An SI of less than zero represents undersaturated conditions and the mineral should dissolve if it is present and the kinetics are favorable.

Table 4
Synthetic Precipitation Leaching Procedure Results
Deseret Power Bonanza Plant

Location	S1	S1	S2
Depth	89.5 - 90 ft	0 - 90 ft	0 - 90 ft
Date	12/17/2019	12/17/2019	12/17/2019
Parameter [mg/l unless otherwise noted]			
SPLP General Parameters			
Alkalinity, Bicarbonate, as CaCO ₃ (reprep)	26	25	20
Alkalinity, Carbonate as CaCO ₃ (reprep)	< 10.0	12	20
Alkalinity, Hydroxide as CaCO ₃ (reprep)	< 10.0	< 10.0	< 10.0
Alkalinity, Total, as CaCO ₃ (reprep)	30	37	40
Chloride	3.05	8.93	11.4
Fluoride	0.185	0.288	0.38
pH (reprep) [pH units]	8.59	8.65	9.19
Sulfate	1,500	1,500	1,580
SPLP Metals			
Antimony	< 0.0300	< 0.0300	< 0.0300
Arsenic	< 0.0200	< 0.0200	< 0.0200
Beryllium	< 0.0100	< 0.0100	< 0.0100
Boron	0.554	1	2
Cadmium	< 0.00350	< 0.00350	< 0.00350
Calcium	652	622	656
Calcium (reprep)	708	633	677
Chromium	< 0.100	< 0.100	< 0.100
Cobalt	< 0.0200	< 0.0200	< 0.0200
Lead	< 0.0100	< 0.0100	< 0.0100
Lithium	< 0.100	< 0.100	< 0.100
Magnesium	< 1.00	1.15	5.15
Mercury	< 0.00100	< 0.00100	< 0.00100
Molybdenum	0.322	0.0623	0.104
Potassium	< 1.00	1.24	1.45
Selenium	0.0137	< 0.0100	0.0306
Sodium	24.6	27.1	30.9
Thallium	< 0.0100	< 0.0100	< 0.0100



Appendix A Boring Logs

Appendix A

Boring Logs





Barr Engineering Co.
170 South Main Street Suite 500
Salt Lake City, UT 84101
Telephone: 801-333-8400

LOG OF BORING TB-24-GEO1

SHEET 1 OF 1

Project: Deseret Power
Project No.: 44241001
Location: Bonanza, UT
Coordinates: NAD 1983 StatePlane Utah North FIPS 4301 Feet
Surface Elevation: 5061.1 ft
Drilling Method: Sonic
Sampling Method: Sonic
Completion Depth: 44.0 ft

Depth, feet	Sample Type & Recovery	Sample No.	U S C S	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation, feet
0					SILT (ML): Brown (7.5YR 5/6); dry; strong HCl reaction; 90% silt, 5% very fine sand; roots abundant. 1.4-2.0'- sand content increases to 60% fine sand, 40% fines.	5060
5		1	ML		SILTY SAND (SM): Yellow Brown (5YR 5/6); dry; subangular; 80% very fine to fine sand, 20% silt; trace roots; subangular grains; subrounded-rounded quartz grains; white evaporite grains. 4.5-4.8'- silt lens.	
		2	SM		SILT (ML): Redish Brown (; dry; strong HCl reaction; massive; 95% silt, 5% very fine sand, trace medium sand. 9.5-10'- silty sand lens.	5055
10		3	ML		14'- harder silt fragments, drier. 15-16'- sand content increases with depth.	5050
15		4	SM		SILTY SAND (SM): Brown (7.5YR 5/4); dry; 65% fine sand, 35% silty fines; trace medium to coarse sand and white evaporite; subrounded.	5045
20			ML		SILT (ML): Brown (7.5YR 5/4); dry; 95% fines, 5% very fine sand.	
			SM		SILTY SAND (SM): Brown (7.5YR 5/4); dry; 70% very fine to medium sand, 30% fines, trace subangular feldspar, quartz, fine gravel.	
					SILTY SAND (SM): Yellow Red (5YR 5/6); moist; 60% fine to medium sand, 40% fines, trace subrounded fine gravel.	5040
25		5	SM		22'- Color change to Light Yellow Brown (10YR 6/4); fine sand with trace medium sand.	5035
30			ML		SILT (ML): Light Yellow Brown (10YR 6/4); moist; very soft; low plasticity; slow dilatancy; weak HCl reaction; thinly bedded; some clay. 29.8'- 1" SM lense, dry, Dark Gray (10YR 6/4), 60% very fine to fine sand with trace medium sand, 40% fines with a strong HCl reaction.	5030
			SM		SILTY SAND (SM): Brown (7.5 YR 5/4); moist; subangular; strong HCl reaction; 65% very fine to fine sand, 35% fines; Silt increases with depth.	
35		6	ML		SILT (ML): Brown (7.5YR 5/4); dry; soft; massive; cohesive. 36'- moist.	5025
40		7			CLAYSTONE: Light Yellow Brown (2.5Y 6/4); dry; hard; strong HCl reaction; strong cementation; conchoidal fracture with very moderate weathering. 39-40.5'- light yellowish brown, with red and olive grey mottling. 40.5-42'- Dark Red Brown (2.5 YR 3/4); matrix with yellow, purple, and grey mottling; moderately weathered. 42-44'- reddish brown, yellow, and grey mottling; Red matrix; some weak HCl reaction on fresh rock; mildly weathered.	5020
45					End of boring 44.0 feet	5015
50						

Date Boring Started: 11/5/24 4:30 pm
Date Boring Completed: 11/6/24 10:45 am
Logged By: KJN3
Drilling Contractor: Cascade
Drill Rig: Sonic

Remarks: Driller possible void zone at 35'. Backfilled with native material. EOB at 44' due to bedrock encounter.

Additional data may have been collected in the field which is not included on this log.

\\EDI-CAD\CAD\GINT\PROJECTS\44241001\DESERET POWER\DESERET_FA-HES.GPJ_BARR\LIBRARY\GLB_ENVIRO LOG_BARR TEMPLATE.GDT



Barr Engineering Co.
170 South Main Street Suite 500
Salt Lake City, UT 84101
Telephone: 801-333-8400

LOG OF BORING TB-24-GEO2

SHEET 1 OF 1

Project: Deseret Power
Project No.: 44241001
Location: Bonanza, UT
Coordinates: NAD 1983 StatePlane Utah North FIPS 4301 Feet
Surface Elevation: 5078.1 ft
Drilling Method: Sonic
Sampling Method: Sonic
Completion Depth: 40.0 ft

Depth, feet	Sample Type & Recovery	Sample No.	USCS	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation, feet
0			ML		SANDY SILT (ML): Brown (10YR 5/3); dry; strong HCl reaction; 35-80% silty fines, 15% very fine sand grades to 40% very fine sand.	
		1	ML		SILT (ML): Brown (10YR 5/3); dry; strong HCl reaction; 5% very fine sand; fine roots.	
5		7	SM		SILTY SAND (SM): Brown (7.5YR 5/4); dry; strong HCl reaction; 60% very fine sand, 40% silt; angular to subrounded; fine roots to 4', trace medium sand. 4-5.5'- white; fine sand, evaporites; silt decreases to 15% very fine and fine sand with trace medium sand. 5.5-7.5'- 40% silt, 60% fine sand, trace medium sand.	5075
		2	SM		7.5-8'- 20% fines, fine sand with trace medium sand. SILTY SAND (SM): Reddish Yellow (5YR 6/6); moist; 70% very fine to fine sand, 30% fines; some mafic grains.	5070
10			ML		SANDY SILT (ML): Brown (7.5YR 5/4); moist; strong HCl reaction; 60-90% silty fines, 10-15% very fine to fine sand increasing to 40% from 14-18'; trace medium sand.	5065
15		3	ML			
			SM		SILTY SAND (SM): Brown (7.5YR 5/4); dry to moist; angular; 85% fine sand, 15% fines; trace evaporites.	5060
20			SM		SILTY SAND (SM): Strong Brown (7.5YR 5/6); moist; weak HCl reaction; 55% fine sand, 45% silty fines; trace medium sand.	
25		4	SM		23.6-23.8'- silt content increases to 55%; grain size coarsens with depth to fine and medium sand with trace coarse sand.	5055
30			SM		29.5-30'-sandy silt (ML); cohesive; moist; hard; 1cm grey sand pockets.	5050
35		5	SM		32-35'- dry claystone fragments; very weathered.	5045
			CLAYSTONE		CLAYSTONE: Brown (7.5YR 5/4); dry; hard; red yellow mottling; strong HCl reaction; massive; moderately weathered.	5040
40		6			End of boring 40.0 feet	
45						5035

Date Boring Started: 11/6/24 2:30 pm
Date Boring Completed: 11/6/24 4:15 pm
Logged By: KJN3
Drilling Contractor: Cascade
Drill Rig: Sonic

Remarks: Driller reported hard drilling at 37'. Backfilled with native material.
EOB at 40' due to bedrock encounter.

Additional data may have been collected in the field which is not included on this log.

\\EDI-CAD\CAD\GINT\PROJECTS\44241001\DESERET POWER\DESERET_FA-HES.GPJ_BARR\LIBRARY.GLB_ENVIRO LOG_BARR TEMPLATE.GDT



Appendix B Lab Reports

Appendix B

Lab Reports





December 12, 2024

Anna Schneider
Barr Engineering Company
4300 MarketPointe Dr
Suite 200
Minneapolis, MN 55435

RE: Project: 44241010.04 Deseret Power
Pace Project No.: 10715613

Dear Anna Schneider:

Enclosed are the analytical results for sample(s) received by the laboratory on November 13, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Beaver
- Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Martha Hansen
martha.hansen@pacelabs.com
(612)607-6451
Project Manager

Enclosures

cc: Barr DM, Barr Engineering
Accounts Payable, Barr Engineering



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



CERTIFICATIONS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas DW Certification #: MN00064

Arkansas WW Certification #: 88-0680

California Certification #: 2929

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

DoD Certification via A2LA #: 2926.01

EPA Region 8 Tribal Water Systems+Wyoming DW
Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

GMP+ Certification #: GMP050884

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

ISO/IEC 17025 Certification via A2LA #: 2926.01

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: AI-03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240

Mississippi Certification #: MN00064

Missouri Certification #: 10100

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification (A2LA) #: R-036

North Dakota Certification (MN) #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification (1700) #: CL101

Oklahoma Certification #: 9507

Oregon Primary Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Vermont Certification #: VT-027053137

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DEP Certification #: 382

West Virginia DW Certification #: 9952 C

Wisconsin Certification #: 999407970

Wyoming UST Certification via A2LA #: 2926.01

USDA Permit #: P330-19-00208

Pace Analytical Services Beaver

225 Industrial Park Road, Beaver, WV 25813

Virginia VELAP 460148

West Virginia DEP 060

West Virginia DHHR 00412CM

North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10715613001	TB-24-Geo1_0-3	Solid	11/05/24 16:25	11/13/24 08:50
10715613002	TB-24-Geo1_3-5.5	Solid	11/05/24 16:30	11/13/24 08:50
10715613003	TB-24-Geo1_5.5-16	Solid	11/06/24 11:45	11/13/24 08:50
10715613004	TB-24-Geo1_18.5-27.5	Solid	11/06/24 11:50	11/13/24 08:50
10715613005	TB-24-Geo1_36-39	Solid	11/06/24 11:55	11/13/24 08:50
10715613006	TB-24-Geo1_39-44	Solid	11/06/24 12:00	11/13/24 08:50
10715613007	TB-24-Geo2_0-10	Solid	11/06/24 16:45	11/13/24 08:50
10715613008	TB-24-Geo2_10-18	Solid	11/06/24 16:50	11/13/24 08:50
10715613009	TB-24-Geo2_18-36.5	Solid	11/06/24 16:55	11/13/24 08:50
10715613010	TB-24-Geo2_36.5-40	Solid	11/06/24 17:00	11/13/24 08:50

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SAMPLE ANALYTE COUNT

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10715613001	TB-24-Geo1_0-3	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613002	TB-24-Geo1_3-5.5	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613003	TB-24-Geo1_5.5-16	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613004	TB-24-Geo1_18.5-27.5	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613005	TB-24-Geo1_36-39	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613006	TB-24-Geo1_39-44	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613007	TB-24-Geo2_0-10	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613008	TB-24-Geo2_10-18	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613009	TB-24-Geo2_18-36.5	EPA 9056A	MAT	3	PASI-BV
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M
10715613010	TB-24-Geo2_36.5-40	EPA 9056A	MAT	3	PASI-BV

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SAMPLE ANALYTE COUNT

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010D	IP	5	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	KEO	1	PASI-M

PASI-BV = Pace Analytical Services - Beaver

PASI-M = Pace Analytical Services - Minneapolis

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PROJECT NARRATIVE

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Date: December 12, 2024

Case Narrative

WET Chemistry

2320B Alkalinity

The laboratory was unable to analyze the samples submitted for method 2320B alkalinity. Alkalinity analysis involves the titration of samples with sulfuric acid (H_2SO_4) to end points of pH 4.5 s.u. for total alkalinity. The laboratory attempted titration at two separate attempts using the maximum titrant volume of 50mL allowed per the method, once at the standard titrant of 0.02N H_2SO_4 and again using 0.1N H_2SO_4 . In both attempts, the samples over-titrated. The laboratory was unable to achieve the necessary endpoint required by the method and analysis could not be performed nor could a true concentration be mathematically determined. The instrument also did not record pH data values due to the inability of the samples to the inability to titrate. The laboratory also needed to replace an electrode on the instrument after attempting analysis.

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_0-3 Lab ID: 10715613001 Collected: 11/05/24 16:25 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	18.8	mg/kg	13.4	6.0	1	11/21/24 09:10	11/21/24 14:59	16887-00-6	
Fluoride	4.5	mg/kg	2.7	1.3	1	11/21/24 09:10	11/21/24 14:59	16984-48-8	
Sulfate	<66.8	mg/kg	66.8	13.4	1	11/21/24 09:10	11/21/24 14:59	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<9.6	mg/kg	9.6	1.1	1	11/19/24 11:47	11/21/24 13:39	7440-42-8	
Calcium	34800	mg/kg	31.9	4.0	1	11/19/24 11:47	11/21/24 13:39	7440-70-2	P6
Magnesium	8420	mg/kg	31.9	1.1	1	11/19/24 11:47	11/21/24 13:39	7439-95-4	P6
Potassium	1560	mg/kg	160	8.3	1	11/19/24 11:47	11/21/24 13:39	7440-09-7	M1
Sodium	93.8	mg/kg	63.9	1.9	1	11/19/24 11:47	11/21/24 13:39	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	25.1	%	0.10	0.10	1		11/18/24 10:07		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	8.4	Std. Units	0.10	0.10	1		11/26/24 14:30		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_3-5.5 Lab ID: 10715613002 Collected: 11/05/24 16:30 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	<12.0	mg/kg	12.0	5.4	1	11/21/24 09:10	11/21/24 15:18	16887-00-6	
Fluoride	<2.4	mg/kg	2.4	1.2	1	11/21/24 09:10	11/21/24 15:18	16984-48-8	
Sulfate	<59.9	mg/kg	59.9	12.0	1	11/21/24 09:10	11/21/24 15:18	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<8.5	mg/kg	8.5	0.97	1	11/19/24 11:47	11/21/24 13:51	7440-42-8	
Calcium	19900	mg/kg	28.5	3.6	1	11/19/24 11:47	11/21/24 13:51	7440-70-2	
Magnesium	3380	mg/kg	28.5	0.96	1	11/19/24 11:47	11/21/24 13:51	7439-95-4	
Potassium	672	mg/kg	142	7.4	1	11/19/24 11:47	11/21/24 13:51	7440-09-7	
Sodium	79.3	mg/kg	57.0	1.7	1	11/19/24 11:47	11/21/24 13:51	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	16.5	%	0.10	0.10	1		11/18/24 10:07		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	9.1	Std. Units	0.10	0.10	1		11/26/24 14:31		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_5.5-16 Lab ID: 10715613003 Collected: 11/06/24 11:45 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	24.5	mg/kg	10.4	4.7	1	11/21/24 09:10	11/21/24 15:37	16887-00-6	
Fluoride	6.5	mg/kg	2.1	1.0	1	11/21/24 09:10	11/21/24 15:37	16984-48-8	
Sulfate	62.7	mg/kg	51.9	10.4	1	11/21/24 09:10	11/21/24 15:37	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<7.5	mg/kg	7.5	0.85	1	11/19/24 11:47	11/21/24 13:53	7440-42-8	
Calcium	36000	mg/kg	24.9	3.1	1	11/19/24 11:47	11/21/24 13:53	7440-70-2	
Magnesium	9000	mg/kg	24.9	0.84	1	11/19/24 11:47	11/21/24 13:53	7439-95-4	
Potassium	1830	mg/kg	125	6.4	1	11/19/24 11:47	11/21/24 13:53	7440-09-7	
Sodium	515	mg/kg	49.8	1.4	1	11/19/24 11:47	11/21/24 13:53	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	3.6	%	0.10	0.10	1		11/18/24 10:08		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	9.4	Std. Units	0.10	0.10	1		11/26/24 14:33		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_18.5-27.5 Lab ID: 10715613004 Collected: 11/06/24 11:50 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	<10.2	mg/kg	10.2	4.6	1	11/21/24 09:10	11/21/24 15:56	16887-00-6	
Fluoride	2.2	mg/kg	2.0	1.0	1	11/21/24 09:10	11/21/24 15:56	16984-48-8	
Sulfate	88.1	mg/kg	50.8	10.2	1	11/21/24 09:10	11/21/24 15:56	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<7.4	mg/kg	7.4	0.84	1	11/19/24 11:47	11/21/24 13:54	7440-42-8	
Calcium	23800	mg/kg	24.6	3.1	1	11/19/24 11:47	11/21/24 13:54	7440-70-2	
Magnesium	3180	mg/kg	24.6	0.83	1	11/19/24 11:47	11/21/24 13:54	7439-95-4	
Potassium	615	mg/kg	123	6.4	1	11/19/24 11:47	11/21/24 13:54	7440-09-7	
Sodium	488	mg/kg	49.3	1.4	1	11/19/24 11:47	11/21/24 13:54	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	1.6	%	0.10	0.10	1		11/18/24 10:08		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	10.3	Std. Units	0.10	0.10	1		11/26/24 14:34		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_36-39 Lab ID: 10715613005 Collected: 11/06/24 11:55 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	72.3	mg/kg	11.7	5.3	1	11/21/24 09:10	11/21/24 16:14	16887-00-6	
Fluoride	7.9	mg/kg	2.3	1.2	1	11/21/24 09:10	11/21/24 16:14	16984-48-8	
Sulfate	724	mg/kg	58.6	11.7	1	11/21/24 09:10	11/21/24 16:14	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	11.8	mg/kg	8.7	1.0	1	11/19/24 11:47	11/21/24 13:56	7440-42-8	
Calcium	34200	mg/kg	29.1	3.7	1	11/19/24 11:47	11/21/24 13:56	7440-70-2	
Magnesium	8600	mg/kg	29.1	0.98	1	11/19/24 11:47	11/21/24 13:56	7439-95-4	
Potassium	1540	mg/kg	146	7.5	1	11/19/24 11:47	11/21/24 13:56	7440-09-7	
Sodium	1850	mg/kg	58.2	1.7	1	11/19/24 11:47	11/21/24 13:56	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	14.6	%	0.10	0.10	1		11/18/24 10:08		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	9.9	Std. Units	0.10	0.10	1		11/26/24 14:36		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo1_39-44 Lab ID: 10715613006 Collected: 11/06/24 12:00 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	17.4	mg/kg	10.4	4.7	1	11/21/24 09:10	11/21/24 17:13	16887-00-6	
Fluoride	6.7	mg/kg	2.1	1.0	1	11/21/24 09:10	11/21/24 17:13	16984-48-8	
Sulfate	205	mg/kg	51.9	10.4	1	11/21/24 09:10	11/21/24 17:13	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	12.2	mg/kg	7.7	0.88	1	11/19/24 11:47	11/21/24 13:58	7440-42-8	
Calcium	43800	mg/kg	25.8	3.3	1	11/19/24 11:47	11/21/24 13:58	7440-70-2	
Magnesium	11400	mg/kg	25.8	0.87	1	11/19/24 11:47	11/21/24 13:58	7439-95-4	
Potassium	2020	mg/kg	129	6.7	1	11/19/24 11:47	11/21/24 13:58	7440-09-7	
Sodium	2270	mg/kg	51.5	1.5	1	11/19/24 11:47	11/21/24 13:58	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	3.6	%	0.10	0.10	1		11/18/24 10:08		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	10.4	Std. Units	0.10	0.10	1		11/26/24 14:37		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo2_0-10 Lab ID: 10715613007 Collected: 11/06/24 16:45 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	25.2	mg/kg	10.2	4.6	1	11/21/24 09:10	11/21/24 17:32	16887-00-6	
Fluoride	<2.0	mg/kg	2.0	1.0	1	11/21/24 09:10	11/21/24 17:32	16984-48-8	
Sulfate	191	mg/kg	51.2	10.2	1	11/21/24 09:10	11/21/24 17:32	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<7.5	mg/kg	7.5	0.85	1	11/19/24 11:47	11/21/24 13:59	7440-42-8	
Calcium	28900	mg/kg	25.0	3.2	1	11/19/24 11:47	11/21/24 13:59	7440-70-2	
Magnesium	5220	mg/kg	25.0	0.84	1	11/19/24 11:47	11/21/24 13:59	7439-95-4	
Potassium	904	mg/kg	125	6.5	1	11/19/24 11:47	11/21/24 13:59	7440-09-7	
Sodium	162	mg/kg	50.0	1.4	1	11/19/24 11:47	11/21/24 13:59	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	2.4	%	0.10	0.10	1		11/18/24 10:08		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	8.6	Std. Units	0.10	0.10	1		11/26/24 14:38		

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo2_10-18 Lab ID: 10715613008 Collected: 11/06/24 16:50 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	<10.9	mg/kg	10.9	4.9	1	11/21/24 09:10	11/21/24 17:52	16887-00-6	
Fluoride	<2.2	mg/kg	2.2	1.1	1	11/21/24 09:10	11/21/24 17:52	16984-48-8	
Sulfate	<54.5	mg/kg	54.5	10.9	1	11/21/24 09:10	11/21/24 17:52	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<8.0	mg/kg	8.0	0.92	1	11/19/24 11:47	11/21/24 14:01	7440-42-8	
Calcium	31900	mg/kg	26.8	3.4	1	11/19/24 11:47	11/21/24 14:01	7440-70-2	
Magnesium	6910	mg/kg	26.8	0.90	1	11/19/24 11:47	11/21/24 14:01	7439-95-4	
Potassium	1340	mg/kg	134	6.9	1	11/19/24 11:47	11/21/24 14:01	7440-09-7	
Sodium	478	mg/kg	53.5	1.6	1	11/19/24 11:47	11/21/24 14:01	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	8.2	%	0.10	0.10	1		11/18/24 10:09		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	9.8	Std. Units	0.10	0.10	1		11/26/24 14:40		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo2_18-36.5 Lab ID: 10715613009 Collected: 11/06/24 16:55 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	66.4	mg/kg	10.9	4.9	1	11/21/24 09:10	11/21/24 18:12	16887-00-6	
Fluoride	3.7	mg/kg	2.2	1.1	1	11/21/24 09:10	11/21/24 18:12	16984-48-8	
Sulfate	358	mg/kg	54.7	10.9	1	11/21/24 09:10	11/21/24 18:12	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<7.7	mg/kg	7.7	0.88	1	11/19/24 11:47	11/21/24 14:03	7440-42-8	
Calcium	20100	mg/kg	25.6	3.2	1	11/19/24 11:47	11/21/24 14:03	7440-70-2	
Magnesium	2690	mg/kg	25.6	0.86	1	11/19/24 11:47	11/21/24 14:03	7439-95-4	
Potassium	571	mg/kg	128	6.6	1	11/19/24 11:47	11/21/24 14:03	7440-09-7	
Sodium	168	mg/kg	51.2	1.5	1	11/19/24 11:47	11/21/24 14:03	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	8.6	%	0.10	0.10	1		11/18/24 10:09		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	9.1	Std. Units	0.10	0.10	1		11/26/24 14:41		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Sample: TB-24-Geo2_36.5-40 Lab ID: 10715613010 Collected: 11/06/24 17:00 Received: 11/13/24 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
BVR 9056A IC Anions									
Analytical Method: EPA 9056A Preparation Method: EPA 9056A									
Pace Analytical Services - Beaver									
Chloride	<10.5	mg/kg	10.5	4.7	1	11/21/24 09:10	11/21/24 18:31	16887-00-6	
Fluoride	2.6	mg/kg	2.1	1.0	1	11/21/24 09:10	11/21/24 18:31	16984-48-8	
Sulfate	<52.4	mg/kg	52.4	10.5	1	11/21/24 09:10	11/21/24 18:31	14808-79-8	
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B									
Pace Analytical Services - Minneapolis									
Boron	<7.8	mg/kg	7.8	0.89	1	11/19/24 11:47	11/21/24 14:04	7440-42-8	
Calcium	41900	mg/kg	25.9	3.3	1	11/19/24 11:47	11/21/24 14:04	7440-70-2	
Magnesium	8550	mg/kg	25.9	0.87	1	11/19/24 11:47	11/21/24 14:04	7439-95-4	
Potassium	1350	mg/kg	130	6.7	1	11/19/24 11:47	11/21/24 14:04	7440-09-7	
Sodium	726	mg/kg	51.9	1.5	1	11/19/24 11:47	11/21/24 14:04	7440-23-5	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Pace Analytical Services - Minneapolis									
Percent Moisture	4.6	%	0.10	0.10	1		11/18/24 10:09		N2
9045D pH									
Analytical Method: EPA 9045D									
Pace Analytical Services - Minneapolis									
pH at 25 Degrees C	10.0	Std. Units	0.10	0.10	1		11/26/24 14:46		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

QC Batch:	710982	Analysis Method:	EPA 9056A
QC Batch Method:	EPA 9056A	Analysis Description:	BVR 9056A IC Anions
		Laboratory:	Pace Analytical Services - Beaver
Associated Lab Samples:	10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010		

METHOD BLANK:	3462805	Matrix:	Solid
Associated Lab Samples:	10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/kg	<10.0	10.0	4.5	11/21/24 19:10	
Fluoride	mg/kg	<2.0	2.0	1.0	11/21/24 19:10	
Sulfate	mg/kg	<50.0	50.0	10.0	11/21/24 19:10	

LABORATORY CONTROL SAMPLE:	3462806					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/kg	250	245	98	80-120	
Fluoride	mg/kg	20	20.6	103	80-120	
Sulfate	mg/kg	500	492	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	3462807			3462808								
Parameter	Units	30736163001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/kg	390	1370	1370	1650	1550	92	85	80-120	7	20	
Fluoride	mg/kg	20.4	109	109	85.5	82.2	60	56	80-120	4	20	M1
Sulfate	mg/kg	894	2730	2730	3060	2930	79	74	80-120	4	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

QC Batch:	979871	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050B	Analysis Description:	6010D Solids
		Laboratory:	Pace Analytical Services - Minneapolis
Associated Lab Samples:	10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010		

METHOD BLANK: 5119797

Matrix: Solid

Associated Lab Samples: 10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	mg/kg	<7.3	7.3	0.83	11/21/24 13:36	
Calcium	mg/kg	<24.2	24.2	3.1	11/21/24 13:36	
Magnesium	mg/kg	<24.2	24.2	0.82	11/21/24 13:36	
Potassium	mg/kg	<121	121	6.3	11/21/24 13:36	
Sodium	mg/kg	<48.4	48.4	1.4	11/21/24 13:36	

LABORATORY CONTROL SAMPLE: 5119798

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	mg/kg	48.6	49.8	103	80-120	
Calcium	mg/kg	972	983	101	80-120	
Magnesium	mg/kg	972	953	98	80-120	
Potassium	mg/kg	972	993	102	80-120	
Sodium	mg/kg	972	1000	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5119799 5119800

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max	
		10715613001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec	% Rec		RPD	RPD Qual
Boron	mg/kg	<9.6	61.4	63.3	68.6	69.3	104	102	75-125	1	20	
Calcium	mg/kg	34800	1230	1270	40500	37800	460	233	75-125	7	20	P6
Magnesium	mg/kg	8420	1230	1270	11600	10400	260	160	75-125	11	20	P6
Potassium	mg/kg	1560	1230	1270	4060	3630	203	164	75-125	11	20	M1
Sodium	mg/kg	93.8	1230	1270	1460	1480	111	109	75-125	1	20	

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QUALITY CONTROL DATA

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

QC Batch:	980135	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight / %M by ASTM D2974
		Laboratory:	Pace Analytical Services - Minneapolis
Associated Lab Samples:	10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010		

SAMPLE DUPLICATE: 5121586

Parameter	Units	10715592002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	0.47	0.48	3	30	N2

SAMPLE DUPLICATE: 5121763

Parameter	Units	10715613002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.5	17.6	7	30	N2

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QUALITY CONTROL DATA

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

QC Batch: 981680

Analysis Method: EPA 9045D

QC Batch Method: EPA 9045D

Analysis Description: 9045D pH

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 10715613001, 10715613002, 10715613003, 10715613004, 10715613005, 10715613006, 10715613007, 10715613008, 10715613009, 10715613010

LABORATORY CONTROL SAMPLE: 5129183

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH at 25 Degrees C	Std. Units	5	5.0	101	98-102	

SAMPLE DUPLICATE: 5129184

Parameter	Units	10715718001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	12.3	12.4	0	3	

SAMPLE DUPLICATE: 5129185

Parameter	Units	10715718002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	12.4	12.4	0	3	

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QUALIFIERS

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 10715613

[1] The enclosed data is not intended for regulatory compliance; certification was waived by the client.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 44241010.04 Deseret Power

Pace Project No.: 10715613

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10715613001	TB-24-Geo1_0-3	EPA 9056A	710982	EPA 9056A	711103
10715613002	TB-24-Geo1_3-5.5	EPA 9056A	710982	EPA 9056A	711103
10715613003	TB-24-Geo1_5.5-16	EPA 9056A	710982	EPA 9056A	711103
10715613004	TB-24-Geo1_18.5-27.5	EPA 9056A	710982	EPA 9056A	711103
10715613005	TB-24-Geo1_36-39	EPA 9056A	710982	EPA 9056A	711103
10715613006	TB-24-Geo1_39-44	EPA 9056A	710982	EPA 9056A	711103
10715613007	TB-24-Geo2_0-10	EPA 9056A	710982	EPA 9056A	711103
10715613008	TB-24-Geo2_10-18	EPA 9056A	710982	EPA 9056A	711103
10715613009	TB-24-Geo2_18-36.5	EPA 9056A	710982	EPA 9056A	711103
10715613010	TB-24-Geo2_36.5-40	EPA 9056A	710982	EPA 9056A	711103
10715613001	TB-24-Geo1_0-3	EPA 3050B	979871	EPA 6010D	980629
10715613002	TB-24-Geo1_3-5.5	EPA 3050B	979871	EPA 6010D	980629
10715613003	TB-24-Geo1_5.5-16	EPA 3050B	979871	EPA 6010D	980629
10715613004	TB-24-Geo1_18.5-27.5	EPA 3050B	979871	EPA 6010D	980629
10715613005	TB-24-Geo1_36-39	EPA 3050B	979871	EPA 6010D	980629
10715613006	TB-24-Geo1_39-44	EPA 3050B	979871	EPA 6010D	980629
10715613007	TB-24-Geo2_0-10	EPA 3050B	979871	EPA 6010D	980629
10715613008	TB-24-Geo2_10-18	EPA 3050B	979871	EPA 6010D	980629
10715613009	TB-24-Geo2_18-36.5	EPA 3050B	979871	EPA 6010D	980629
10715613010	TB-24-Geo2_36.5-40	EPA 3050B	979871	EPA 6010D	980629
10715613001	TB-24-Geo1_0-3	ASTM D2974	980135		
10715613002	TB-24-Geo1_3-5.5	ASTM D2974	980135		
10715613003	TB-24-Geo1_5.5-16	ASTM D2974	980135		
10715613004	TB-24-Geo1_18.5-27.5	ASTM D2974	980135		
10715613005	TB-24-Geo1_36-39	ASTM D2974	980135		
10715613006	TB-24-Geo1_39-44	ASTM D2974	980135		
10715613007	TB-24-Geo2_0-10	ASTM D2974	980135		
10715613008	TB-24-Geo2_10-18	ASTM D2974	980135		
10715613009	TB-24-Geo2_18-36.5	ASTM D2974	980135		
10715613010	TB-24-Geo2_36.5-40	ASTM D2974	980135		
10715613001	TB-24-Geo1_0-3	EPA 9045D	981680		
10715613002	TB-24-Geo1_3-5.5	EPA 9045D	981680		
10715613003	TB-24-Geo1_5.5-16	EPA 9045D	981680		
10715613004	TB-24-Geo1_18.5-27.5	EPA 9045D	981680		
10715613005	TB-24-Geo1_36-39	EPA 9045D	981680		
10715613006	TB-24-Geo1_39-44	EPA 9045D	981680		
10715613007	TB-24-Geo2_0-10	EPA 9045D	981680		
10715613008	TB-24-Geo2_10-18	EPA 9045D	981680		
10715613009	TB-24-Geo2_18-36.5	EPA 9045D	981680		
10715613010	TB-24-Geo2_36.5-40	EPA 9045D	981680		

REPORT OF LABORATORY ANALYSIS

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Barr Engineering Co. Chain of Custody

Sample Origination State

☐ CO ☐ MI ☐ MN ☐ MO ☐ ND ☐ NV ☐ TX ☒ UT ☐ WI

WO#: 10715613



10715613

Requested

Soil

COC Number: **No 592433**

COC 1 of 1

Matrix Code:

Preservative Code:

GW = Groundwater A = None
SW = Surface Water B = HCl
DW = Drinking Water C = HNO₃
PW = Pore Water D = H₂SO₄
WW = Waste Water E = NaOH
WQ = TB, FB, EB, etc. F = MeOH
W = Unspecified G = NaHSO₄
S = Soil/Solid H = Na₂S₂O₃
SD = Sediment I = Ascorbic Acid
SQ = MeOH blank J = Zn Acetate
OTH = Other (Oil, etc.) K = Other

Preservative Code

Field Filtered Y/N

REPORT TO		INV		Collection Date		Collection Time		Matrix Code		Perform MS/MSD Y / N		Total Number Of Containers		Soil		% Solids			
Company:	Address:	Company:	Address:	Unit (m./ft. or in.)	Start	Stop	Unit (m./ft. or in.)	Start	Stop	Unit (m./ft. or in.)	Start	Stop	Unit (m./ft. or in.)	Start	Stop	Unit (m./ft. or in.)	Start	Stop	
Company: Barr Eng. Co	Address: 4300 Market Pointe Dr. Ste 200	Company: Same	Address: Same	Unit: FT	11/05/2024	16:25	S	N	3										
Address: Minneapolis, MN	Name: Terri Olson	Address:	Name:																
email: toolson@barr.com	Copy to: BarrDM@barr.com	email:	P.O.																
Project Name: Desert Power	Barr Project No: 44241010.04																		
Location	Sample Depth	Collection Date	Collection Time	Matrix Code	Perform MS/MSD Y / N	Total Number Of Containers	Soil	% Solids											
1. TB-24-Geo1	0 3	11/05/2024	16:25	S	N	3	XXX												
2. TB-24-Geo1	3 5.5	11/06/2024	16:30			3													
3. TB-24-Geo1	5.5 16		11:45			3													
4. TB-24-Geo1	18.5 27.5		11:50			3													
5. TB-24-Geo1	36 39		11:55			3													
6. TB-24-Geo1	39 44		12:00			3													
7. TB-24-Geo2	0 10		16:45			3													
8. TB-24-Geo2	10 18		16:50			3													
9. TB-24-Geo2	18 36.5		16:55			3													
10. TB-24-Geo2	36.5 40		17:00			3													
BARR USE ONLY				Relinquished by: Kaela Nerhus				On Ice? ☒ Y ☐ N		Date: 11/12/24		Time: 1400		Received by: [Signature]		Date: 11/13/24		Time: 850	
Sampled by: KJN3				Relinquished by:				On Ice? ☐ Y ☐ N		Date:		Time:		Received by:		Date:		Time:	
Barr Proj. Manager: SM32				Samples Shipped VIA: ☐ Ground Courier ☐ Air Carrier				Air Bill Number:				Requested Due Date:							
Barr DQ Manager: TAO				☐ Sampler ☒ Other: FedEx								☒ Standard Turn Around Time							
Lab Name: Pace				Lab WO:				Temperature on Receipt (°C): 4.9				Custody Seal Intact? ☒ Y ☐ N ☐ None							
Lab Location: MPLS												☐ Rush (mm/dd/yyyy)							

ENV-FRM-MIN4-0150 v17 Sample Condition Upon Receipt

CLIENT NAME: Barr Engineering Co.

PROJECT #:

WO#: 10715613

COURIER: ☐ Client ☐ Commercial ☒ FedEx ☐ Pace
☐ SpeedDee ☐ UPS ☐ USPS

PM MKH

Due Date: 11/27/24

CLIENT: BARR

TRACKING NUMBER: 6289 8669 9571 ☐ See Exceptions form ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present: ☒ YES ☐ NO Seals Intact: ☒ YES ☐ NO Biological Tissue Frozen: ☐ YES ☐ NO ☒ N/A
Packing Material: ☒ Bubble Bags ☐ Bubble Wrap ☐ None ☐ Other Temp Blank: ☒ YES ☐ NO Type of Ice: ☐ Blue ☐ Dry ☒ Wet
Thermometer: ☐ T1 (0461) ☐ T2 (0436) ☒ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235)
☐ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252 (1710) ☐ Melted ☐ None

Did Samples Originate in West Virginia: ☐ YES ☒ NO Were All Container Temps taken: ☐ YES ☐ NO ☒ N/A
Correction Factor: -0.2 Cooler Temp Read w/Temp Blank: 5.1 °C Average Corrected Temp (no Temp Blank Only): 4.9 °C
Cooler Temp Corrected w/Temp Blank: 4.9 °C
NOTE: Temp should be above freezing to 6°C. ☐ See Exceptions Form ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: ☐ N/A - Water Sample/Other (describe): Initials & Date of Person Examining Contents: JMAW 11/19/24
Did Samples originate from one of the following states (check maps) - AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA: ☐ YES ☒ NO Did samples originate from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☒ NO
NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

LOCATION (check one):	YES	NO	N/A	COMMENT(S)								
☐ DULUTH ☒ MINNEAPOLIS ☐ VIRGINIA												
Chain of Custody Present and Filled Out?	☒	☐		1.								
Chain of Custody Relinquished?	☒	☐		2.								
Sampler Name and/or Signature on COC?	☒	☐	☐	3.								
Samples Arrived within Hold Time?	☒	☐		4. If Fecal: ☐ <8 hrs ☐ >8 hr, <24 hr ☐ No								
Short Hold Time Analysis (<72 hr)?	☐	☒		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/E. coli ☐ Other:								
Rush Turn Around Time Requested?	☐	☒		6.								
Sufficient Sample Volume?	☒	☐		7.								
Correct Containers Used?	☒	☐	☐	8.								
- Pace Containers Used?	☒	☐										
Containers Intact?	☒	☐		9.								
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☒	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO								
Is sufficient information available to reconcile the samples to the COC? NOTE: If ID/Date/Time don't match fill out section 11. Matrix: ☐ Oil ☒ Soil ☐ Water ☐ Other	☒	☐		11. If NO, write ID/Date/Time of container below: ☐ See Exceptions form ENV-FRM-MIN4-0142								
All containers needing acid/base preservation have been checked? All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil & Grease, DRO/8015 (water) and Dioxins/PFAS NOTE: If adding preservation to the container, verify with the PM first. Clients may require adding preservative to the field and equipment blanks when this occurs.	☐	☐	☒	12. Sample #: ☐ HNO ₃ ☐ H ₂ SO ₄ ☐ NaOH ☐ Zinc Acetate Positive for Residual Chlorine: ☐ YES ☐ NO pH Paper Lot # <table border="1"> <tr> <th>Residual Chlorine</th> <th>0-6 Roll</th> <th>0-6 Strip</th> <th>0-14 Strip</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table> ☐ See Exceptions form ENV-FRM-MIN4-0142	Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip				
Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip									
Headspace in Methyl Mercury Container?	☐	☐	☒	13.								
Extra labels present on soil VOA or WIDRO containers?	☐	☐	☒	14.								
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☒	☐ See Exceptions form ENV-FRM-MIN4-0140								
Trip Blanks Present?	☐	☒	☐	15.								
Trip Blank Custody Seals Present?	☐	☐	☒	Pace Trip Blank Lot # (if purchased):								

CLIENT NOTIFICATION / RESOLUTION

FIELD DATA REQUIRED: ☐ YES ☐ NO

Person Contacted: _____ Date & Time: _____

Comments / Resolution: _____

Project Manager Review: JMAW

Date: 11/19/24

NOTE: When there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEQ Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled By: JMAW

Line: 4

30736109

W0# : 30736109

PM: ARG

Due Date: 12/06/24

CLIENT: PACE_10_MIMN

LIMS30 Lab Sample Condition Upon Receipt (West Virgin

Courier: Fed Ex UPS USPS Client 3rd Party Courier Pace Other

Tracking #:

Custody Seal on Cooler/Box/Containers Present: yes no

Seals intact: yes no

Thermometer Used

Type of Ice: Wet Blue None

Cooler Temperature

Observed Temp

.5 °C

Correction Factor: 0 °C

Final Temp: .5 °C

Thermal Preservation Requirement Met Yes No

pH paper Lot#

204524

Date and Initials of person examining

contents: PC 11/20/24

	Yes	No	N/A	
Chain of Custody Present:	\			1.
Chain of Custody Filled Out:	\			2.
Chain of Custody Relinquished:	\			3.
Sampler Name & Signature on COC:	\			4.
Sample Labels match COC:	\			5.
-Includes date/time/ID				
Matrix: Solid				
Samples Arrived within Hold Time:	\			6.
Short Hold Time Analysis (<72hr remaining):		\		7.
Rush Turn Around Time Requested:		\		8.
Sufficient Volume:	\			9.
Correct Containers Used:	\			10.
-Pace Containers Used:	\			
Containers Intact:	\			11.
Orthophosphate field filtered:			\	12.
Hex Cr Aqueous sample field filtered:			\	13.
-pH adjusted within 24 hours? (If yes, indicate acid lot #)			\	
Filtered volume received for Dissolved tests:			\	14.
All containers have been checked for chemical preservation:			\	15.
exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix				
All containers meet method/chemical preservation requirements:			\	
Initial when completed				PC
Date:				11/20/24
Tests not preserved:				
Headspace in VOA Vials:			\	16.
Trip Blank Present:			\	17.
Initial when completed				PC
Date:				10/20/24

Comments:

*PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen.



Appendix C

2025 Gradients and Flow Rates

Deseret Power Fly Ash Area Groundwater Velocity Calculation

Date

5/12/25-5/14/25

Kh low (ft/d)	0.2	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
Kh high (ft/d)	8.8	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
porosity, n	0.4	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
gradient, i (ft/ft)	0.005	
V low (ft/d)	0.002	
V high (ft/d)	0.103	
V low (ft/yr)	0.86	
V high (ft/yr)	38	
Flow Direction	Southeast	

	Top of Casing Elevation	Depth to Water	Water Level Elevation
	ft amsl	ft below TOC	ft amsl
FA-UG1	5084.46	35.99	5048.47
FA-UG2	5069.17	25.49	5043.68
FA-DG2	5060.61	31.35	5029.26
FA-DG3	5058.97	29.77	5029.20
FA-DG4	5059.81	31.23	5028.58
FA-DG5	5060.38	31.03	5029.35

*Previously PZ-212

Fly Ash Landfill horizontal distance, ft

	FA-UG1
FA-DG2	4178
FA-DG3	4152
FA-DG4	4096
FA-DG5	3994

*Previously PZ-212

Fly Ash Landfill difference in WL elevation, ft

	FA-UG1
FA-DG2	19.21
FA-DG3	19.27
FA-DG4	19.89
FA-DG5	19.11

*Previously PZ-212

Fly Ash Landfill horizontal gradient, ft/ft

	FA-UG1
FA-DG2	0.005
FA-DG3	0.005
FA-DG4	0.005
FA-DG5	0.005
Average	0.005

*Previously PZ-212

Deseret Power Bottom Ash Area Groundwater Velocity Calculation

Date

5/14/25-5/15/25

Kh low (ft/d)	0.6	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
Kh high (ft/d)	5.2	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
porosity, n	0.4	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
gradient, i (ft/ft)	0.001	
V low (ft/d)	0.002	
V high (ft/d)	0.017	
V low (ft/yr)	0.7	
V high (ft/yr)	6	
Flow Direction	Southeast	

	Top of Casing Elevation	Depth to Water	Water Level Elevation
	ft amsl	ft below TOC	ft amsl
BA-UG1	5028.82	34.93	4993.89
BA-DG1	5005.91	14.79	4991.12
BA-DG2	5007.27	16.28	4990.99
BA-DG3	5006.95	17.50	4989.45
BA-DG4	5007.38	19.86	4987.52

Bottom Ash Landfill horizontal distance, ft

	BA-UG1
BA-DG1	2484
BA-DG2	2479
BA-DG3	2528
BA-DG4	2597

Bottom Ash Landfill difference in WL elevation, ft

	BA-UG1
BA-DG1	2.76
BA-DG2	2.90
BA-DG3	4.43
BA-DG4	6.36

Bottom Ash Landfill horizontal gradient, ft/ft

	BA-UG1
BA-DG1	0.001
BA-DG2	0.001
BA-DG3	0.002
BA-DG4	0.002
Average	0.001

Deseret Power Fly Ash Area Groundwater Velocity Calculation

Date

10/13/25-10/15/25

Kh low (ft/d)	0.2	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
Kh high (ft/d)	8.8	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
porosity, n	0.4	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
gradient, i (ft/ft)	0.006	
V low (ft/d)	0.003	
V high (ft/d)	0.126	
V low (ft/yr)	1.05	
V high (ft/yr)	46	
Flow Direction	Southeast	

	Top of Casing Elevation	Depth to Water	Water Level Elevation
	ft amsl	ft below TOC	ft amsl
FA-UG1	5084.46	32.26	5052.20
FA-UG2	5069.17	25.78	5043.39
FA-DG2	5060.61	31.44	5029.17
FA-DG3	5058.97	30.37	5028.60
FA-DG4	5059.81	31.85	5027.96
FA-DG5	5060.38	31.68	5028.70

*Previously PZ-212

Fly Ash Landfill horizontal distance, ft

	FA-UG1
FA-DG2	4178
FA-DG3	4152
FA-DG4	4096
FA-DG5	3994

*Previously PZ-212

Fly Ash Landfill difference in WL elevation, ft

	FA-UG1
FA-DG2	23.03
FA-DG3	23.60
FA-DG4	24.24
FA-DG5	23.49

*Previously PZ-212

Fly Ash Landfill horizontal gradient, ft/ft

	FA-UG1
FA-DG2	0.006
FA-DG3	0.006
FA-DG4	0.006
FA-DG5	0.006
Average	0.006

*Previously PZ-212

Deseret Power Bottom Ash Area Groundwater Velocity Calculation

Date

10/15/25-10/16/25

Kh low (ft/d)	0.6	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
Kh high (ft/d)	5.2	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
porosity, n	0.4	Groundwater Monitoring System Certification (Burns & McDonnell, 2017)
gradient, i (ft/ft)	0.002	
V low (ft/d)	0.003	
V high (ft/d)	0.024	
V low (ft/yr)	1.0	
V high (ft/yr)	9	
Flow Direction	Southeast	

	Top of Casing Elevation	Depth to Water	Water Level Elevation
	ft amsl	ft below TOC	ft amsl
BA-UG1	5028.82	34.81	4994.01
BA-DG1	5005.91	15.35	4990.56
BA-DG2	5007.27	16.63	4990.64
BA-DG3	5006.95	17.88	4989.07
BA-DG4	5007.38	20.15	4987.23

Bottom Ash Landfill horizontal distance, ft

	BA-UG1
BA-DG1	2484
BA-DG2	2479
BA-DG3	2528
BA-DG4	2597

Bottom Ash Landfill difference in WL elevation, ft

	BA-UG1
BA-DG1	3.44
BA-DG2	3.37
BA-DG3	4.93
BA-DG4	6.77

Bottom Ash Landfill horizontal gradient, ft/ft

	BA-UG1
BA-DG1	0.001
BA-DG2	0.001
BA-DG3	0.002
BA-DG4	0.003
Average	0.002