2025 Annual Groundwater Monitoring and Corrective Action Report

Former LOS Ponds 2 and 3 Multiunit
Leland Olds Station
Stanton, North Dakota

Prepared for
Basin Electric Power Cooperative

Prepared by
Barr Engineering Co.

January 2026

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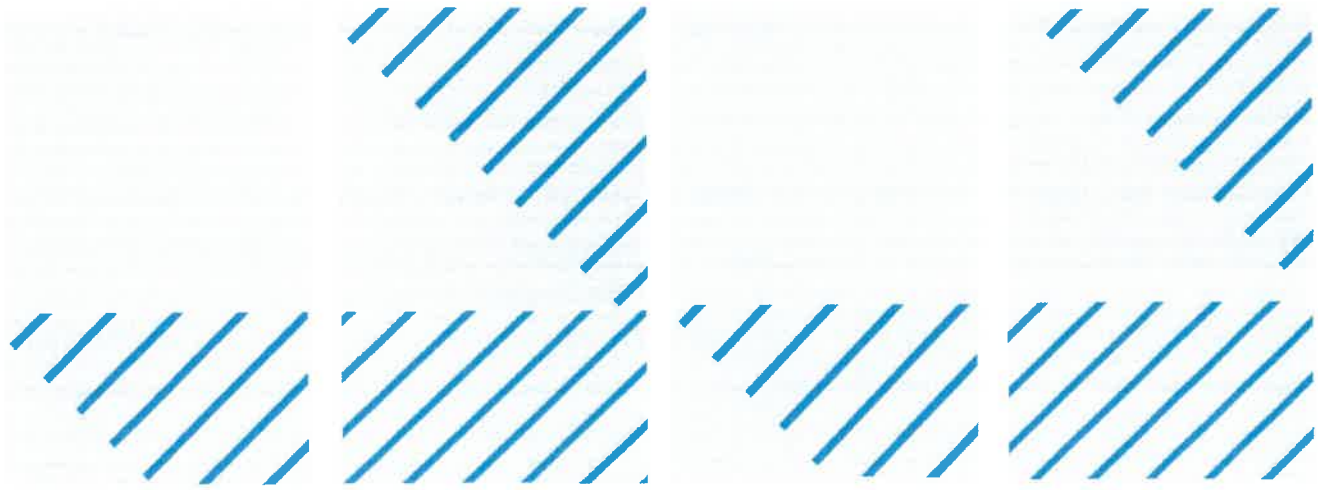

2025 Annual Groundwater Monitoring and Corrective Action Report

January 2026

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Attached Tables

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Abbreviations

asml	above mean sea level
ASD	Alternative Source Demonstration
bgs	below ground surface
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
cm	Centimeter
EPA	Environmental Protection Agency
FGD	Flue gas desulfurization
ft	feet
LOS	Leland Olds Station
NDAC	North Dakota Administrative Code
NDDEQ	North Dakota Department of Environmental Quality
NPDES	National pollution discharge and elimination system
SAP	Sampling and Analysis Plan
sec	Second
SSI	Statistically Significant Increase
TDS	Total Dissolved Solids

1 Executive Summary

This 2025 Annual Groundwater Monitoring and Corrective Action Report (Annual Report) describes the monitoring program and results for the former Ponds 2 and 3 Multiunit (Multiunit) at Basin Electric Power Cooperative's (Basin Electric) Leland Olds Station (LOS; Site). The content of this report is to satisfy the requirements of the federal CCR rule.

At the beginning, end, and throughout 2025, the Multiunit was operating under a detection monitoring program as described in 40 CFR § 257.94 and NDAC 33.1-20-08-06-04. This program includes semi-annual detection monitoring events conducted in the spring and fall.

Pursuant to § 257.94 and NDAC 33.1-20-08-06-04, no statistically significant increases (SSIs) were determined for the May 2025 and August 2025 sampling events. Therefore, no assessment monitoring program (§ 257.95 and NDAC 33.1-20-08-06-04) or related corrective or remedial measures (§§ 257.96, 257.97, and 257.98; NDAC 33.1-20-08-06-06, -07, and -08) were necessary.

2 Introduction

Basin Electric Power Cooperative (Basin Electric) owns Leland Olds Station (LOS), a coal-fired generating station with two power-generating units, located southeast of Stanton, Mercer County, North Dakota (Figure 1). Unit 1 coal-based operations began in 1966, and Unit 2 operations began in 1975. Coal combustion residuals (CCR) were directed to four surface impoundments (Pond 1, Pond 2, Pond 3, and Pond 4) on the southeast side of the property. CCR produced at LOS includes fly ash, bottom ash, and flue gas desulfurization (FGD) waste.

Ponds 1 and 4 were closed-in-place in the mid-1990s. Bottom ash Ponds 2 and 3 (Multiunit or Site) continued operating until 2015. Pond 2 flowed into Pond 3, which discharged through Outfall 003 in accordance with the National Pollution Discharge Elimination System (NPDES) permit. In 2015, LOS converted to dry handling of bottom ash, and the Multiunit ceased accepting CCRs.

Closure of the southern half of Pond 2 was completed in 2017. Closure of the remaining portion of Pond 2 and all of Pond 3 began in 2019 and was completed in 2020. In compliance with the CCR Rule, a closure notification including certification by a qualified professional engineer that the closure was completed in accordance with the written closure plan and the requirements of Chapter 40 Code of Federal Regulations (CFR) § 257.102, was posted on October 26, 2020. The Multiunit is now closed-in-place.

This Annual Report describes the monitoring program and results for the Multiunit at the Site. No corrective actions were required or conducted in 2025.

Basin Electric utilizes a consulting firm, Barr Engineering Co. (Barr), to assist in groundwater reporting and analysis. Barr is familiar with the site and has reviewed the historical groundwater data and CCR information for the site and is knowledgeable about facility design and operation.

Additional Site monitoring information, including CCR reports and certifications, can be found on Basin Electric's CCR website: Pond 2 Surface Impoundment - LOS - Basin Electric Power Cooperative and Pond 3 Surface Impoundment - LOS - Basin Electric Power Cooperative.

2.1 Physical Setting

The Multiunit is situated in the valley of the Missouri River. The valley floor is relatively flat, with two poorly defined terraces ranging from 1,670 feet above mean sea level (ft amsl) to a maximum elevation of 1,715 ft amsl near the southern property boundary. Seven of the CCR monitoring system monitoring wells (MW-2017-1 through MW-2017-4, MW-2017-7, MW-2017-10 and MW-2017-11) are located on the lower (first) terrace level, while one is located on the upper (second) terrace (MW-2017-8).

The geology underlying the Multiunit is generally comprised of more than 50 feet of alluvial silt, silty sand, and gravel deposits. The upper terrace level appears to be underlain by at least 25 more feet of alluvial deposits than is found adjacent to the Multiunit. The alluvial deposits are underlain by the Sentinel Butte Formation, which is described as 1,000 feet or more of continental deposits consisting of dense clay, weakly cemented sandstone, and mudstone interlaced with occasional lignite beds that typically range from 5 to 10 feet in thickness.

Groundwater at the lower terrace locations is found within alluvial deposits comprised primarily of silty, fine to medium-grained sand at depths ranging from approximately 17 to 35 feet below ground surface (ft bgs). Aquifer testing completed at monitoring wells MW-2017-3, MW-2017-4, MW-2017-5, and MW-2017-

6 indicates hydraulic conductivity values within the monitored aquifer range from 1.28×10^{-2} to 6.94×10^{-4} centimeters per second (cm/sec) with a geometric mean of approximately 2.0×10^{-3} cm/sec (5.67 feet per day [ft/day]) (AECOM, April 2019).

The potentiometric surface of the uppermost groundwater underlying the lower terrace area is typically encountered at elevations between 1,658 and 1,662 ft amsl, depending on the stage of the adjacent Missouri River. The stage of the Missouri River was 1659.07 ft asml during the spring sampling event and 1659.20 ft asml during the fall sampling event. Although the direction of groundwater flow is highly influenced by changes in the elevation of the Missouri River, the net flow direction is expected to be eastward in the general direction of river flow, with some flow northward into the river. Groundwater at the upper terrace is perched at a considerably higher elevation with limited hydraulic connection to the lower terrace. As a result, the groundwater from the upper terrace is expected to act as a limited background/upgradient influence on the uppermost aquifer at the Multiunit.

Additional Site information can be found on Basin Electric's CCR website in the Pond 2 and Pond 3 Multiunit CCR Groundwater Monitoring System Report (AECOM, June 2022).

2.2 Purpose

As stated in § 257.90(e) and NDAC 33.1-20-08-06-01(e), the Annual Report must:

- Document the status of groundwater monitoring and any corrective action programs for the CCR unit,
- Summarize key actions completed,
- Describe any problems encountered,
- Discuss actions to resolve the problems, and
- Project key activities for the upcoming year.

2.3 CCR Rule Requirements

Additional requirements for the Annual Report, as outlined in § 257.90(e) and NDAC 33.1-20-08-06-01(e), and this Site's compliance with the CCR Rules, are summarized in Table 1.

Table 1 CCR Rule Requirements and Compliance

EPA CCR Rule Reference (40 CFR)	NDDEQ CCR Rule Reference (NDAC)	Content Required in Report	Location
§ 257.90(e)(1)	§ 33.1-20-08-06-01(e)(1)	**Monitoring System Figure:** A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit.	Section 3.1 Groundwater Monitoring System; see Figure 1

EPA CCR Rule Reference (40 CFR)	NDDEQ CCR Rule Reference (NDAC)	Content Required in Report	Location
§ 257.90(e)(2)	§ 33.1-20-08-06-01(e)(2)	**Monitoring System Adjustments**: Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken.	Section 3.1.1 Changes to Groundwater Monitoring System
§ 257.90(e)(3)	§ 33.1-20-08-06-01(e)(3)	**Data and Collection Summary**: In addition to all the monitoring data obtained under §257.90 through §257.98 and §33.1-20-08-06, a summary including the number of groundwater samples that were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs.	Section 3.3 Data and Collection Summary; monitoring data included in Attached Table 1, Attached Table 2, Attached Table 3, Appendix A, and Appendix B
§ 257.90(e)(4)	§ 33.1-20-08-06-01(e)(4)	**Monitoring Program**: A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels).	Not applicable – No transition between monitoring programs was necessary
§ 257.90(e)(5)	§ 33.1-20-08-06-01(e)(5)	**Other Information**: Other information required, if applicable, to be included in the annual report as specified in §257.90 through §257.98 and §33.1-20-08-06.	No changes to the groundwater monitoring system occurred in 2025. The system described in Section 2.1 and shown on Figure 2 supplanted the groundwater monitoring system described in the Groundwater Monitoring System Certification (AECOM, April 2019). Actions Completed/Problems Encountered
§ 257.90(e)(6)	N/A	**Executive Summary:** A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit.	Executive Summary

3 Groundwater Monitoring Program

This section documents the status of the groundwater monitoring and corrective action program for the Multiunit in 2025. A description of the groundwater monitoring system is included in Section 3.1, key actions completed and problems encountered are described in Section 2.2, the monitoring and analytical results are described in Section 3.3, and key activities planned for 2026 are described in Section 3.4.

3.1 Groundwater Monitoring System

The certified groundwater monitoring well network around the Multiunit consists of two background wells and six downgradient wells, sampled for groundwater analysis on a semi-annual basis. Background wells monitor water quality that is not potentially influenced by the presence of CCR in the Multiunit. Well locations are described below in Table 2 and shown in Figure 2.

Table 2 Groundwater Monitoring System

CCR Unit	Background Wells	Downgradient Wells
Ponds 2 and 3 Multiunit	MW-2017-1 and MW-2017-8	MW-2017-2, MW-2017-3, MW-2017-4, MW-2017-7, MW-2017-10, and MW-2017-11

Several wells are not included in the compliance network as they are used for characterization, including MW-2017-8D and MW-2017-9. MW-2017-8D is screened in bedrock.

Two monitoring wells, MW-2017-5 and MW-2017-6, have been excluded from the groundwater monitoring network due to concerns about their installation, specifically the improper placement of the annular seal and the grout in contact with groundwater. The wells remain in place for optional collection of groundwater level measurements for potential inclusion in the potentiometric evaluation of the Site.

Baseline monitoring initiated in September 2017 for wells in the monitoring network (except MW-2017-10 and MW-2017-11 as described below) and included sampling groundwater over eight baseline monitoring events. The results of baseline monitoring are discussed in previous Annual Reports.

Detection monitoring events in 2025 and prior to 2025 were performed in general accordance with procedures established in the site-specific Sampling and Analysis Plan (SAP) (AECOM, June 2022), which is included in the facility's Operating Record. The Multiunit was placed in Detection monitoring in April 2019, with the first Detection monitoring groundwater sampling event completed in November 2019. Detection monitoring events have been completed semi-annually since November 2019. The results of prior Detection monitoring events were presented and discussed in the previously published Annual Reports, which can be found on Basin Electric's CCR website.

3.1.1 Changes to Groundwater Monitoring System

No changes to the groundwater monitoring system occurred in 2025. The system described in Section 3.1 and shown in Figure 2 supplanted the groundwater monitoring system described in the Groundwater Monitoring System Certification (AECOM, April 2019).

3.2 Actions Completed/Problems Encountered

The following actions were completed in 2025:

- **Detection Monitoring Sampling:** Groundwater samples were collected from each well in the groundwater monitoring system on May 6-7, 2025, and August 4-5, 2025. Groundwater samples were analyzed for Appendix III constituents, per the detection monitoring program of the CCR Rules (§ 257.94 and NDAC 33.1-20-08-06-04) (Attached Table 1).
- **SSI Evaluation:** SSI evaluations were conducted in accordance with the Groundwater Statistical Method Selection Certification (AECOM, 2019) for the May 2025 and August 2025 detection monitoring events. There were no SSIs from either event. (Attached Table 2)

No problems were encountered in 2025.

3.3 Data and Collection Summary

3.3.1 May 2025 Detection Monitoring Event

Groundwater samples were collected from the nine groundwater monitoring network wells at the Site on May 6-7, 2025. No SSIs were identified. A summary of results is included in Attached Table 3. Field data sheets and analytical laboratory reports for detection monitoring sampling are included in Appendix A. Water level contours are shown on Figure 3, and flow calculations are included in Appendix B.

3.3.2 August 2025 Detection Monitoring Event

Groundwater samples were collected from the nine groundwater monitoring network wells at the Site on August 4-5, 2025. No SSIs were identified. A summary of results is included in Attached Table 3. Field data sheets and analytical laboratory reports for detection, monitoring, and sampling are included in Appendix A. Water level contours are shown in Figure 4, and flow calculations are included in Appendix B.

3.4 Activities for Upcoming Year

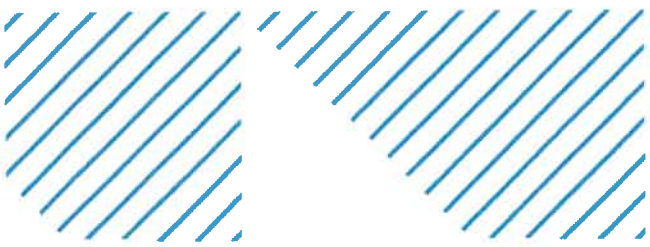
The following key activities for analytical results and statistical evaluations are planned for 2025:

- Evaluate analytical results from 2026 semi-annual detection monitoring events for SSIs according to the Statistical Certification (AECOM, April 2019).
- Review the conceptual site model and consider recommendations for improvements to the monitoring well network if needed.

4 References

AECOM. (April 2019). *Pond 2 and Pond 3 Multiunit CCR Groundwater Monitoring System Report, Leland Olds Station. Prepared for Basin Electric Power Cooperative. .*

AECOM. (June 2022). *Pond 2 and Pond 3 Multiunit Sampling and Analysis Plan, CCR Monitoring Program, Leland Olds Station. Prepared for Basin Electric Power Cooperative. .*



Attached Tables

Attached Table 1
Sampling Summary
2025 Annual Monitoring Report
BEPC-LOS Multiunit

Event Classification and Number	Monitoring Well	Up or Down Gradient	Event date	No. Samples
Detection Monitoring Event #1	MW-2017-1	Up		2
Detection Monitoring Event #1	MW-2017-2	Down		1
Detection Monitoring Event #1	MW-2017-3	Down		1
Detection Monitoring Event #1	MW-2017-4	Down		1
Detection Monitoring Event #1	MW-2017-7	Down		1
Detection Monitoring Event #1	MW-2017-8	Up		1
Detection Monitoring Event #1	MW-2017-10	Down		2
Detection Monitoring Event #1	MW-2017-11	Down		1
Detection Monitoring Event #2	MW-2017-1	Up		1
Detection Monitoring Event #2	MW-2017-2	Down		2
Detection Monitoring Event #2	MW-2017-3	Down		1
Detection Monitoring Event #2	MW-2017-4	Down		1
Detection Monitoring Event #2	MW-2017-7	Down		1
Detection Monitoring Event #2	MW-2017-8	Up		1
Detection Monitoring Event #2	MW-2017-10	Down		1
Detection Monitoring Event #2	MW-2017-11	Down		1

Attached Table 2
Statistical Evaluation Summary
2025 Annual Monitoring Report
LOS Multiunit CCR Groundwater Compliance

Spring 2025

	Appendix III Constituents						
Well	**Boron (T)**	**Calcium (T)**	**Chloride**	**Fluoride**	**pH**	**Sulfate**	**TDS**
MW-2017-2	1.5	78.8	11.3	0.48	7.3	271	711
MW-2017-3	1.51	111	11	0.5	7.2	156	882
MW-2017-4	1.2	151	10.8	0.78	7.1	298	886
MW-2017-7	2.23	72.2	11.4	1.21	7.5	224	721
MW-2017-10	0.88	96	10.8	0.86	7.4	284	726
MW-2017-11	1.3	66.6	11.2	0.76	7.4	169	606

Fall 2025

	Appendix III Constituents						
Well	**Boron (T)**	**Calcium (T)**	**Chloride**	**Fluoride**	**pH**	**Sulfate**	**TDS**
MW-2017-2	1.11	119	11.7	0.41	7.2	291	916
MW-2017-3	1.25	112	11.3	0.52	7.2	136	966
MW-2017-4	1.18	163	11.2	0.8	7.1	323	908
MW-2017-7	2.17	71.4	11.5	1.15	7.5	243	721
MW-2017-10	0.83	94.9	10.9	0.91	7.5	308	671
MW-2017-11	1.25	63.4	11.5	0.78	7.5	178	592

Sample had a value higher than the prediction limit determined from background data and is a verified SSI

Sample did not have a value higher than the prediction limit determined from background data

pH: two-sided prediction limit; color indicates sample higher and/or lower than prediction limits

Attached Table 3
Water Quality Analytical Data Summary
2025 Annual Monitoring Report
BEPC LOS Multiunit

Location			MW-2017-1	MW-2017-1	MW-2017-2	MW-2017-2	MW-2017-3	MW-2017-3	MW-2017-4	MW-2017-4	MW-2017-7		MW-2017-7	MW-2017-8	MW-2017-8	MW-2017-8D	MW-2017-8D	MW-2017-10	MW-2017-10	MW-2017-11	MW-2017-11	
Date			5/6/25	8/4/25	5/6/25	8/4/25	5/5/25	8/4/25	5/5/25	8/4/25	5/6/25		8/4/25	5/7/25	8/4/25	5/7/25	8/5/25	5/6/25	8/4/25	5/6/25	8/4/25	
Sample Type			N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	FD
Parameter	Analysis Location	Units																				
Appendix III																						
Boron, total	Lab	mg/l	0.54	0.44	1.50	1.11	1.51	1.25	1.20	1.18	2.23	2.32	2.17	0.44	0.43	0.69	0.67	0.88	0.83	1.30	1.25	1.24
Calcium, total	Lab	mg/l	217	231	78.8	119	111	112	151	163	72.2	74.5	71.4	128	127	8.50	8.30	96.0	94.9	66.6	63.4	62.0
Chloride	Lab	mg/l	14.7	16.4	11.3	11.7	11.0	11.3	10.8	11.2	11.4	11.4	11.5	26.5	26.2	16.5	16.2	10.8	10.9	11.2	11.5	11.5
Fluoride	Lab	mg/l	0.36	0.35	0.48	0.41	0.50	0.52	0.78	0.80	1.21	1.22	1.15	0.39	0.40	0.68	0.65	0.86	0.91	0.76	0.78	0.78
pH	Field	pH units	6.90	6.97	726	7.16	7.18	7.24	7.06	7.14	7.45	--	7.51	7.36	7.41	7.96	7.94	7.41	7.49	7.41	7.45	--
Solids, total dissolved	Lab	mg/l	1250	1230	711	916	882	966	886	908	721	741	721	3680	3620	1960	1930	726	671	606	592	585
Sulfate, as SO4	Lab	mg/l	355	326	271	291	156	136	298	323	224	261	243	1630	1740	345	384	284	308	169	178	180

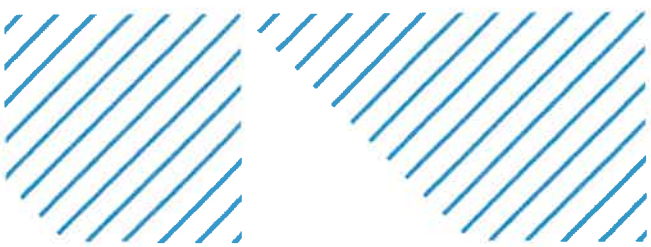
-- Not analyzed/Not available.

N Sample Type: Normal

FD: Sample Type: Field Duplicate

U: The analyte was analyzed for, but was not detected.

1/28/2026
\\barr.com\projects\Bismarck\34 ND\29\34291141 LOS CCR Groundwater 2024\WorkFiles\Annual Monitoring Report\Ponds\2025\Tables\Attached Table 3 - GW Analytical Results.xlsx



Figures

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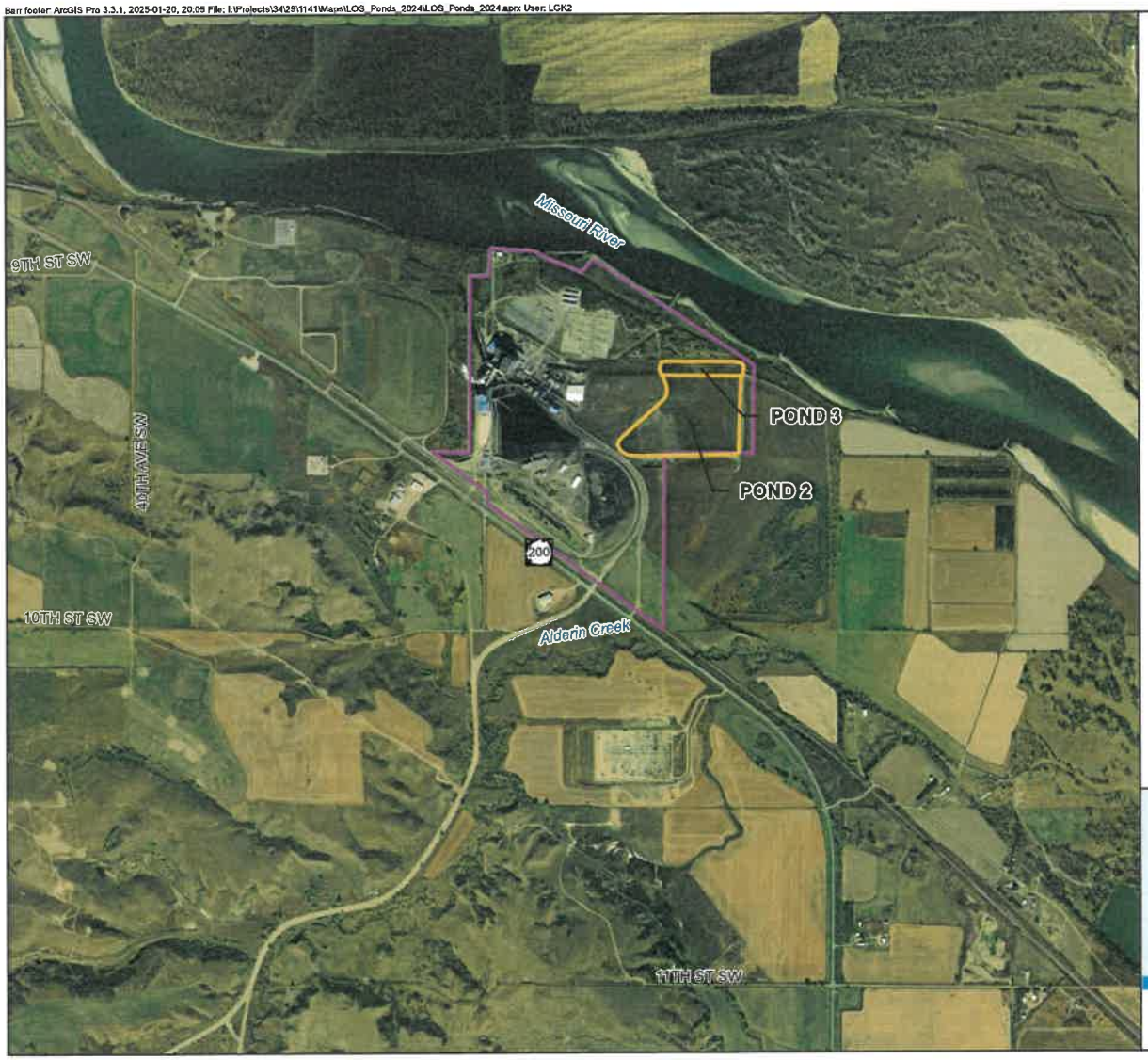


Leland Olds Power Plant
Ponds

N

0 1,000 2,000
Feet

Imagery: ESRI 2024

Site Location
Leland Olds Station- Ponds
Basin Electric Power Cooperative
Stanton, North Dakota

FIGURE 1

BARR

Compliance Well
Site Characterization Well
Water Level Only

N

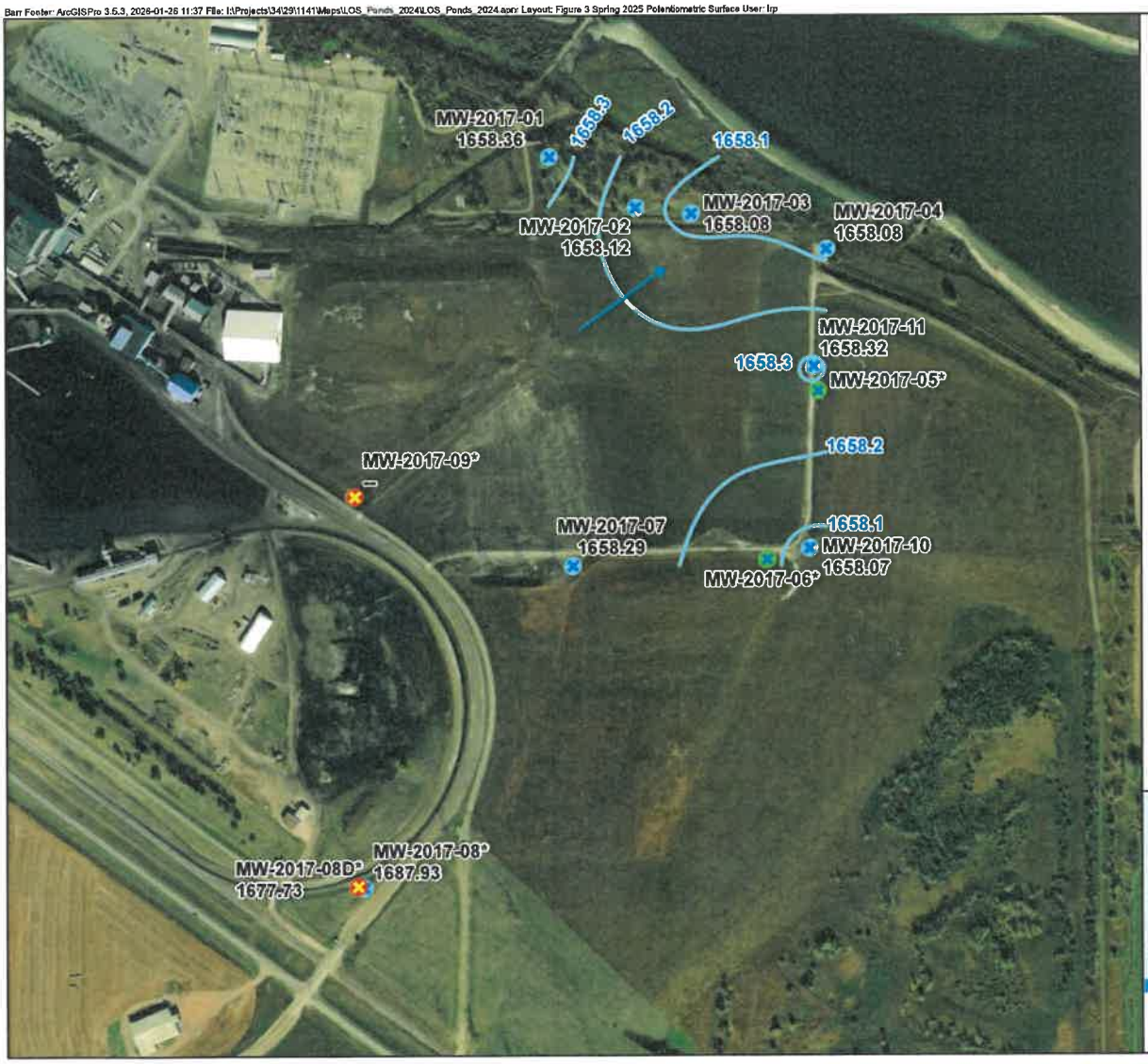
0 300 600
Feet

Imagery: ESRI 2024

Monitoring Network
Leland Olds Station- Ponds
Basin Electric Power Cooperative
Stanton, North Dakota

FIGURE 2

BARR.



Compliance Well
Site Characterization Well
Water Level Only
Groundwater Contours
Flow Direction

Notes:
* = Wells not used for contouring
Groundwater elevations were obtained on May 5, 2025.
NM = not measured

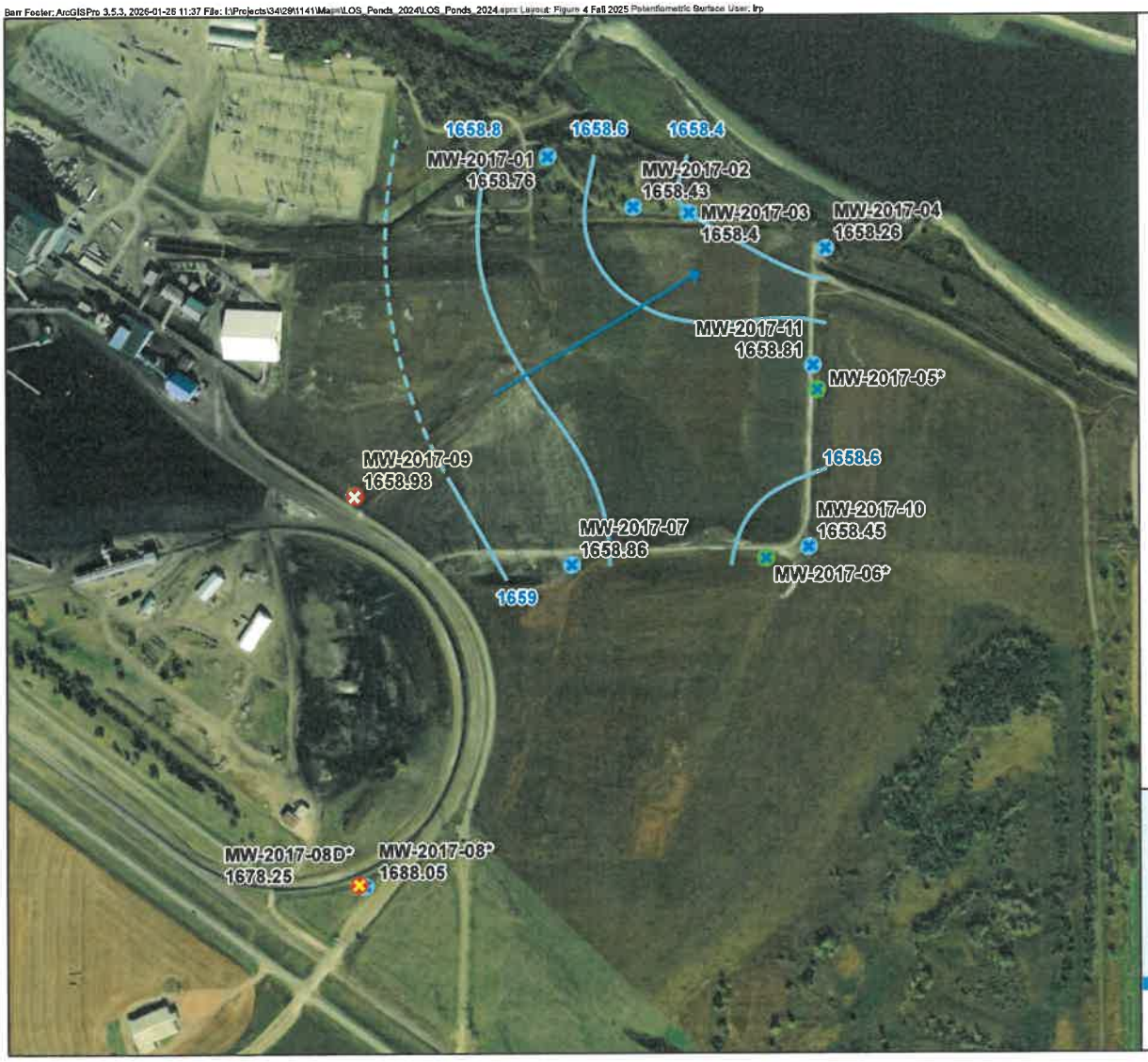
0 300 600
Feet

Imagery: ESRI 2024

Spring 2025
Potentiometric Surface
Leland Olds Station- Ponds
Basin Electric Power Cooperative
Stanton, North Dakota

FIGURE 3

BARR.



Compliance Well
Site Characterization Well
Water Level Only
Groundwater Contour
Flow Direction

Notes:
* = Wells not used for contouring
Groundwater elevations were obtained on August 4, 2025.
NM = not measured

0 300 600
Feet

Imagery: ESRI 2024

Fall 2025
Potentiometric Surface
Leland Olds Station- Ponds
Basin Electric Power Cooperative
Stanton, North Dakota

FIGURE 4

BARR.

Appendices

Appendix A

Lab and Field Reports

Well/Piezo ID: MW-2017-1

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS LOS Plant
Weather Conds:
Collector(s): MK
Date: 5/6/25
Time: 0740
Finish 0827

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length 29.75 c. Casing Material PVC Pump Settings 27/3 @ 100PSI

b. Water Table Depth 25.5 d. Casing Diameter

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump

b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO mg/L (<0.5)	Spec. Cond (µs/cm)	pH	ORP	Turbidity (NTU) (<5)	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
0802	INITIAL 4L	10.2	.40	1784	10.90	-41.4	4.85	clear	25.101
0806	5 L	10.1	.41	1784	10.90	-41.16	4.60	↓	25.60
0810	6 L	10.2	.49	1784	10.90	-42.3	4.20		25.59
0814	7 L	10.2	.48	1784	10.90	-42.16	4.17	↓	25.60
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservatior	Analysis	Time
	1L	1		TDS/Anions	0817
	500mL	1	HNO3	Metals	↓

Comments

Signature MK Date 5/6/25

Well/Piezo ID: MW-2017-2

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: ~~AVS~~ LOS Plant
Weather Conds: Cloudy, Cool
Date: 5/6/25
Time: 0828
Finish 0916
Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length 34.15
b. Water Table Depth 22.91
c. Casing Material PVC
d. Casing Diameter
Pump Settings 22/3 @ 100psi

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time / Stabilization	Volume Removed (gal)	T° (C) +/- 0.2	DO mg/L +/- 10% (<0.5)	Spec. Cond (µs/cm) +/- 3%	pH +/- 0.1	ORP +/- 10%	Turbidity (NTU) +/- 10% (<5)	Color	DTW 0.33 ft
0849	INITIAL 6L	10.1	.44	1051	7.25	-64.7	24.9	Rusty	22.95
0853	7 L	10.2	.54	1049	7.25	-68.7	19.6	↓	22.95
0857	8 L	10.2	.48	1048	7.25	-71.5	19.5	↓	22.95
0901	9 L	10.1	.46	1047	7.25	-70.9	18.4	↓	22.96
0905	10 L	10.2	.42	1047	7.25	-71.4	16.7	↓	22.95
0909	11 L	10.2	.40	1047	7.26	-72	16.6	↓	22.95
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	0911
	500mL	1	HNO3	Metals	↓

Comments

Signature MK Date 5/6/25

Well/Piezo ID: MW-2017 3

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS LDS Plant
Weather Conds: Cloudy, cool
Collector(s): MK
Date: 5/6/25
Time: 0920
Finish 0954

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length 29.06
b. Water Table Depth 24.28
c. Casing Material PVC
d. Casing Diameter
Pump Settings 27/3 @ 160 psi

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time Stabilization	Volume Removed (gal)	T° (C) +/- 0.2	DO mg/L +/- 10% (<0.5)	Spec. Cond (µs/cm) +/- 3%	pH +/- 0.1	ORP +/- 10%	Turbidity (NTU) +/- 10% (<5)	Color	DTW 0.33 ft
0935	INITIAL 5L	10.2	3.30	1358	7.17	-103.0	9.4	clear	24.56
0939	6 L	10.3	3.08	1359	7.18	-103.5	10.3	↓	24.555
0943	7 L	10.3	3.03	1362	7.18	-104.4	9.3		24.58
0947	8 L	10.3	3.05	1365	7.18	-102.7	8.5	↓	24.56
	L								
	L								
	L								
	L								
	L								
	L								
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	L								
	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	0953
	500mL	1	HNO3	Metals	↓

Comments

Signature MK Date 5/6/25

Well/Piezo ID: MW-2017-4

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: ~~AVS~~ LAS Plant
Weather Conds: Sunny 50°
Date: 5/6/25
Time: 1015
Finish 1055
Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☒

a. Total Well Length 34.27
b. Water Table Depth ~~26.58~~ 26.05
c. Casing Material PVC
d. Casing Diameter
Pump Settings 27/3 @ 100psi

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO mg/L	Spec. Cond (µs/cm)	pH	ORP	Turbidity (NTU)	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
			<0.5				<5		
1031	INITIAL 5L	10.6	.29	1275	7.05	-52.3	54.7	orange/	26.06
1035	6 L	10.5	.25	1267	7.03	-38.7	24.3	rusty	26.09
1039	7 L	10.5	.26	1269	7.04	-40.3	21.9		26.06
1043	8 L	10.5	.40	1288	7.04	-44.0	22.3		26.10
1047	9 L	10.5	.31	1291	7.05	-48.2	22.8	↓	26.11
	L								
	L								
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e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	1048
	500mL	1	HNO3	Metals	↓

Comments

Signature MK
Date 5/6/25

Well/Piezo ID: MW-2017-10

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS LOS Plant
Weather Conds: Sunny, 60, Breezy
Date: 5/6/25
Time: 1101
Finish 1139
Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length 44.100
b. Water Table Depth 34.08
c. Casing Material PVC
d. Casing Diameter
Pump Settings 210/4 @ 50psi

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO mg/L (<0.5)	Spec. Cond (µs/cm)	pH	ORP	Turbidity (NTU) (<5)	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
1118	INITIAL 4L	11.4	0.20	990	7.43	-74.1	4.87		34.15
1122	5 L	11.3	.15	989	7.42	-72.0	4.89		34.12
1126	6 L	11.4	.15	989	7.43	-67.8	3.46		34.16
1130	7 L	11.5	.13	989	7.41	-70.0	2.96		34.17
	L								
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	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	1131
	500mL	1	HNO3	Metals	↓

Comments

Signature Mark Date 5/6/25

Well/Piezo ID: MW-2017-11

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS - LOS Plant
Weather Conds: Sunny, breezy
Collector(s): MK
Date: 5/6/25
Time: 1224
Finish 1302

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length 49.92
b. Water Table Depth 39.89
c. Casing Material PVC
d. Casing Diameter
Pump Settings 26/4 @ 50psi

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time / Stabilization	Volume Removed (gal)	T° (C) +/- 0.2	DO mg/L (<0.5) +/- 10%	Spec. Cond (µs/cm) +/- 3%	pH +/- 0.1	ORP +/- 10%	Turbidity (NTU) (<5) +/- 10%	Color	DTW 0.33 ft
1245	INITIAL 4L	11.3	.22	878	7.40	-65.2	1.28	clear	39.88
1249	5 L	11.2	.20	880	7.41	-68.4	1.85	↓	39.87
1253	6 L	11.3	.18	877	7.41	-70.8	1.45	↓	39.87
1257	7 L	11.3	.16	879	7.41	-72.9	.87	↓	39.88
	L								
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	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	1259
	500mL	1	HNO3	Metals	↓

Comments

Signature MM

Date 5/6/25

Well/Piezo ID: MW-2017-7

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS - LOS Plant
Weather Conds: Breezy, cloudy, cool
Date: 5/6/25
Time: 1315
Finish 1355
Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☒

a. Total Well Length 45.3
b. Water Table Depth 39.96
c. Casing Material PVC
d. Casing Diameter
Pump Settings 24/4 @ 60PSI

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO mg/L	Spec. Cond (µs/cm)	pH	ORP	Turbidity (NTU)	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
			<0.5				<5		
1332	INITIAL 3L	11.0	.4	1037	7.45	95.7	2.00	yellow/ Brown	40.0
1336	4 L	11.1	.28	1041	7.445	90.8	2.58	↓	40.01
1340	5 L	11.2	.26	1039	7.45	88.5	2.87		40.0
1344	10 L	11.2	.22	1045	7.45	86.0	1.09	↓	40.02
	L								
	L								
	L								
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	L								
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	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

DUP

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	1345
	500mL	1	HNO3	Metals	↓

Comments

Signature MK Date 5/6/25

Well/Piezo ID: MW-2017-8

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS LDS Plant
Weather Conds: Sunny, Cool
Date: 5/7/25
Time: 0750
Finish 0833
Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length 35.35
b. Water Table Depth 29.30
c. Casing Material PVC
d. Casing Diameter
Pump Settings 20/4 @ 40 psi

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO mg/L (<0.5)	Spec. Cond (µs/cm)	pH	ORP	Turbidity (NTU) (<5)	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
0815	INITIAL 4L	9.1	.41	4833	7.38	-369.7	17.6	clear	29.3
0819	4.75 L	9.1	.39	4854	7.38	-372.9	17.7		29.31
0822	5.5 L	9.1	.37	4865	7.37	-368.3	16.6		29.3
0826	6.25 L	9.1	.37	4882	7.36	-355.3	15.9		29.32
	L								
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	L								
	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	0827
	500mL	1	HNO3	Metals	↓

Comments

Signature [signature] Date 5/7/25

Well/Piezo ID: MW-2017-8D

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS COS PLANT
Weather Conds: Sunny, cool
Date: 5/7/25
Time: 0835
Finish 0920
Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length 44.34
b. Water Table Depth 38.54
c. Casing Material PVC
d. Casing Diameter
Pump Settings 26/4 @ 50PSI

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time / Stabilization	Volume Removed (gal)	T° (C) +/- 0.2	DO mg/L +/- 10% (<0.5)	Spec. Cond (µs/cm) +/- 3%	pH +/- 0.1	ORP +/- 10%	Turbidity (NTU) +/- 10% (<5)	Color	DTW 0.33 ft
0901	INITIAL 5L	9.1	.38	2730	7.97	-363.4	5.01	Brown	38.60
0905	6 L	9.2	.30	2731	7.98	-364.0	5.07	↓	38.60
0909	7 L	9.2	.29	2730	7.98	-366.4	4.86		38.61
0912	8 L	9.2	.28	2730	7.96	-369	5.17		38.60
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	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	0914
	500mL	1	HNO3	Metals	↓

Comments

Signature Mann Date 5/7/25

Minnesota Valley Testing Laboratories, Inc.
2616 East Broadway Avenue
Bismarck, ND 58501
Phone: (701) 258-9720
Toll Free: (800) 279-6885 Fax: (701) 258-9724

Lab Use Only

Chain of Custody

Page __1__ of __2___

Work Order # (Lab Use Only)

Company Name and Address Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571	Account # 2040 Contact Mark Dihle Name of Sampler Mariah Knutson	Phone # 701-745-7238 701-557-5488 Emails mdihle@bepc.com aknutson@bepc.com
Billing Address (indicate if different from above) Attn: Liabilities	Quote Number Project Name/Number LOS CCR Wells	Date Submitted 5/7/2025 Purchase Order # 790708-04

Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	Y/N	Analysis Required
	MW-2017-1	GW	5/6/2025	817	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
	MW-2017-2	GW	5/6/2025	911	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
	MW-2017-3	GW	5/6/2025	953	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
	MW-2017-4	GW	5/6/2025	1048	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
	MW-2017-10	GW	5/6/2025	1131	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
	MW-2017-11	GW	5/6/2025	1259	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
	MW-2017-7	GW	5/6/2025	1345	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
	DUP	GW	5/6/2025	1345	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
	MW-2017-8	GW	5/7/2025	827	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH

Transferred by	Date	Time	Received by	Date	Time	Temp	ROI	Therm. #
1. MILLENIUM EXPRESS	5/7/2025	NOON					Y / N	
2.							Y / N	

Please submit the top copy with your samples. We will return the completed original with your results.

MVTL

Minnesota Valley Testing Laboratories, Inc.
2616 East Broadway Avenue
Bismarck, ND 58501
Phone: (701) 258-9720
Toll Free: (800) 279-6885 Fax: (701) 258-9724

Lab Use Only

Chain of Custody

Page 2 of 2

Work Order #
Lab Use Only

Company Name and Address Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571	**Account #** 2040	**Phone #** 701-745-7238 701-557-5488
	Contact Mark Dihle	**Emails** mdihle@bepc.com aknutson@bepc.com
	Name of Sampler Mariah Knutson	
Billing Address (indicate if different from above) Attn: Liabilities	**Quote Number**	**Date Submitted** 9/18/2024
	Project Name/Number ND0025232	**Purchase Order #** 790708-04

Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	Y/N	Analysis Required
	MW-2017-8D	GW	5/7/2025	914	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH

Comments:

Transferred by	Date	Time	Received by	Date	Time	Temp	ROI	Therm. #
1. MILLENNIUM EXPRESS	5/7/2025	NOON					Y / N	
2.							Y / N	

Basin Electric North Dakota

Site Name: LOS PLANT
Event Date: 8-4-25
Weather Conditions: Foggy cool
Field Technician: MK

River Elevation (if applicable)
1057.89

Well ID	Time	Depth to Water*	Well Condition	Comments
MW 2017-1	0706	25.10		
MW-2017-2	0710	22.60		
MW 2017-3	0712	23.96		
MW-2017 4	0718	25.87		
MW-2017-10	0720	33.70		
MW-2017-11	0722	39.40		
MW-2017-7	0724	39.39		
MW-2017-9	0727	50.95		
MW 2017-8	0730	28.18		
MW-2017-8D	0732	38.02		

* Depth to water as measured from the top of PVC casing.

Well/Piezo ID: MW-2017-1

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS LOS PLANT
Weather Conds: Foggy 60°
Collector(s): MK
Date: 8-4-25
Time: 0744
Finish 0819

WATER LEVEL DATA: (measured from Top of Casing) Well ☒

a. Total Well Length 25.10 ↓
b. Water Table Depth
c. Casing Material PVC
d. Casing Diameter
Pump Settings 28/2 @ 60 psi

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO mg/L	Spec. Cond (µs/cm)	pH	ORP	Turbidity ✓ (NTU)	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
			<0.5				<5		
0800	INITIAL 4L	11.2	.37	1898	6.97	-342.2	2.37	clear	25.15
0804	5 L	11.1	.59	1898	6.97	-344.8	2.22	↓	25.15
0808	6 L	11.2	.58	1899	6.98	-344.1	2.15		25.15
0812	7 L	11.1	.62	1899	6.97	-342.0	2.06		25.16
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e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	0813
	500mL	1	HNO3	Metals	↓

Comments

Signature MK Date 8-4-25

Well/Piezo ID: MW-2017-2

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS LOS PLANT
Weather Conds: Foggy 60°
Collector(s): MK
Date: 8.4.25
Time: 0820
Finish 0900

WATER LEVEL DATA: (measured from Top of Casing) Well ☒

a. Total Well Length _____ c. Casing Material PVC Pump Settings 27|3 @ 60PSI

b. Water Table Depth 22.60 d. Casing Diameter _____

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump

b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time / Stabilization	Volume Removed (gal)	T° (C) +/- 0.2	DO mg/L (<0.5) +/- 10%	Spec. Cond (µs/cm) +/- 3%	pH +/- 0.1	ORP +/- 10%	Turbidity (NTU) (<5) +/- 10%	Color	DTW 0.33 ft
0846	INITIAL 4.5L	11.3	.33	1411	7.16	-343.1	4.99	CLEAR	22.67
0850	5.5 L	11.2	.31	1408	7.16	-342.5	4.45	↓	22.68
0854	6.5 L	11.2	.29	1397	7.16	-340.3	4.70		22.62
0858	7.5 L	11.1	.29	1395	7.16	-340.0	4.37		22.64
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	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	0900
	500mL	1	HNO3	Metals	↓

Comments _____

Signature [signature] Date 8.4.25

Well/Piezo ID: MW-2017-3

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: ~~AVS~~ LOS Plant
Weather Conds: Foggy 60°
Collector(s) MK

Date: 8-4-25
Time: 0910
Finish 0932

WATER LEVEL DATA: (measured from Top of Casing)

Well ☑

a. Total Well Length ______
c. Casing Material PVC
Pump Settings 22/3 @ 60psi
b. Water Table Depth 23.96
d. Casing Diameter ______

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump

b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO mg/L <0.5	Spec. Cond (µs/cm)	pH	ORP	Turbidity (NTU) <5	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
0919	INITIAL 6L	10.8	0.25	1524	7.24	-338.5	3.24	Clear	24.30
0923	7 L	10.9	0.22	1517	7.25	-339.5	3.06	↓	24.29
0927	8 L	10.8	0.21	1517	7.24	-339.8	2.98	↓	24.30
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Type	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	0928
	500mL	1	HNO3	Metals	↓

Comments

Signature [signature]

Date 8 4 25

Well/Piezo ID: MW-2017-4

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS LCS Plant
Weather Conds: cloudy 41°
Date: 8-4-25
Time: 0947
Finish 1029
Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☒

a. Total Well Length _____
b. Water Table Depth 25.81
c. Casing Material PVC
d. Casing Diameter _____
Pump Settings 27/3 @ 60 psi

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time / Stabilization	Volume Removed (gal)	T° (C) +/- 0.2	DO mg/L (<0.5) +/- 10%	Spec. Cond (µs/cm) +/- 3%	pH +/- 0.1	ORP +/- 10%	Turbidity (NTU) (<5) +/- 10%	Color	DTW 0.33 ft
1006	INITIAL 4L	11.5	0.33	1348	7.12	348.1	19.3	clear	25.86
1010	5 L	11.5	0.30	1356	7.13	348.8	22.4	↓	25.91
1014	6 L	11.5	0.24	1361	7.15	349.4	12.6		25.90
1018	7 L	11.4	0.22	1364	7.13	349.9	11.9		25.91
1022	8 L	11.6	0.21	1368	7.14	350.2	11.4	↓	25.89
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	1023
	500mL	1	HNO3	Metals	↓

Comments _____

Signature _____ Date 8-4-25

Well/Piezo ID: MW-2017-10

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS - LOS Plant
Weather Conds: cloudy
Date: 8.4.25
Time: 1033
Finish 1107
Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☒

a. Total Well Length _____
b. Water Table Depth 33.70
c. Casing Material PVC
d. Casing Diameter _____
Pump Settings 26/4 @ 50psi

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO ✓mg/L	Spec. Cond (µs/cm)	pH	ORP	Turbidity ✓ (NTU)	Color	DTW
Stabilization		+/- 0.2	<0.5 +/- 10%	+/- 3%	+/- 0.1	+/- 10%	<5 +/- 10%		0.33 ft
1050	INITIAL 4L	12.4	0.16	1013	7.50	-354.2	1.55	clear	33.80
1054	5 L	12.4	0.14	1011	7.49	-354.5	1.46	↓	33.81
1058	6 L	12.4	0.13	1011	7.49	-354.9	0.83		33.80
1102	7 L	12.5	0.12	1010	7.49	-354.9	0.82	↓	33.79
	L								
	L								
	L								
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	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	1103
	500mL	1	HNO3	Metals	↓

Comments _____

Signature _____ Date 8.4.25

Well/Piezo ID: MW-2017-11

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: ~~AVS~~ LAS Plant
Weather Conds: cloudy, nice
Date: 8-4-25
Time: 1146
Finish 1230
Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length _____ c. Casing Material PVC Pump Settings 2L/4@50psi

b. Water Table Depth 39.40 d. Casing Diameter _____

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump

b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	✓ DO mg/L (<0.5)	Spec. Cond (µs/cm)	pH	ORP	✓ Turbidity (NTU) (<5)	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
1209	INITIAL 4L	13.2	0.19	923	7.44	-319.5	0.51	clear	39.40
1213	5 L	13.1	0.17	922	7.45	-320.5	0.58	↓	39.40
1217	6 L	13.2	0.15	924	7.45	-335.6	0.62		39.39
1221	7 L	13.1	0.13	925	7.45	-351.9	0.63		39.40
	L								
	L								
	L								
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	L								
	L								
	L								
	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

DUP.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	1221
	500mL	1	HNO3	Metals	↓

Comments _____

Signature _____ Date 8-4-25

Well/Piezo ID: MW-207-7

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS LOS Plant
Weather Conds: cloudy mild
Date: 8-4-25
Time: 1234
Finish 1313
Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length _____
b. Water Table Depth 39.39
c. Casing Material PVC
d. Casing Diameter _____
Pump Settings 210/4 @ 100psi

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump
b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO mg/L (<0.5)	Spec. Cond (µs/cm)	pH	ORP	Turbidity (NTU) (<5)	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
1257	INITIAL 3.5	12.1	0.24	1070	7.51	-363.9	2.30	yellow/ brown	39.39
1301	4.5 L	11.9	0.23	1072	7.51	-364.9	2.32	↓	39.39
1305	5.5 L	11.9	0.20	1071	7.51	-364.1	.87		39.39
1309	6.5 L	11.8	0.18	1073	7.51	-364.5	.90		39.39
	L								
	L								
	L								
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	L								
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	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☑	☐	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	1310
	500mL	1	HNO3	Metals	↓

Comments _____

Signature _____ Date 8-4-25

Well/Piezo ID: MW-2017-8

Ground Water Sample Collection Record

Client: BEPC
Project No:
Site Location: AVS LOS Plant
Weather Conds: Warm
Date: 8.4.25
Time: 1316
Finish 1353
Collector(s) MK. MLS

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length _____ c. Casing Material PVC Pump Settings 26/4 @ 40psi

b. Water Table Depth 28.18 d. Casing Diameter _____

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump

b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO mg/L (<0.5)	Spec. Cond (µs/cm)	pH	ORP	Turbidity (NTU) (<5)	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
1336	INITIAL 3.5 L	10.8	.28	4825	7.41	351.6	14.2	clear	28.20
1340	4.5 L	10.9	.25	4845	7.41	352.3	13.6		28.19
1344	5.5 L	10.9	.26	4891	7.40	364.4	12.5		28.19
1348	6.5 L	10.9	.31	4921	7.41	365.0	12.3		28.19
	L								
	L								
	L								
	L								
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	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	1349
	500mL	1	HNO3	Metals	↓

Comments _____

Signature _____ Date 8.4.25

Well/Piezo ID: MW-2017-8D

Ground Water Sample Collection Record

Client: BEPC Date: 8-5-25
Project No: Time:
Site Location: AVS LCS Plant Finish
Weather Conds: Rainy Cool Collector(s) MK

WATER LEVEL DATA: (measured from Top of Casing) Well ☑

a. Total Well Length c. Casing Material PVC Pump Settings 26/4 C 50PSI

b. Water Table Depth 38.02 d. Casing Diameter

WELL PURGING DATA

a. Purge Method Dedicated Bladder Pump

b. Field Testing Equipment Used:

Make	Model	Serial Number
YSI		5320084101
HACH		20030C084551

c. Field Testing Equipment Calibration Documentation Found in Field Notebook # 1 Page # 1

Time	Volume Removed (gal)	T° (C)	DO mg/L (<0.5)	Spec. Cond (µs/cm)	pH	ORP	Turbidity (NTU) (<5)	Color	DTW
Stabilization		+/- 0.2	+/- 10%	+/- 3%	+/- 0.1	+/- 10%	+/- 10%		0.33 ft
0752	INITIAL 5L	10.9	.43	2897	7.94	-343.8	5.03	BROWN	38.04
0756	6 L	10.7	.39	2904	7.95	-342.0	4.84	↓	38.03
0800	7 L	10.6	.35	2891	7.95	-342.1	4.78		38.05
0804	8 L	10.7	.32	2887	7.94	-341.4	4.67	↓	38.04
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								
	L								

e. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

SAMPLE COLLECTION: Method: Bladder Pump

Sample ID	Container Typ	No. of Containers	Preservation	Analysis	Time
	1L	1		TDS/Anions	0805
	500mL	1	HNO3	Metals	↓

Comments

Signature Date 8-5-25

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1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 515-382-5486 ~ Fax 515-382-3885
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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Minnesota Valley Testing Laboratories, Inc.
2616 East Broadway Avenue
Bismarck, ND 58501
Phone: (701) 258-9720
Toll Free: (800) 279-6885 Fax: (701) 258-9724

Basin Electric Power Coop
WO: 94620

Chain of Custody
Page 1 of 2

Order #
Only

Company Name and Address Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571	Account # 2040
	Phone # 701-745-7238 701-557-5486
	Contact Mark Dihle
	Emails mdihle@bepc.com aknutson@bepc.com
Billing Address (indicate if different from above) Attn: Liabilities	Name of Sampler Mariah Knutson
	Quote Number
	Date Submitted 8/5/2025
	Project Name/Number LOS CCR Wells
	Purchase Order # 790708-04

Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	# of	Filtered	Analysis Required
001	MW-2017-1	GW	8/4/2025	813	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
002	MW-2017-2	GW	8/4/2025	900	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
003	MW-2017-3	GW	8/4/2025	928	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
004	MW-2017-4	GW	8/4/2025	1023	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
005	MW-2017-10	GW	8/4/2025	1103	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
006	MW-2017-11	GW	8/4/2025	1221	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
007	DUP	GW	8/4/2025	1221	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
008	MW-2017-7	GW	8/4/2025	1310	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
009	MW-2017-8	GW	8/4/2025	1349	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH

Transferred by	Date	Time	Received by	Date	Time	Temp	ROI	Therm. #
1. MILLENIUM EXPRESS	8/5/2025	NOON	[signature]	5Aug25	1515	3.2°C	(Y)/N	[illegible]
2.							Y / N	

Please submit the top copy with your samples. We will return the completed original with your results.

Report Date: Tuesday, August 12, 2025 3:24:45 PM

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Minnesota Valley Testing Laboratories, Inc.
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Bismarck, ND 58501
Phone: (701) 258-9720
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Chain of Custody

Page 2 of 2

Work Order # (Lab Use Only)

Company Name and Address: Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571	Account # 2040
Billing Address (Indicate if different from above): Attn: Liabilities	Phone # 701-745-7238 701-557-5488
	Contact: Mark Dihle
	Emails: mdihle@bepc.com aknutson@bepc.com
	Name of Sampler: Mariah Knutson
	Quote Number
	Date Submitted: 9/18/2024
	Project Name/Number: ND0025232
	Purchase Order #: 790708-04

Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	# of	Filtered	Analysis Required
010	MW-2017-8D	GW	8/5/2025	805	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH

Comments:

Transferred by	Date	Time	Received by	Date	Time	Temp	ROI	Therm. #
1. MILLENNIUM EXPRESS	8/5/2025	NOON		5Aug25	1515	3.2°C	Y / N	TM95
2.							Y / N	

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative
Workorder: LOS CCR Wells (85896) **PO:** 790708-04

Mark Dihle
Basin Electric Power Cooperative
1717 E. Interstate Avenue
Bismarck, ND 58503

Certificate of Analysis

Approval

All data reported has been reviewed and approved by:

C. Carroll

Claudette Carroll, Lab Manager Bismarck, ND

Analyses performed under Minnesota Department of Health Accreditation conforms to the current TNI standards.

NEW ULM LAB CERTIFICATIONS:
MN LAB # 027-015-125 ND WW/DW # R-040

BISMARCK LAB CERTIFICATIONS:
MN LAB # 038-999-267 ND W/DW # ND-016

Workorder Comments

All analytes with dilution factors greater than 1 (displayed in DF column) required dilution due to matrix or high concentration of target analyte unless otherwise noted and reporting limits (RDL column) have been adjusted accordingly.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID:	85896001	**Date Collected:**	05/06/2025 08:17	**Matrix:**	Groundwater
Sample ID:	MW-2017-1	**Date Received:**	05/07/2025 14:44	**Collector:**	Client

Temp @ Receipt (C): 4.6 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**355**	mg/L	25	5		05/14/2025 10:01	
Method: EPA 6010D							
Boron	**0.54**	mg/L	0.1	1	05/07/2025 17:00	05/14/2025 09:18	
Calcium	**217**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:51	
Magnesium	**91.2**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:51	
Potassium	**6.09**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:51	
Sodium	**112**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:51	
Method: SM2320 B-2021							
Alkalinity, Total	**588**	mg/L as CaCO3	20.5	1		05/08/2025 18:17	
Bicarbonate	**588**	mg/L as CaCO3	20.5	1		05/08/2025 18:17	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		05/08/2025 18:17	
Method: SM4500 H+ B-2021							
pH	**7.3**	units	0.1	1		05/08/2025 18:17	*
Method: SM4500-Cl-E 2021							
Chloride	**14.7**	mg/L	2.0	1		05/13/2025 10:06	
Method: SM4500-F-C-2021							
Fluoride	**0.36**	mg/L	0.1	1		05/08/2025 18:17	
Method: USGS I-1750-85							
Total Dissolved Solids	**1250**	mg/L	10	1		05/09/2025 14:55	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 85896002 **Date Collected:** 05/06/2025 09:11 **Matrix:** Groundwater
Sample ID: MW-2017-2 **Date Received:** 05/07/2025 14:44 **Collector:** Client

Temp @ Receipt (C): 4.6 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**271**	mg/L	5	1		05/14/2025 10:14	
Method: EPA 6010D							
Boron	**1.50**	mg/L	0.1	1	05/07/2025 17:00	05/14/2025 09:18	
Calcium	**78.8**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:53	
Magnesium	**27.8**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:53	
Potassium	**5.16**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:53	
Sodium	**142**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:53	
Method: SM2320 B-2021							
Alkalinity, Total	**218**	mg/L as CaCO3	20.5	1		05/08/2025 18:28	
Bicarbonate	**218**	mg/L as CaCO3	20.5	1		05/08/2025 18:28	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		05/08/2025 18:28	
Method: SM4500 H+ B-2021							
pH	**7.6**	units	0.1	1		05/08/2025 18:28	*
Method: SM4500-Cl-E 2021							
Chloride	**11.3**	mg/L	2.0	1		05/13/2025 10:07	
Method: SM4500-F-C-2021							
Fluoride	**0.48**	mg/L	0.1	1		05/08/2025 18:28	
Method: USGS I-1750-85							
Total Dissolved Solids	**711**	mg/L	10	1		05/09/2025 14:55	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 515-382-5486 ~ Fax 515-382-3885
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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 85896003 **Date Collected:** 05/06/2025 09:53 **Matrix:** Groundwater
Sample ID: MW-2017-3 **Date Received:** 05/07/2025 14:44 **Collector:** Client

Temp @ Receipt (C): 4.6 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**156**	mg/L	5	1		05/14/2025 10:15	
Method: EPA 6010D							
Boron	**1.51**	mg/L	0.1	1	05/07/2025 17:00	05/14/2025 09:19	
Calcium	**111**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:54	
Magnesium	**39.7**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:54	
Potassium	**6.87**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:54	
Sodium	**195**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:54	
Method: SM2320 B-2021							
Alkalinity, Total	**533**	mg/L as CaCO3	20.5	1		05/08/2025 18:39	
Bicarbonate	**533**	mg/L as CaCO3	20.5	1		05/08/2025 18:39	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		05/08/2025 18:39	
Method: SM4500 H+ B-2021							
pH	**7.6**	units	0.1	1		05/08/2025 18:39	*
Method: SM4500-Cl-E 2021							
Chloride	**11.0**	mg/L	2.0	1		05/13/2025 10:17	
Method: SM4500-F-C-2021							
Fluoride	**0.50**	mg/L	0.1	1		05/08/2025 18:39	
Method: USGS I-1750-85							
Total Dissolved Solids	**882**	mg/L	10	1		05/09/2025 14:55	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 85896004 **Date Collected:** 05/06/2025 10:48 **Matrix:** Groundwater
Sample ID: MW-2017-4 **Date Received:** 05/07/2025 14:44 **Collector:** Client

Temp @ Receipt (C): 4.6 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**298**	mg/L	25	5		05/14/2025 10:16	
Method: EPA 6010D							
Boron	**1.20**	mg/L	0.1	1	05/07/2025 17:00	05/14/2025 09:20	
Calcium	**151**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:55	
Magnesium	**34.1**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:55	
Potassium	**9.30**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:55	
Sodium	**123**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:55	
Method: SM2320 B-2021							
Alkalinity, Total	**329**	mg/L as CaCO3	20.5	1		05/08/2025 18:50	
Bicarbonate	**329**	mg/L as CaCO3	20.5	1		05/08/2025 18:50	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		05/08/2025 18:50	
Method: SM4500 H+ B-2021							
pH	**7.5**	units	0.1	1		05/08/2025 18:50	*
Method: SM4500-Cl-E 2021							
Chloride	**10.8**	mg/L	2.0	1		05/13/2025 10:18	
Method: SM4500-F-C-2021							
Fluoride	**0.78**	mg/L	0.1	1		05/08/2025 18:50	
Method: USGS I-1750-85							
Total Dissolved Solids	**886**	mg/L	10	1		05/09/2025 14:55	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 85896005 **Date Collected:** 05/06/2025 11:31 **Matrix:** Groundwater
Sample ID: MW-2017-10 **Date Received:** 05/07/2025 14:44 **Collector:** Client

Temp @ Receipt (C): 4.6 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**284**	mg/L	25	5		05/14/2025 10:17	
Method: EPA 6010D							
Boron	**0.88**	mg/L	0.1	1	05/07/2025 17:00	05/14/2025 09:20	
Calcium	**96.0**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:56	
Magnesium	**27.5**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:56	
Potassium	**4.99**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:56	
Sodium	**108**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:56	
Method: SM2320 B-2021							
Alkalinity, Total	**173**	mg/L as CaCO3	20.5	1		05/08/2025 19:01	
Bicarbonate	**173**	mg/L as CaCO3	20.5	1		05/08/2025 19:01	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		05/08/2025 19:01	
Method: SM4500 H+ B-2021							
pH	**7.8**	units	0.1	1		05/08/2025 19:01	*
Method: SM4500-Cl-E 2021							
Chloride	**10.8**	mg/L	2.0	1		05/13/2025 10:19	
Method: SM4500-F-C-2021							
Fluoride	**0.86**	mg/L	0.1	1		05/08/2025 19:01	
Method: USGS I-1750-85							
Total Dissolved Solids	**726**	mg/L	10	1		05/09/2025 14:55	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 85896006 **Date Collected:** 05/06/2025 12:59 **Matrix:** Groundwater
Sample ID: MW-2017-11 **Date Received:** 05/07/2025 14:44 **Collector:** Client

Temp @ Receipt (C): 4.6 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**169**	mg/L	5	1		05/14/2025 10:18	
Method: EPA 6010D							
Boron	**1.30**	mg/L	0.1	1	05/07/2025 17:00	05/14/2025 09:21	
Calcium	**66.6**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:57	
Magnesium	**24.1**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:57	
Potassium	**4.97**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:57	
Sodium	**121**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:57	
Method: SM2320 B-2021							
Alkalinity, Total	**255**	mg/L as CaCO3	20.5	1		05/08/2025 19:12	
Bicarbonate	**255**	mg/L as CaCO3	20.5	1		05/08/2025 19:12	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		05/08/2025 19:12	
Method: SM4500 H+ B-2021							
pH	**7.8**	units	0.1	1		05/08/2025 19:12	*
Method: SM4500-Cl-E 2021							
Chloride	**11.2**	mg/L	2.0	1		05/13/2025 10:20	
Method: SM4500-F-C-2021							
Fluoride	**0.76**	mg/L	0.1	1		05/08/2025 19:12	
Method: USGS I-1750-85							
Total Dissolved Solids	**606**	mg/L	10	1		05/09/2025 14:55	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 85896007 **Date Collected:** 05/06/2025 13:45 **Matrix:** Groundwater
Sample ID: MW-2017-7 **Date Received:** 05/07/2025 14:44 **Collector:** Client

Temp @ Receipt (C): 4.6 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**224**	mg/L	5	1		05/14/2025 10:20	
Method: EPA 6010D							
Boron	**2.23**	mg/L	0.1	1	05/07/2025 17:00	05/14/2025 09:22	
Calcium	**72.2**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:59	
Magnesium	**21.9**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:59	
Potassium	**4.03**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:59	
Sodium	**155**	mg/L	1	1	05/07/2025 17:00	05/12/2025 15:59	
Method: SM2320 B-2021							
Alkalinity, Total	**221**	mg/L as CaCO3	20.5	1		05/08/2025 19:23	
Bicarbonate	**221**	mg/L as CaCO3	20.5	1		05/08/2025 19:23	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		05/08/2025 19:23	
Method: SM4500 H+ B-2021							
pH	**7.8**	units	0.1	1		05/08/2025 19:23	*
Method: SM4500-Cl-E 2021							
Chloride	**11.4**	mg/L	2.0	1		05/13/2025 10:21	
Method: SM4500-F-C-2021							
Fluoride	**1.21**	mg/L	0.1	1		05/08/2025 19:23	
Method: USGS I-1750-85							
Total Dissolved Solids	**721**	mg/L	10	1		05/09/2025 14:55	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 85896008 **Date Collected:** 05/06/2025 13:45 **Matrix:** Groundwater
Sample ID: DUP **Date Received:** 05/07/2025 14:44 **Collector:** Client

Temp @ Receipt (C): 4.6 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**261**	mg/L	25	5		05/14/2025 10:21	
Method: EPA 6010D							
Boron	**2.32**	mg/L	0.1	1	05/07/2025 17:00	05/14/2025 09:24	
Calcium	**74.5**	mg/L	1	1	05/07/2025 17:00	05/12/2025 16:00	
Magnesium	**22.7**	mg/L	1	1	05/07/2025 17:00	05/12/2025 16:00	
Potassium	**4.14**	mg/L	1	1	05/07/2025 17:00	05/12/2025 16:00	
Sodium	**161**	mg/L	1	1	05/07/2025 17:00	05/12/2025 16:00	
Method: SM2320 B-2021							
Alkalinity, Total	**214**	mg/L as CaCO3	20.5	1		05/08/2025 19:33	
Bicarbonate	**214**	mg/L as CaCO3	20.5	1		05/08/2025 19:33	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		05/08/2025 19:33	
Method: SM4500 H+ B-2021							
pH	**7.8**	units	0.1	1		05/08/2025 19:33	*
Method: SM4500-Cl-E 2021							
Chloride	**11.4**	mg/L	2.0	1		05/13/2025 10:23	
Method: SM4500-F-C-2021							
Fluoride	**1.22**	mg/L	0.1	1		05/08/2025 19:33	
Method: USGS I-1750-85							
Total Dissolved Solids	**741**	mg/L	10	1		05/09/2025 14:55	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 85896009 **Date Collected:** 05/07/2025 08:27 **Matrix:** Groundwater
Sample ID: MW-2017-8 **Date Received:** 05/07/2025 14:44 **Collector:** Client

Temp @ Receipt (C): 4.6 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**1630**	mg/L	50	10		05/14/2025 10:22	
Method: EPA 6010D							
Boron	**0.44**	mg/L	0.1	1	05/07/2025 17:00	05/14/2025 09:25	
Calcium	**128**	mg/L	1	1	05/07/2025 17:00	05/12/2025 16:01	
Magnesium	**115**	mg/L	1	1	05/07/2025 17:00	05/12/2025 16:01	
Potassium	**9.48**	mg/L	1	1	05/07/2025 17:00	05/12/2025 16:01	
Sodium	**1080**	mg/L	5	5	05/07/2025 17:00	05/12/2025 16:29	
Method: SM2320 B-2021							
Alkalinity, Total	**915**	mg/L as CaCO3	20.5	1		05/08/2025 19:44	
Bicarbonate	**915**	mg/L as CaCO3	20.5	1		05/08/2025 19:44	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		05/08/2025 19:44	
Method: SM4500 H+ B-2021							
pH	**7.8**	units	0.1	1		05/08/2025 19:44	*
Method: SM4500-Cl-E 2021							
Chloride	**26.5**	mg/L	2.0	1		05/13/2025 10:24	
Method: SM4500-F-C-2021							
Fluoride	**0.39**	mg/L	0.1	1		05/08/2025 19:44	
Method: USGS I-1750-85							
Total Dissolved Solids	**3680**	mg/L	10	1		05/09/2025 14:55	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 85896010 **Date Collected:** 05/07/2025 09:14 **Matrix:** Groundwater
Sample ID: MW-2017-8D **Date Received:** 05/07/2025 14:44 **Collector:** Client

Temp @ Receipt (C): 4.6 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**345**	mg/L	25	5		05/14/2025 10:23	*
Method: EPA 6010D							
Boron	**0.69**	mg/L	0.1	1	05/07/2025 17:00	05/14/2025 09:26	
Calcium	**8.50**	mg/L	1	1	05/07/2025 17:00	05/12/2025 16:03	
Magnesium	**3.75**	mg/L	1	1	05/07/2025 17:00	05/12/2025 16:03	
Potassium	**4.00**	mg/L	1	1	05/07/2025 17:00	05/12/2025 16:03	
Sodium	**806**	mg/L	5	5	05/07/2025 17:00	05/12/2025 16:31	
Method: SM2320 B-2021							
Alkalinity, Total	**1137**	mg/L as CaCO3	20.5	1		05/08/2025 21:47	
Bicarbonate	**1136**	mg/L as CaCO3	20.5	1		05/08/2025 21:47	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		05/08/2025 21:47	
Method: SM4500 H+ B-2021							
pH	**8.3**	units	0.1	1		05/08/2025 21:47	*
Method: SM4500-Cl-E 2021							
Chloride	**16.6**	mg/L	2.0	1		05/13/2025 10:25	
Method: SM4500-F-C-2021							
Fluoride	**0.68**	mg/L	0.1	1		05/08/2025 21:47	
Method: USGS I-1750-85							
Total Dissolved Solids	**1960**	mg/L	10	1		05/09/2025 14:55	

Analysis Results Comments

Sulfate

Matrix spike and/or matrix spike duplicate recovery was low; the associated laboratory control sample recovery was acceptable.

pH

Sample analyzed beyond holding time.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

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Minnesota Valley Testing Laboratories, Inc.
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Phone: (701) 258-9720
Toll Free: (800) 279-6885 Fax: (701) 258-9724

Work Order # (Lab Use Only)

Company Name and Address: Basin Electric Power Coop, Leland Olds Station, 3901 Highway 200A, Stanton, ND 58571	Account # 2040	Phone # 701-745-7238 701-557-5488
Billing Address (indicate if different from above): Attn: Liabilities	Contact: Mark Dihle	Emails: mdihle@bepc.com aknutson@bepc.com
	Name of Sampler: Mariah Knutson	
	Quote Number	Date Submitted: 5/7/2025
	Project Name/Number: LOS CCR Wells	Purchase Order #: 790708-04

Lab Use Only Lab	Sample ID	Sample Matrix (GW - Groundwater)	Date Sampled	Time Sampled	# of	Filtered	Analysis Required
001	MW-2017-1	GW	5/6/2025	817	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
002	MW-2017-2	GW	5/6/2025	911	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
003	MW-2017-3	GW	5/6/2025	953	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
004	MW-2017-4	GW	5/6/2025	1048	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
005	MW-2017-10	GW	5/6/2025	1131	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
006	MW-2017-11	GW	5/6/2025	1259	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
007	MW-2017-7	GW	5/6/2025	1345	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
008	DUP	GW	5/6/2025	1345	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
009	MW-2017-8	GW	5/7/2025	827	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH

Transferred by	Date	Time	Received by	Date	Time	Temp	SOI	Therm. #
1. MILLENIUM EXPRESS	5/7/2025	NOON				4.6°C	Y / N	WR59
2.							Y / N	

Please submit the top copy with your samples. We will return the completed original with your results.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

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Chain of Custody

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Work Order # (Lab Use Only)

Company Name and Address: Basin Electric Power Coop, Leland Olds Station, 3901 Highway 200A, Stanton, ND 58571	Account # 2040	Phone # 701-745-7238 701-557-5488
Billing Address (indicate if different from above): Attn: Liabilities	Contact: Mark Dihle	Emails: mdihle@bepc.com aknutson@bepc.com
	Name of Sampler: Mariah Knutson	
	Quote Number	Date Submitted: 9/18/2024
	Project Name/Number: ND0025232	Purchase Order #: 790708-04

Lab Use Only Lab	Sample ID	Sample Matrix (GW - Groundwater)	Date Sampled	Time Sampled	# of	Filtered	Analysis Required
010	MW-2017-8D	GW	5/7/2025	914	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH

Comments:

Transferred by	Date	Time	Received by	Date	Time	Temp	ROI	Therm. #
1. MILLENNIUM EXPRESS	5/7/2025	NOON		5/8/25	1444	4.6°C	Y/N	TM0159
2.							Y/N	

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Sample Condition Checklist

Date: 7 May 25 Time: 1609 Analyst: PN

Work Order #: 858916

Containers Supplied by MVTL: ☒ Yes ☐ No (Designate customer supplied containers as "Other" in container size column)

Comments:

Number of Bottles	Container Size (mL) F-(500) = Filtered	Container Type CG = Clear Glass, P = Plastic, AG = Amber Glass	Preservation	pH	Sample IDs Preservation reagent added Date/Time Analyst	Unique ID of preservation reagent added	Sample pH after preservation	Required for HNO_3 samples only (24 hours later) Sample ID pH Recheck Result Date/Time/Analyst
10	(125) (250) (500) F-(500) **(1000)** Other	(CG) **(P)** (AG) Other	**NONE** HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
10	(125) (250) **(500)** F-(500) (1000) Other	(CG) **(P)** (AG) Other	NONE **HNO_3** H_2SO_4 NaOH NaOH/ZnAcet HCl	**<2** >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	Oil and grease	(CG) (P) (AG) Other	HCl	n/a				
	TOC Vials	(G) (AG)	H_3PO_4	n/a				
	DOC Vials	(G) (AG)	None H_3PO_4	n/a				

*All samples requiring analyses performed outside of the Bismarck laboratory (New Ulm and Sub-Contract) are not documented on this form.
*All samples requiring microbiological tests are not documented on this form.

Report Date: Tuesday, May 20, 2025 7:56:39 AM

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative
Workorder: LOS CCR Wells (94620) **PO:** 790708-04

Mark Dihle
Basin Electric Power Cooperative
1717 E. Interstate Avenue
Bismarck, ND 58503

Certificate of Analysis

Approval

All data reported has been reviewed and approved by:

C. Carroll

Claudette Carroll, Lab Manager Bismarck, ND

Analyses performed under Minnesota Department of Health Accreditation conforms to the current TNI standards.

NEW ULM LAB CERTIFICATIONS:
MN LAB # 027-015-125 ND WW/DW # R-040

BISMARCK LAB CERTIFICATIONS:
MN LAB # 038-999-267 ND W/DW # ND-016

Workorder Comments

All analytes with dilution factors greater than 1 (displayed in DF column) required dilution due to matrix or high concentration of target analyte unless otherwise noted and reporting limits (RDL column) have been adjusted accordingly.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 94620001 **Date Collected:** 08/04/2025 08:13 **Matrix:** Groundwater
Sample ID: MW-2017-1 **Date Received:** 08/05/2025 15:19 **Collector:** Client

Temp @ Receipt (C): 3.2 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**326**	mg/L	25	5		08/08/2025 09:45	
Method: EPA 6010D							
Boron	**0.44**	mg/L	0.1	1	08/05/2025 16:43	08/08/2025 08:54	
Calcium	**231**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:36	
Magnesium	**94.8**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:36	
Potassium	**6.02**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:36	
Sodium	**108**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:36	
Method: SM2320 B-2021							
Alkalinity, Total	**630**	mg/L as CaCO3	20.5	1		08/05/2025 18:48	
Bicarbonate	**630**	mg/L as CaCO3	20.5	1		08/05/2025 18:48	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		08/05/2025 18:48	
Method: SM4500 H+ B-2021							
pH	**7.2**	units	0.1	1		08/05/2025 18:48	*
Method: SM4500-Cl-E 2021							
Chloride	**16.4**	mg/L	2.0	1		08/08/2025 12:13	
Method: SM4500-F-C-2021							
Fluoride	**0.35**	mg/L	0.1	1		08/05/2025 18:48	
Method: USGS I-1750-85							
Total Dissolved Solids	**1230**	mg/L	10	1		08/06/2025 13:48	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 94620002 **Date Collected:** 08/04/2025 09:00 **Matrix:** Groundwater
Sample ID: MW-2017-2 **Date Received:** 08/05/2025 15:19 **Collector:** Client

Temp @ Receipt (C): 3.2 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**291**	mg/L	5	1		08/08/2025 09:46	
Method: EPA 6010D							
Boron	**1.11**	mg/L	0.1	1	08/05/2025 16:43	08/08/2025 08:54	
Calcium	**119**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:41	
Magnesium	**43.8**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:41	
Potassium	**5.85**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:41	
Sodium	**154**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:41	
Method: SM2320 B-2021							
Alkalinity, Total	**403**	mg/L as CaCO3	20.5	1		08/05/2025 18:58	
Bicarbonate	**403**	mg/L as CaCO3	20.5	1		08/05/2025 18:58	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		08/05/2025 18:58	
Method: SM4500 H+ B-2021							
pH	**7.4**	units	0.1	1		08/05/2025 18:58	*
Method: SM4500-Cl-E 2021							
Chloride	**11.7**	mg/L	2.0	1		08/08/2025 12:15	
Method: SM4500-F-C-2021							
Fluoride	**0.41**	mg/L	0.1	1		08/05/2025 18:58	
Method: USGS I-1750-85							
Total Dissolved Solids	**916**	mg/L	10	1		08/06/2025 13:48	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 94620003 **Date Collected:** 08/04/2025 09:28 **Matrix:** Groundwater
Sample ID: MW-2017-3 **Date Received:** 08/05/2025 15:19 **Collector:** Client

Temp @ Receipt (C): 3.2 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**136**	mg/L	5	1		08/08/2025 09:47	*
Method: EPA 6010D							
Boron	**1.25**	mg/L	0.1	1	08/05/2025 16:43	08/08/2025 08:57	
Calcium	**112**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:42	
Magnesium	**41.2**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:42	
Potassium	**6.67**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:42	
Sodium	**198**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:42	
Method: SM2320 B-2021							
Alkalinity, Total	**651**	mg/L as CaCO3	20.5	1		08/05/2025 20:21	
Bicarbonate	**651**	mg/L as CaCO3	20.5	1		08/05/2025 20:21	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		08/05/2025 20:21	
Method: SM4500 H+ B-2021							
pH	**7.5**	units	0.1	1		08/05/2025 20:21	*
Method: SM4500-Cl-E 2021							
Chloride	**11.3**	mg/L	2.0	1		08/08/2025 12:16	
Method: SM4500-F-C-2021							
Fluoride	**0.52**	mg/L	0.1	1		08/05/2025 20:21	
Method: USGS I-1750-85							
Total Dissolved Solids	**966**	mg/L	10	1		08/06/2025 13:48	

Analysis Results Comments

Sulfate

Matrix spike and/or matrix spike duplicate recovery was low; the associated laboratory control sample recovery was acceptable.

pH

Sample analyzed beyond holding time.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 94620004 **Date Collected:** 08/04/2025 10:23 **Matrix:** Groundwater
Sample ID: MW-2017-4 **Date Received:** 08/05/2025 15:19 **Collector:** Client

Temp @ Receipt (C): 3.2 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**323**	mg/L	25	5		08/08/2025 11:14	
Method: EPA 6010D							
Boron	**1.18**	mg/L	0.1	1	08/05/2025 16:43	08/08/2025 08:57	
Calcium	**163**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:39	
Magnesium	**35.7**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:39	
Potassium	**9.31**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:39	
Sodium	**124**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:39	
Method: SM2320 B-2021							
Alkalinity, Total	**365**	mg/L as CaCO3	20.5	1		08/05/2025 20:32	
Bicarbonate	**365**	mg/L as CaCO3	20.5	1		08/05/2025 20:32	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		08/05/2025 20:32	
Method: SM4500 H+ B-2021							
pH	**7.4**	units	0.1	1		08/05/2025 20:32	*
Method: SM4500-Cl-E 2021							
Chloride	**11.2**	mg/L	2.0	1		08/08/2025 12:17	
Method: SM4500-F-C-2021							
Fluoride	**0.80**	mg/L	0.1	1		08/05/2025 20:32	
Method: USGS I-1750-85							
Total Dissolved Solids	**908**	mg/L	10	1		08/06/2025 13:48	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 94620005 **Date Collected:** 08/04/2025 11:03 **Matrix:** Groundwater
Sample ID: MW-2017-10 **Date Received:** 08/05/2025 15:19 **Collector:** Client

Temp @ Receipt (C): 3.2 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**308**	mg/L	25	5		08/08/2025 11:15	
Method: EPA 6010D							
Boron	**0.83**	mg/L	0.1	1	08/05/2025 16:43	08/08/2025 08:58	
Calcium	**94.9**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:43	
Magnesium	**26.3**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:43	
Potassium	**4.49**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:43	
Sodium	**99.5**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:43	
Method: SM2320 B-2021							
Alkalinity, Total	**180**	mg/L as CaCO3	20.5	1		08/05/2025 20:42	
Bicarbonate	**180**	mg/L as CaCO3	20.5	1		08/05/2025 20:42	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		08/05/2025 20:42	
Method: SM4500 H+ B-2021							
pH	**7.7**	units	0.1	1		08/05/2025 20:42	*
Method: SM4500-Cl-E 2021							
Chloride	**10.9**	mg/L	2.0	1		08/08/2025 12:23	
Method: SM4500-F-C-2021							
Fluoride	**0.91**	mg/L	0.1	1		08/05/2025 20:42	
Method: USGS I-1750-85							
Total Dissolved Solids	**671**	mg/L	10	1		08/06/2025 13:48	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 94620006 **Date Collected:** 08/04/2025 12:21 **Matrix:** Groundwater
Sample ID: MW-2017-11 **Date Received:** 08/05/2025 15:19 **Collector:** Client

Temp @ Receipt (C): 3.2 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**178**	mg/L	5	1		08/08/2025 11:03	
Method: EPA 6010D							
Boron	**1.25**	mg/L	0.1	1	08/05/2025 16:43	08/08/2025 08:59	
Calcium	**63.4**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:45	
Magnesium	**23.9**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:45	
Potassium	**4.88**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:45	
Sodium	**116**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:45	
Method: SM2320 B-2021							
Alkalinity, Total	**267**	mg/L as CaCO3	20.5	1		08/05/2025 20:53	
Bicarbonate	**267**	mg/L as CaCO3	20.5	1		08/05/2025 20:53	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		08/05/2025 20:53	
Method: SM4500 H+ B-2021							
pH	**7.7**	units	0.1	1		08/05/2025 20:53	*
Method: SM4500-Cl-E 2021							
Chloride	**11.5**	mg/L	2.0	1		08/08/2025 12:24	
Method: SM4500-F-C-2021							
Fluoride	**0.78**	mg/L	0.1	1		08/05/2025 20:53	
Method: USGS I-1750-85							
Total Dissolved Solids	**592**	mg/L	10	1		08/06/2025 13:48	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 94620007 **Date Collected:** 08/04/2025 12:21 **Matrix:** Groundwater
Sample ID: DUP **Date Received:** 08/05/2025 15:19 **Collector:** Client

Temp @ Receipt (C): 3.2 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**180**	mg/L	5	1		08/08/2025 11:04	
Method: EPA 6010D							
Boron	**1.24**	mg/L	0.1	1	08/05/2025 16:43	08/08/2025 09:00	
Calcium	**62.0**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:46	
Magnesium	**23.5**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:46	
Potassium	**4.71**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:46	
Sodium	**114**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:46	
Method: SM2320 B-2021							
Alkalinity, Total	**268**	mg/L as CaCO3	20.5	1		08/05/2025 21:03	
Bicarbonate	**268**	mg/L as CaCO3	20.5	1		08/05/2025 21:03	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		08/05/2025 21:03	
Method: SM4500 H+ B-2021							
pH	**7.7**	units	0.1	1		08/05/2025 21:03	*
Method: SM4500-Cl-E 2021							
Chloride	**11.5**	mg/L	2.0	1		08/08/2025 12:25	
Method: SM4500-F-C-2021							
Fluoride	**0.78**	mg/L	0.1	1		08/05/2025 21:03	
Method: USGS I-1750-85							
Total Dissolved Solids	**585**	mg/L	10	1		08/06/2025 13:48	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 94620008 **Date Collected:** 08/04/2025 13:10 **Matrix:** Groundwater
Sample ID: MW-2017-7 **Date Received:** 08/05/2025 15:19 **Collector:** Client

Temp @ Receipt (C): 3.2 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**243**	mg/L	5	1		08/08/2025 11:06	
Method: EPA 6010D							
Boron	**2.17**	mg/L	0.1	1	08/05/2025 16:43	08/08/2025 09:00	
Calcium	**71.4**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:47	
Magnesium	**21.9**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:47	
Potassium	**3.90**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:47	
Sodium	**147**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:47	
Method: SM2320 B-2021							
Alkalinity, Total	**234**	mg/L as CaCO3	20.5	1		08/05/2025 21:14	
Bicarbonate	**234**	mg/L as CaCO3	20.5	1		08/05/2025 21:14	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		08/05/2025 21:14	
Method: SM4500 H+ B-2021							
pH	**7.7**	units	0.1	1		08/05/2025 21:14	*
Method: SM4500-Cl-E 2021							
Chloride	**11.5**	mg/L	2.0	1		08/08/2025 12:26	
Method: SM4500-F-C-2021							
Fluoride	**1.15**	mg/L	0.1	1		08/05/2025 21:14	
Method: USGS I-1750-85							
Total Dissolved Solids	**721**	mg/L	10	1		08/06/2025 13:48	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Member ACIL

Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 94620009 **Date Collected:** 08/04/2025 13:49 **Matrix:** Groundwater
Sample ID: MW-2017-8 **Date Received:** 08/05/2025 15:19 **Collector:** Client

Temp @ Receipt (C): 3.2 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**1740**	mg/L	50	10		08/08/2025 11:07	
Method: EPA 6010D							
Boron	**0.43**	mg/L	0.1	1	08/05/2025 16:43	08/08/2025 09:01	
Calcium	**127**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:48	
Magnesium	**114**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:48	
Potassium	**9.39**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:48	
Sodium	**1020**	mg/L	5	5	08/05/2025 16:43	08/11/2025 11:02	
Method: SM2320 B-2021							
Alkalinity, Total	**932**	mg/L as CaCO3	20.5	1		08/05/2025 21:24	
Bicarbonate	**932**	mg/L as CaCO3	20.5	1		08/05/2025 21:24	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		08/05/2025 21:24	
Method: SM4500 H+ B-2021							
pH	**7.7**	units	0.1	1		08/05/2025 21:24	*
Method: SM4500-Cl-E 2021							
Chloride	**26.2**	mg/L	2.0	1		08/08/2025 12:28	
Method: SM4500-F-C-2021							
Fluoride	**0.40**	mg/L	0.1	1		08/05/2025 21:24	
Method: USGS I-1750-85							
Total Dissolved Solids	**3620**	mg/L	10	1		08/06/2025 13:48	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

Analytical Results

Lab ID: 94620010 **Date Collected:** 08/05/2025 08:05 **Matrix:** Groundwater
Sample ID: MW-2017-8D **Date Received:** 08/05/2025 15:19 **Collector:** Client

Temp @ Receipt (C): 3.2 **Received on Ice:** Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	**384**	mg/L	25	5		08/08/2025 11:08	
Method: EPA 6010D							
Boron	**0.67**	mg/L	0.1	1	08/05/2025 16:43	08/08/2025 09:02	
Calcium	**8.30**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:49	
Magnesium	**3.59**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:49	
Potassium	**3.85**	mg/L	1	1	08/05/2025 16:43	08/11/2025 10:49	
Sodium	**715**	mg/L	5	5	08/05/2025 16:43	08/11/2025 11:02	
Method: SM2320 B-2021							
Alkalinity, Total	**1152**	mg/L as CaCO3	20.5	1		08/05/2025 21:36	
Bicarbonate	**1152**	mg/L as CaCO3	20.5	1		08/05/2025 21:36	
Carbonate	<20.5	mg/L as CaCO3	20.5	1		08/05/2025 21:36	
Method: SM4500 H+ B-2021							
pH	**8.1**	units	0.1	1		08/05/2025 21:36	*
Method: SM4500-Cl-E 2021							
Chloride	**16.2**	mg/L	2.0	1		08/08/2025 12:29	
Method: SM4500-F-C-2021							
Fluoride	**0.65**	mg/L	0.1	1		08/05/2025 21:36	
Method: USGS I-1750-85							
Total Dissolved Solids	**1930**	mg/L	10	1		08/06/2025 13:48	

Analysis Results Comments

pH

Sample analyzed beyond holding time.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

QC Results Summary — WO #: 94620

Sulfate — Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
LFB			100	100.0		85	115		
LFB			100	100.0		85	115		
LFB			100	96.2		85	115		
LFB			100	91.5		85	115		
LFB			100	106.0		85	115		
LFB			100	105.0		85	115		
LFB			100	100.0		85	115		
MB		<5							
MB		<5							
MB		<5							
MB		<5							
MB		<5							
MB		<5							
MB		<5							
MS/MSD	94108017		100	73.0	74.5	85	115	0.4	20
MS/MSD	94445003		500	98.3	98.0	85	115	0.7	20
MS/MSD	94620003		100	82.5	81.7	85	115	0.5	20
MS/MSD	94639003		100	78.8	80.6	85	115	1.0	20
MS/MSD	94639013		500	89.9	88.2	85	115	1.0	20
MS/MSD	94652001		100	94.5	95.5	85	115	1.1	20

Chloride — Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
LFB			30	96.3		90	110		
LFB			30	96.3		90	110		
LFB			30	96.2		90	110		
LFB			30	95.4		90	110		
LFB			30	95.5		90	110		
MB		<2.0							
MB		<2.0							

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Chloride Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
MB		<2.0							
MB		<2.0							
MB		<2.0							
MS/MSD	94639004		30	102.4	106.6	80	120	3.6	20
MS/MSD	94681001		30	96.4	95.7	80	120	0.0	20

Boron Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
LFB-OE			0.4	99.6		85	115		
MB		<0.1							
MS/MSD	94525003		0.4	109.0	98.8	75	125	1.8	20
MS/MSD	94620002		0.4	91.2	95.8	75	125	1.2	20

Calcium Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
LFB-MI			100	108.0		85	115		
MB		<1							
PDS/PDSD	94108014		500	99.7	101.0	75	125	0.8	20
DUP	94445004							0.4	20
PDS/PDSD	94525001		100	103.0	103.0	75	125	0.1	20
DUP	94620004							4.8	20
PDS/PDSD	94620005		100	95.6	96.3	75	125	0.4	20

Magnesium Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
LFB-MI			100	108.0		85	115		
MB		<1							
PDS/PDSD	94108014		500	101.0	103.0	75	125	0.9	20
DUP	94445004							0.9	20
PDS/PDSD	94525001		100	102.0	102.0	75	125	0.4	20
DUP	94620004							3.0	20
PDS/PDSD	94620005		100	102.0	103.0	75	125	0.7	20

Potassium Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
LFB-MI			100	106.0		85	115		

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Account #: 2040 **Client:** Basin Electric Power Cooperative

Potassium Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
MB		<1							
PDS/PDSD	94108014		500	103.0	104.0	75	125	1.2	20
DUP	94445004							2.0	20
PDS/PDSD	94525001		100	103.0	103.0	75	125	0.4	20
DUP	94620004							2.6	20
PDS/PDSD	94620005		100	102.0	102.0	75	125	0.0	20

Sodium Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
LFB-MI			100	107.0		85	115		
MB		<1							
PDS/PDSD	94108014		500	99.6	101.0	75	125	0.6	20
DUP	94445004							1.5	20
PDS/PDSD	94525001		500	90.3	92.5	75	125	0.9	20
DUP	94620004							5.2	20
PDS/PDSD	94620005		100	94.2	93.6	75	125	0.3	20

Alkalinity, Total Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
CRM			501	93.1		80	120		
LFB			410	96.6		90	110		
LFB			410	95.2		90	110		
LFB			410	93.1		90	110		
LFB			410	92.1		90	110		
MB		<20.5							
MB		<20.5							
MB		<20.5							
MB		<20.5							
MS/MSD	94445002		410	90.1	90.7	80	120	0.5	20
MS/MSD	94525002		410	91.3	101.9	80	120	3.1	20
MS/MSD	94620008		410	91.8	85.5	80	120	4.2	20

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pH Units: units

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
CRM-PH			6	100.0					
CRM-PH			6	99.7					
CRM-PH			6	99.5					
CRM-PH			6	99.5					
DUP	94444006							0.1	20
DUP	94445004							1.1	20
DUP	94620003							0.8	20

Fluoride Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
CRM-F			3.34	94.3		83.83	111.07		
LFB-F			0.5	92.0		90	110		
LFB-F			0.5	106.0		90	110		
LFB-F			0.5	106.0		90	110		
MB-F		<0.1							
MB-F		<0.1							
MB-F		<0.1							
MS/MSD	94525004		0.5	70.0	100.0	80	120	7.6	20
MS/MSD	94620005		0.5	102.0	110.0	80	120	2.8	20

Total Dissolved Solids Units: mg/L

QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
CRM			736	98.0		90.35	110.33		
CRM			736	99.0		90.35	110.33		
CRM			736	98.0		90.35	110.33		
MB		<10							
MB		<10							
MB		<10							
DUP	94445003							0.5	20
DUP	94620004							1.0	20
DUP	94639004							1.9	20
DUP	94639014							0.0	20
DUP	94639019							2.5	20

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2616 East Broadway Avenue
Bismarck, ND 58501
Phone: (701) 258-9720
Toll Free: (800) 279-6885 Fax: (701) 258-9724

Basin Electric Power Coop
WO: 94620

Chain of Custody
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Order #
Only

Company Name and Address Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571	Account # 2040
	Phone # 701-745-7236 701-557-5488
	Contact Mark Dihle
	Emails mdihle@bepc.com aknutson@bepc.com
Billing Address (indicate if different from above) Attn: Liabilities	Name of Sampler Mariah Knutson
	Quote Number
	Date Submitted 8/5/2025
	Project Name/Number LOS CCR Wells
	Purchase Order # 7B0708-04

Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	# of	Filtered	Analysis Required
001	MW-2017-1	GW	8/4/2025	813	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
002	MW-2017-2	GW	8/4/2025	900	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
003	MW-2017-3	GW	8/4/2025	928	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
004	MW-2017-4	GW	8/4/2025	1023	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
005	MW-2017-10	GW	8/4/2025	1103	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
006	MW-2017-11	GW	8/4/2025	1221	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
007	DUP	GW	8/4/2025	1221	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
008	MW-2017-7	GW	8/4/2025	1310	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH
009	MW-2017-8	GW	8/4/2025	1349	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH

Transferred by	Date	Time	Received by	Date	Time	Temp	ROI	Therm. #
1. MILLENIUM EXPRESS	8/5/2025	NOON	[signature]	5Aug25	1519	3.2 °C	(Y)/N	[illegible]
2.							Y / N	

Please submit the top copy with your samples. We will return the completed original with your results.

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Account #: 2040 **Client:** Basin Electric Power Cooperative

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Toll Free: (800) 279-6885 Fax: (701) 258-9724

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Page 2 of 2

Work Order # (Lab Use Only)

Company Name and Address: Basin Electric Power Coop., Leland Olds Station, 3901 Highway 200A, Stanton, ND 58571	Account # 2040
Billing Address (Indicate if different from above): Attn: Liabilities	Phone # 701-745-7238 701-557-5488
	Contact: Mark Dihle
	Emails: mdihle@bepc.com aknutson@bepc.com
	Name of Sampler: Mariah Knutson
	Quote Number
	Date Submitted: 9/18/2024
	Project Name/Number: ND0025232
	Purchase Order #: 790708-04

Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	# of	Filtered	Analysis Required
OLD	MW-2017-8D	GW	8/5/2025	805	2	N	B, Ca, Cl, F, SO4, TDS, Mg, Na, K, Total Alkalinity, (Carbonate, Bicarbonate), pH

Comments:

Transferred by	Date	Time	Received by	Date	Time	Temp	ROI	Therm. #
1. MILLENNIUM EXPRESS	8/6/2025	NOON		8Aug25	1515	3.2°C	Y / N	11958
2.							Y / N	

Sample Condition Checklist

Date: 5 Aug 25 Time: 1631 Analyst: PW

Work Order #: 94620

Containers Supplied by MVTL: [X] Yes [ ] No (Designate customer supplied containers as "Other" in container size column)

Comments:

Number of Bottles	Container Size (mL) F-(500) = Filtered	Container Type CG = Clear Glass, P = Plastic, AG = Amber Glass	Preservation	pH	Sample IDs Preservation reagent added Date/Time Analyst	Unique ID of preservation reagent added	Sample pH after preservation	Required for HNO_3 samples only (24 hours later) Sample ID pH Recheck Result Date/Time/Analyst
10	(125) (250) (500) F-(500) (1000) Other — circled: (1000)	(CG) (P) (AG) Other — circled: (P)	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl — circled: NONE	<2 >12				
10	(125) (250) (500) F-(500) (1000) Other — circled: (500)	(CG) (P) (AG) Other — circled: (P)	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl — circled: HNO_3	<2 >12 — circled: <2				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	(125) (250) (500) F-(500) (1000) Other	(CG) (P) (AG) Other	NONE HNO_3 H_2SO_4 NaOH NaOH/ZnAcet HCl	<2 >12				
	Oil and grease	(CG) (P) (AG) Other	HCl	n/a				
	TOC Vials	(G) (AG)	H_3PO_4	n/a				
	DOC Vials	(G) (AG)	None H_3PO_4	n/a				

*All samples requiring analyses performed outside of the Bismarck laboratory (New Ulm and Sub-Contract) are not documented on this form.
*All samples requiring microbiological tests are not documented on this form.

Form #80-910025-2 M:\Documents\FORMS\Approved Templates\Bismarck\Waters\80-910025-2 Sample Condition Checklist Page 1 of 1 Effective Date: 1 July 2024

Appendix B

Groundwater Flow Rate

Appendix B
Groundwater Flow Rate
2025 Annual Monitoring Report
LOS Multiunit CCR Groundwater Compliance

LOS - Multiunit Groundwater Velocity Calculation

Sampling Date	5/6/2025

Upgradient: MW-2017-07

Top of Casing Elevation	1698.25	ft amsl
Depth to Water	39.96	ft below TOC
Water Level Elevation	1658.29	ft amsl

Downgradient: MW-2017-02

Top of Casing Elevation	1681.03	ft amsl
Depth to Water	22.91	ft below TOC
Water Level Elevation	1658.12	ft amsl

horizontal hydraulic	4.09E-03	cm/s	*2023 AGMCAR (AECOM, 2024)*
conductivity (Kh)	11.6	ft/day	
porosity (n)	0.33		*2023 AGMCAR (AECOM, 2024)*
horizontal distance	1630	ft	
WL elevation difference	0.17	ft	
gradient (i)	1.043E-04	ft/ft	
linear velocity (V)	3.66E-03	ft/day	
V	**1.3**	ft/yr	

Appendix B
Groundwater Flow Rate
2025 Annual Monitoring Report
LOS Multiunit CCR Groundwater Compliance

LOS - Multiunit Groundwater Velocity Calculation

Sampling Date	8/4/2025

Upgradient: MW-2017-07

Top of Casing Elevation	1698.25	ft amsl
Depth to Water	39.39	ft below TOC
Water Level Elevation	1658.86	ft amsl

Downgradient: MW-2017-04

Top of Casing Elevation	1684.13	ft amsl
Depth to Water	25.87	ft below TOC
Water Level Elevation	1658.26	ft amsl

horizontal hydraulic	4.09E-03	cm/s	*2023 AGMCAR (AECOM, 2024)*
conductivity (Kh)	11.6	ft/day	
porosity (n)	0.33		*2023 AGMCAR (AECOM, 2024)*
horizontal distance	1800	ft	
WL elevation difference	0.60	ft	
gradient (i)	3.333E-04	ft/ft	
linear velocity (V)	1.17E-02	ft/day	
V	**4.3**	ft/yr	