

2023 Annual Groundwater Monitoring and Corrective Action Report

Former LOS Ponds 2 and 3 Multi-Unit

Leland Olds Station Stanton, North Dakota Basin Electric Power Cooperative

January 31, 2024 Project #60634880

Basin Electric Power Cooperative Bismarck, North Dakota

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- Attachment A 2023 Sampling and Analysis Report, Former LOS Pond 2 and Pond 3 Multi-Unit CCR Monitoring Program
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List of Acronyms

AECOM	AECOM Technical Services, Inc.
Basin	Basin Electric Power Cooperative
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
cm/sec	centimeters per second
ft amsl	feet above mean sea level
ft bgs	feet below ground surface
ft/day	feet per day
GWPS	groundwater protection standard
LOS	Leland Olds Station
LPL	lower prediction limit
mg/L	milligrams per liter
Multi-Unit	Ponds 2 and 3 Multi-Unit
SAP	Sampling and Analysis Plan
SSI	statistically significant increase
TDS	total dissolved solids
UPL	upper prediction limit

Executive Summary

This report summarizes groundwater monitoring and corrective action activities completed between January 1 and December 31, 2023, at the former Ponds 2 and 3 Multi-Unit (Multi-Unit) at Leland Olds Station (LOS), as required by 40 Code of Federal Regulations (CFR) Section 257.90(e) of the United States Environmental Protection Agency Coal Combustion Residuals (CCR) Rule.

The relative location of the Multi-Unit with respect to the LOS power plant is presented as **Figure 1**. The location of the monitoring wells installed for monitoring of the groundwater at the Multi-Unit, including CCR program wells and other supporting wells, is presented as **Figure 2**.

Detection monitoring of the Multi-Unit was initiated on November 11, 2019. Detection monitoring through 2023 identified no statistically significant increases (SSIs) of Appendix III constituents (boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids [TDS]) in the downgradient monitoring wells MW-2017-2, MW-2017-3, MW-2017-4, MW-2017-5, MW-2017-6, and MW-2017-7.

Other activities and conditions for the 2023 annual reporting period include:

- Semiannual Detection monitoring events were conducted in June and September. Monitoring involved sampling of two background monitoring wells and six downgradient monitoring wells.
- Collection of groundwater samples from characterization monitoring wells MW-2017-10 and MW-2017-11 coinciding with the June and September 2023 Detection monitoring events.
- No well repair or decommissioning of the existing program monitoring networks was conducted.
- No program transitions (Detection to Assessment or vice versa) were triggered.
- No programmatic problems were encountered, so no remedies were required.

Anticipated activities for the next annual reporting period include:

- Completion of two semiannual Detection monitoring events.
- Statistical evaluation of groundwater data for Appendix III indicator parameters.

1. Introduction

On behalf of Basin Electric Power Cooperative, (Basin), AECOM Technical Services, Inc. (AECOM) has prepared the 2023 annual report documenting groundwater monitoring and corrective action for the Coal Combustion Residuals (CCR) Ponds 2 and 3 Multi-Unit (henceforth referred to as the Multi-Unit) at Basin's Leland Olds Station (LOS). This is the sixth annual groundwater monitoring and corrective action report prepared for this site.

Section 1 provides background information on the power generating facility, the CCR unit(s) present at the facility, and the physical setting of the CCR unit(s), specifically regarding groundwater conditions. Section 2 summarizes CCR groundwater monitoring activities conducted prior to January 2023. Section 3 summarizes the groundwater monitoring and corrective action activities completed between January and December 2023, and references attachments to this report that contain detailed documentation of those activities. Section 4 provides general information about the program including transitions and problems encountered in 2023 and actions planned for 2024. Section 5 presents summary and conclusions for the reporting period (January through December 2023). Section 6 lists references cited in this report.

Regulatory Background

The CCR rule, effective on October 19, 2015, established standards for the disposal of CCR in landfills and surface impoundments (CCR units). In particular, the rule set forth groundwater monitoring and corrective action requirements for CCR units. The rule includes the requirement for an "annual groundwater monitoring and corrective action report" (annual report), submitted to the operating record annually on or before January 31 for inactive CCR units, including the Multi-Unit. The annual reports are intended to document the status of the groundwater monitoring and corrective activities for the upcoming for each CCR unit, summarize key actions completed in the previous year, and project key activities for the upcoming year.

Facility Location and Operational History

LOS is a coal-based generating station located southeast of Stanton, North Dakota (**Figure 1**). The plant began operating in 1966 and consists of two power generating units with a total power output capacity of 669 megawatts.

CCR produced at LOS includes fly ash, bottom ash, and flue gas desulfurization waste.

CCR Unit Description

The Multi-Unit is located on the east side of the LOS power plant (**Figure 1**). Closure of Bottom Ash Pond 2 and Pond 3 was completed in two phases. Phase I construction included the roughly southern half of Ash Pond 2 and was completed in 2017. Phase II construction, which addressed the remainder of Pond 2 and all of Pond 3, began in 2019 and was completed in the third quarter of 2020. A closure notification, completed in accordance with the CCR Rule, including certification by a qualified professional engineer that the closure was completed in accordance with the written closure plan and the requirements of 40 Code of Federal Regulations (CFR) §257.102, was posted on October 26, 2020.

Pond 2 and Pond 3 are now Closed-in-Place with their last operational configuration presented as Figure 2.

Physical Setting

The Multi-Unit is situated in the valley of the Missouri River. The valley floor is relatively flat, with two relatively 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 are located on the lower (first) terrace level, while one is located on the upper (second) terrace (**Figure 2**).

The geology underlying the Multi-Unit is generally comprised of a minimum of 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 Multi-Unit. 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 roughly from 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]). The potentiometric surface of the uppermost groundwater underlying the lower terrace area is typically encountered at elevations between 1,658 to 1,662 ft amsl depending on the stage of the adjacent Missouri River. 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 Multi-Unit.

2. CCR Groundwater Monitoring and Corrective Action Activities Prior to January 2023

The regulatory process for CCR groundwater monitoring and corrective action is established by 40 CFR Sections 257.90 through 257.98. The process includes a phased approach to groundwater monitoring, leading (if applicable) to the establishment of groundwater protection standards (GWPSs) for each CCR unit. Exceedances of the GWPSs that are determined to be statistically significant can trigger requirements for additional groundwater characterization and Assessment of Corrective Measures followed by selection of remedy and remedy implementation.

The following paragraphs provide a summary of CCR groundwater monitoring activities performed prior to 2023.

Groundwater monitoring at the Multi-Unit is performed using a network of monitoring wells that includes both wells to monitor background water quality that is not potentially influenced by the presence of the CCR unit, and wells placed at the downgradient boundary of the unit (**Figure 2**). The hydro-stratigraphic position of the CCR monitoring wells selected for sampling background and downgradient groundwater quality for the LOS CCR unit is summarized below:

CCR unit	Background wells	Downgradient wells
Ponds 2 and 3 Multi-Unit	MW-2017-1 and MW- 2017-8	MW-2017-2, MW-2017-3, MW-2017-4, MW-2017-5, MW-2017-6, and MW-2017-7

Baseline monitoring for the Multi-Unit, initiated in September 2017, involved sampling groundwater for 40 CFR Part 257 Appendix III and IV constituents over eight monitoring events. Baseline monitoring events were performed in general accordance with procedures established in the site-specific Sampling and Analysis Plan (SAP; [AECOM 2019a]), updated on June 22, 2022 [AECOM 2022a], for a change in the purging method from bladder pump to submersible pump in two monitoring wells. A copy of the SAP is included in the facility's Operating Record. The SAP describes the procedures for equipment calibration, monitoring well water level measurement, monitoring well purging and sampling, sample custody, sample shipping, laboratory analysis, and documentation requirements for each groundwater sample submitted.

The results of baseline monitoring were presented and discussed in the First Annual Groundwater Monitoring and Corrective Action Report, Fall 2017-Spring 2019 (AECOM 2019b) issued on July 31, 2019. The LOS Multi-Unit was placed in Detection monitoring in the fall of 2019 with the first groundwater sampling event completed in November 2019, then twice annually thereafter. The results of Detection monitoring at the Multi-Unit completed between August 2019 and December 2022 are presented and discussed in the Second, Third, Fourth, and Fifth Annual Groundwater Monitoring and Corrective Action Reports issued January 31, 2020 (AECOM 2020); January 31, 2021 (AECOM 2021); January 31, 2022 (AECOM 2022b); and January 31, 2023 (AECOM 2023).

3. CCR Groundwater Monitoring and Corrective Action Activities (January-December 2023)

This section summarizes the groundwater monitoring and corrective action activities conducted at the LOS CCR Multi-Unit between January 1 and December 31, 2023. To comply with the requirements of the CCR Rule, this report presents:

- Detection Monitoring Activities:
 - monitoring system evaluations in June and September 2023
 - groundwater monitoring completed in June 2023
 - groundwater monitoring completed in September 2023
 - laboratory analysis for the June 2023 and September 2023 events
- Groundwater Characterization activities:
 - groundwater sampling of MW-2017-10 and MW-2017-11 completed in June 2023
 - groundwater sampling of MW-2017-10 and MW-2017-11 completed in September 2023
- Statistical analysis of the Detection monitoring results for the June and September 2023 events.

Further details concerning each of these activities, including a brief discussion of work completed during the reporting period are provided below.

Detection Monitoring Activities

Monitoring System Evaluation

As described in the CCR Groundwater Monitoring System Report (AECOM 2019c), monitoring wells were installed around the CCR Multi-Unit with appropriate total depth and placement of the well screen to: (1) facilitate collection of representative groundwater samples from the uppermost aquifer; and (2) accurately measure water table elevations to support evaluation of groundwater gradient and flow direction. All monitoring wells comprising the Multi-Unit monitoring system were found to be in good condition during the detection monitoring events conducted in 2023.

Potentiometric surface maps were constructed using the depth-to-groundwater measurements obtained at the beginning of each detection monitoring event as presented in **Attachment A**. The direction of groundwater flow observed in both the June and September events was generally northeast toward the Missouri River. Baseline and detection monitoring completed between fall of 2017 through 2022 indicated that groundwater flow is generally northeast toward the Missouri River, but that reverse flow and parallel flow conditions, as observed during the June 2020 event, are to be expected, depending on prevailing river stage conditions at the time the event is conducted. The general groundwater flow direction observed during the 2023 detection monitoring events support the designation of the wells noted in Section 2 above to represent background groundwater quality and the quality of groundwater downgradient of the Multi-Unit.

Groundwater Sampling and Analysis

The Detection monitoring events completed in 2023 included analysis of collected groundwater samples for the constituents listed in Part 257 Appendix III. The tabulated laboratory analytical results are presented in **Attachment A**, along with potentiometric surface maps for the uppermost aquifer, inferred groundwater flow direction and estimated velocities, and a tabulated summary of field measurements.

Sampling and analysis were performed in general accordance with procedures established in the SAP (AECOM 2022a).

Two additional monitoring wells, identified as MW-2017-10 and MW-2017-11, were sampled in coordination with the Detection monitoring events that were completed in June and September 2023. The groundwater samples obtained from these wells were submitted for the constituents listed in Part 257 Appendix III and IV to further evaluate the groundwater conditions along the eastern edge of the former Ponds 2 and 3 footprints. Tabulated analytical results and laboratory reports for these characterization sampling events are included in **Attachment A**.

Statistical Procedures and Analysis

The cumulative Detection monitoring data collected for Appendix III indicator parameters at the LOS Multi-Unit were evaluated in accordance with the statistical procedures as certified on April 17, 2019 (AECOM 2019c). Program monitoring wells MW-2017-1 and MW-2017-8 are the designated background monitoring well locations for the LOS Multi-Unit for statistical comparison to downgradient monitoring wells MW-2017-2 through MW-2017-7 during the 2023 reporting period.

The Appendix III groundwater quality data collected in 2023 were evaluated using an interwell approach that statistically compared constituent concentrations at downgradient monitoring wells to those present at the background monitoring wells.

ProUCL Version 5.1 was selected for the development of site-specific background upper prediction limits (UPLs) with a 95-percent confidence for each Appendix III constituent utilizing monitoring well data from background monitoring wells MW-2017-1 and MW-2017-8 collected between March 2018 and October 2020. The input file used for development of the UPLs as well as the output file are provided as **Attachment B**. A lower prediction limit (LPL) was also developed for pH, which is a two-sided parameter by calculating nonparametric upper and lower prediction limits. Because ProUCL does not calculate LPLs, Excel was used to match the UPL calculated by ProUCL and calculate a corresponding LPL. The concentrations of detected Appendix III constituents were entered as reported by the laboratory (non-detections set to Reporting Limit and evaluated using ProUCL to determine if the population exhibited a normal, lognormal, or nonparametric distribution).

Data from the downgradient monitoring wells were compared to the UPL to identify SSIs over background. For pH, the data were also compared to determine whether it was below the LPL. The results of the analyses, including the UPLs, and LPL for pH, are provided in **Table 1**.

Table 2 provides a summary of the Appendix III constituents with verified and unverified SSIs above background. No SSIs were identified for boron, calcium, chloride, fluoride, pH, sulfate, or TDS. Therefore, it is recommended the Multi-Unit continue Detection monitoring for 2024.

4. General Information

The following subsections summarize any problems encountered in the LOS Multi-Unit CCR program through 2023, any resolutions to those problems, and upcoming actions planned for 2024.

Program Transitions 2023

There were no program transitions during the January to December 2023 monitoring period.

Problems Encountered

No problems were encountered during the January to December 2023 monitoring period.

Actions Planned for 2024

Basin plans to continue the Detection monitoring program for the Multi-Unit in 2024. The monitoring program will include semi-annual groundwater sampling events and the required statistical evaluations.

Basin plans to continue sample collection from monitoring wells MW-2017-10 and MW-2017-11 to further evaluate the groundwater conditions along the eastern edge of former Ponds 2 and 3. The sampling is anticipated to coincide with the Detection monitoring events to be completed for the Multi-Unit program wells in the first and second half of 2024. The samples are anticipated to be submitted for laboratory analysis for CCR Rule Part 257 Appendix III and Appendix IV constituents for spatial and historical comparison.

5. Summary and Conclusions

Basin conducted two rounds of CCR groundwater Detection monitoring at the Multi-Unit in June and September 2023. The results were used to establish background groundwater quality for Appendix III constituents in the uppermost aquifer, identify appropriate UPLs, and determine whether any UPLs represent SSIs downgradient of the Multi-Unit.

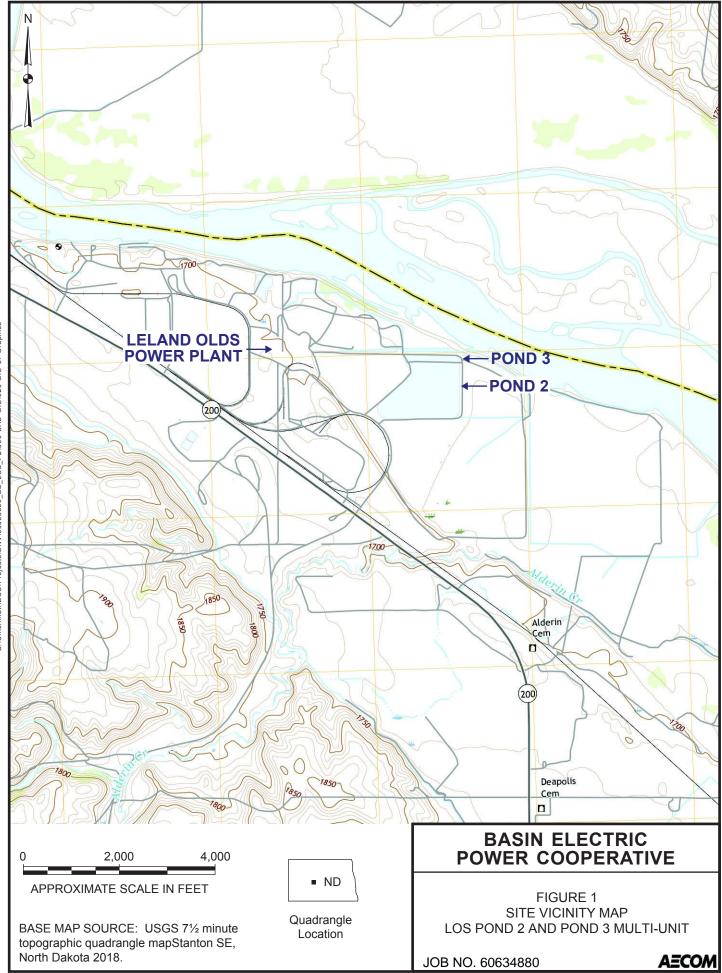
The statistical analysis results indicate that none of the Appendix III constituent concentrations represent SSIs over background. Based on these results, assessment monitoring is not required at the LOS Multi-Unit. Detection monitoring will continue at the site in 2024. Additionally, Basin will continue to sample monitoring wells MW-2017-10 and MW-2017-11 submitted for Rule Part 257 Appendix III and Appendix IV constituents to further evaluate conditions along the eastern edge of former Ponds 2 and 3 in anticipation that these wells may be added to the compliance groundwater monitoring network at a later date. The timing of sample collection in 2024 is anticipated to coincide with the first and second half Detection monitoring events.

6. References

- AECOM Technical Services, Inc. (AECOM). 2019a. Pond 2 and Pond 3 Multi-Unit Sampling and Analysis Plan, CCR Monitoring Program, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. April 2019.
- AECOM. 2019b. First Annual Groundwater Monitoring and Corrective Action Report, Fall 2017- Spring 2019, Pond 2 and Pond 3 Multi-Unit, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. July 31, 2019.
- AECOM. 2019c. Pond 2 and Pond 3 Multi-Unit CCR Groundwater Monitoring System Report, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. October 2017.
- AECOM. 2020. Second Annual Groundwater Monitoring and Corrective Action Report, 2019 issued January 31, 2020.
- AECOM. 2021. Third Annual Groundwater Monitoring and Corrective Action Report, 2020 issued January 31, 2021.
- AECOM. 2022a. Pond 2 and Pond 3 Multi-Unit Sampling and Analysis Plan, CCR Monitoring Program, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. June 2022.
- AECOM. 2022b. Fourth Annual Groundwater Monitoring and Corrective Action Report, 2021 issued January 31, 2022.
- AECOM. 2023. Fifth Annual Groundwater Monitoring and Corrective Action Report, 2023 issued January 31, 2023.

January – December 2023 Annual Groundwater Monitoring and Corrective Action Report Former Pond 2 and 3 Multi-Unit CCR Monitoring Program





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WELL LOCATION MAP LOS POND 2 AND POND 3 MULTI-UNIT

FIGURE 2

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LELAND OLDS STATION STANTON, NORTH DAKOTA



Missouri River

January – December 2023 Annual Groundwater Monitoring and Corrective Action Report Former Pond 2 and 3 Multi-Unit CCR Monitoring Program

Tables

Table 1

2023 Statistical Analysis Methods and Background Upper/Lower Prediction Limits LOS Pond 2 and Pond 3 (Multi-Unit) CCR Monitoring Well Network Leland Olds Station – Stanton, North Dakota

Parameter (Units)	Number of Samples	Percent Nondetects	Normal or Lognormal Distribution?	Statistical Method	Background Prediction Limit
Boron (mg/L)	18	0	No/No	Nonparametric 95% UPL	2.37
Calcium (mg/L)	18	0	Yes/No	Parametric 95% UPL	167
Chloride (mg/L)	18	0	No/No	Nonparametric 95% UPL	25
Fluoride (mg/L)	18	83	No/No	Nonparametric 95% UPL	4.68
pH (std units)	18	0	Yes/Yes	Parametric 95% LPL/UPL	6.80/7.59
Sulfate (mg/L)	18	0	No/No	Nonparametric 95% UPL	2,100
TDS (mg/L)	18	0	No/No	Nonparametric 95% UPL	4,000

Notes:

Note analytical data from the background monitoring wells collected between March 2018 and October 2020 were used to develop an upper prediction limit (UPL) for all Appendix III constituents, and a lower prediction limit (LPL) for pH, at 95 percent confidence. mg/L= milligrams per liter

TDS = total dissolved solids

Table 22023 Statistical Method Analysis and ResultsLOS Pond 2 and Pond 3 (Multi-Unit) CCR Monitoring Well NetworkLeland Olds Station – Stanton, North Dakota

Well	Location	в	Са	CI	F	pH (LPL/L		SO₄	TDS
MW-2017-2	Downgradient				_				
MW-2017-3	Downgradient								
MW-2017-4	Downgradient								
MW-2017-5	Downgradient								
MW-2017-6	Downgradient								
MW-2017-7	Downgradient								
Notes:	Notes:								
SSIs determined u	using interw ell upper p	prediction limi	ts (UPLs) at l	background i	monitoring w	ells MW-2	2017-1 a	and MW-201	7-8
	Less than or equal to background upper prediction limit (UPL) or greater than low er prediction limit (LPL) for pH								
	Unverified statisticall	y significant	increase (SS	SI) over back	ground UPL o	or below b	backgro	ound LPL for	pН
	Verified SSI over background UPL or below background LPL for pH								

Attachment A 2023 Sampling and Analysis Report, Former LOS Pond 2 and Pond 3 Multi-Unit CCR Monitoring Program



2023 Sampling and Analysis Report, Former LOS Pond 2 and Pond 3 Multi-Unit CCR Monitoring Program

Leland Olds Station Stanton, North Dakota

Basin Electric Power Cooperative

January 31, 2024

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Table 2	Estimated Groundwater Gradient and Seepage Velocity
Table 3	2023 Detection-Mode (Appendix III) Analytical Results Summary
Table 4	2023 Characterization (Appendix III and IV) Analytical Results Summary

Appendix

Appendix A Analytical Laboratory Reports, 2023 Detection Monitoring and Characterization Events

List of Acronyms

AECOM	AECOM Technical Services, Inc.
Basin	Basin Electric Power Cooperative
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency
LOS	Leland Olds Station

1. Introduction

On behalf of Basin Electric Power Cooperative (Basin), AECOM Technical Services, Inc. (AECOM) prepared this Coal Combustion Residuals (CCR) Groundwater Sampling and Analysis Report for the Pond 2 and Pond 3 Multi-Unit at Basin's Leland Olds Station (LOS). The objective of the report is to provide a description of the field and office activities performed between January and December of 2023.

This Sampling and Analysis Report was prepared to present the results of sampling and analysis of groundwater conducted for the monitoring requirements of the United States Environmental Protection Agency (EPA) CCR rule (Chapter 40 of the Code of Federal Regulations [CFR], Sections 257.90 to 257.98). Specifically, the report presents the data collected for the groundwater Detection monitoring events conducted in June and September of 2023.

2. Groundwater Flow

As required by 40 CFR Section 257.93(c), groundwater elevations were measured for each well prior to purging each time groundwater was sampled. The measurements, presented in **Tables 1A** and **1B**, were used to create potentiometric surface maps for the uppermost aquifer for the Detection monitoring events completed in June and September 2023, respectively. The resulting potentiometric surface maps, presented as **Figures 1** and **2**, were used to evaluate the direction of groundwater flow and hydraulic gradient for the subject CCR unit for each event. The potentiometric surface and direction of groundwater flow at the site is primarily controlled by changes in the river stage elevation of the Missouri River. In both June and September 2023, groundwater flow was generally northeast toward the Missouri River. The seasonal flow directions observed in 2023 are generally consistent with those observed during previous monitoring events. Previous reporting periods have, on occasion, observed groundwater flow to the south-southwest away from the Missouri River and swinging broadly down-valley to the east-southeast. Groundwater flow velocities for the 2023 Detection monitoring events were calculated and are summarized in **Table 2**. The velocities calculated for the 2023 events are generally consistent with those observed historically.

Based on the groundwater flow conditions documented in this chapter, the relative functions of the monitoring wells employed in the LOS CCR groundwater monitoring system are as follows:

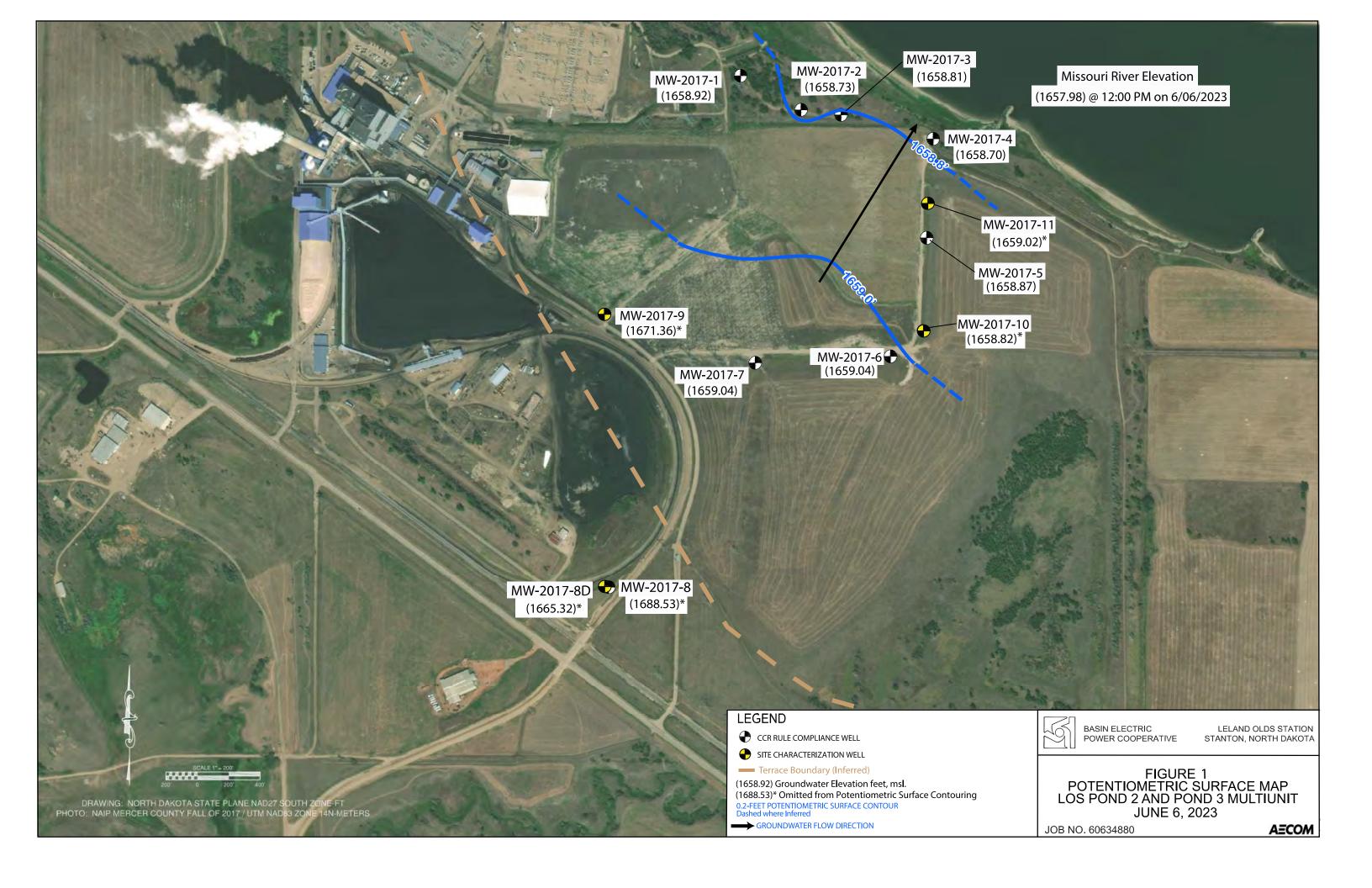
CCR unit	Background wells	Downgradient wells
Pond 2 and Pond 3 Multi-Unit	MW-2017-1 and MW-2017-8	MW-2017-2, MW-2017-3, MW-2017-4, MW-2017-5, MW- 2017-6, and MW-2017-7

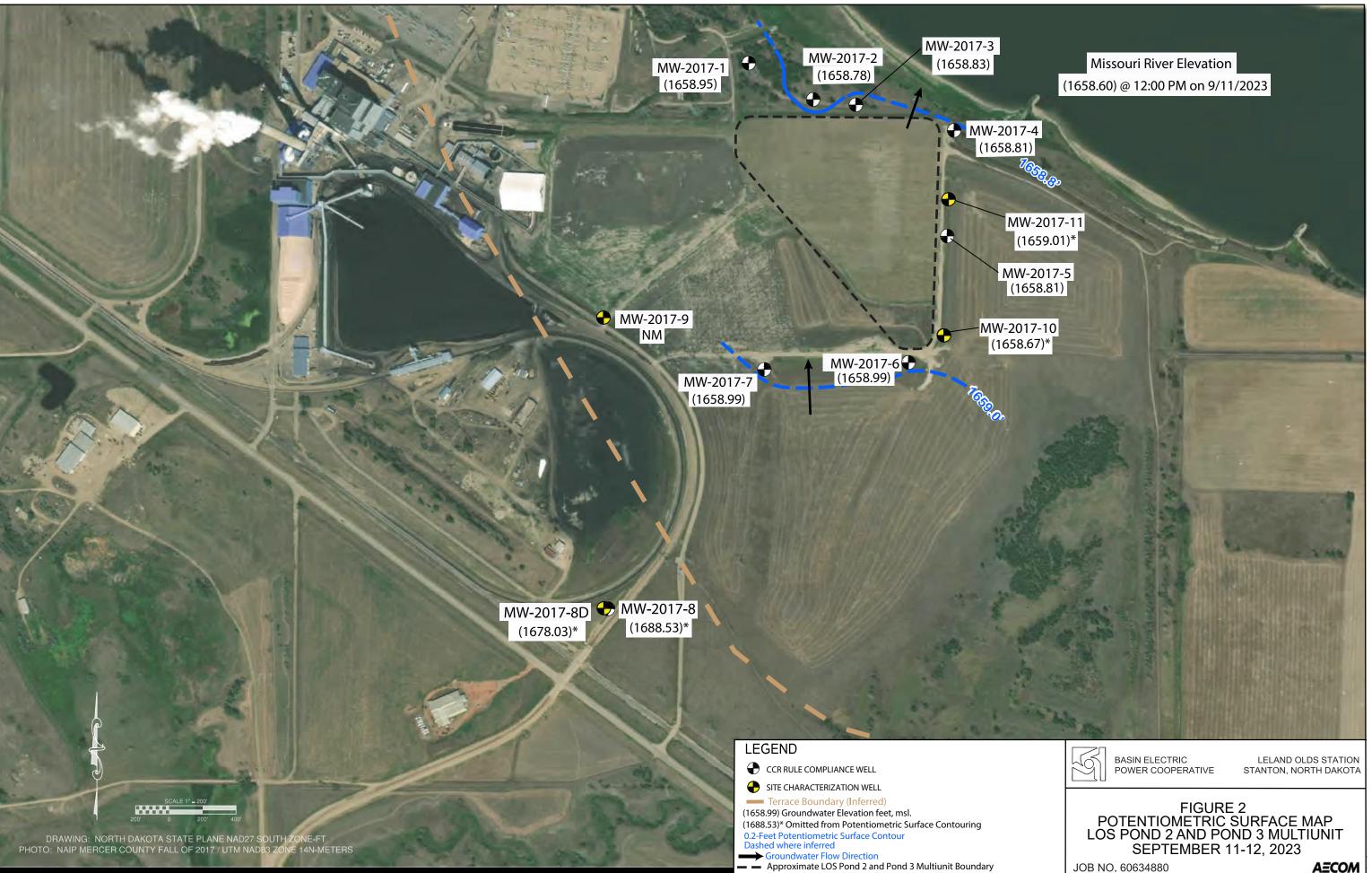
Additional evaluation of site background was initiated in 2020, including gauging, sampling, and installation MW-2017-8D which was installed in the vicinity of MW-2017-8 to confirm the presence of clay observed at the bottom of MW-2017-8, establishing the top of bedrock at this location. The boring was advanced through this clay to a depth of 61.5 feet below ground surface where a 2.5-foot-thick groundwater-yielding lignite bed was identified. MW-2017-8D was screened across this lignite to allow for further evaluation of the groundwater chemistry. Another well, identified as MW-2017-9, was installed in October 2020 to aid in the characterization of the area southwest of the Multi-Unit. Two additional wells identified as Characterization wells MW-2017-10 and MW-2017-11 were installed in October 2022 to further evaluate groundwater quality on the east side of former Pond 2 and Pond 3. The surveyed location of each of these wells is presented in the Potentiometric Surface Maps (Figure 1 and Figure 2).

3. Groundwater Quality

The analytical testing laboratory provided a report presenting the results of laboratory analysis for the June and September 2023 Detection monitoring events and the baseline characterization events for new wells MW-2017-10 and MW-2017-11. The laboratory reports are included in the operating record and were reviewed for completeness against the project-required methods and the chain-of-custody forms. The laboratory reports were also reviewed for holding times, and to check that the data was appropriately flagged based on the quality assurance/quality control data provided. The Detection monitoring (Appendix III) analytical results for 2023 are compiled into summary form as presented in **Table 3**. The characterization (Appendix III and IV) analytical results for samples collected from MW-2017-10 and MW-2017-11 are presented in **Table 4**. A copy of the final laboratory report for each event is included as **Appendix A**.

Figures





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Tables

Table 1A. First Half 2023 - Groundwater Monitoring Water Levels and Elevations

CCR Monitoring Wells LOS Pond 2 and Pond 3 - Multi-unit Stanton, North Dakota

	Reference Elevation	June 6, 2023	Groundwater
	Top of Casing	Depth to Water	Elevation
Well ID	(feet, NAVD 88)	(feet)	(feet, NAVD 88)
MW-2017-1	1,683.86	24.94	1,658.92
MW-2017-2	1,681.03	22.30	1,658.73
MW-2017-3	1,682.36	23.55	1,658.81
MW-2017-4	1,684.13	25.43	1,658.70
MW-2017-5	1,691.72	32.85	1,658.87
MW-2017-6	1,693.44	34.40	1,659.04
MW-2017-7	1,698.25	39.21	1,659.04
MW-2017-8	1,717.23	28.70	1,688.53
MW-2017-8D	1,716.27	50.95	1,665.32
MW-2017-9	1,709.93	38.57	1,671.36
*MW-2017-10	1692.15	33.33	1,658.82
*MW-2017-11	1698.21	39.19	1,659.02
**Missouri River elevation	at approximately 12:00 pr	n on 9/11/2023	1,657.98

Notes:

* Pending Verification of Top of Casing Elevation

** Elevation as reported at Leland Olds Station River Intake in Stanton ND.

Table 1B. Second Half 2023 - Groundwater Monitoring Water Levels and Elevations

CCR Monitoring Wells LOS Pond 2 and Pond 3 - Multi-unit Stanton, North Dakota

		September 11-12,						
	Reference Elevation	2023	Groundwater					
	Top of Casing	Depth to Water	Elevation					
Well ID	(feet, NAVD 88)	(feet)	(feet, NAVD 88)					
MW-2017-1	1683.86	24.91	1,658.95					
MW-2017-2	1681.03	22.25	1,658.78					
MW-2017-3	1682.36	23.53	1,658.83					
MW-2017-4	1684.13	25.32	1,658.81					
MW-2017-5	1691.72	32.91	1,658.81					
MW-2017-6	1693.44	34.45	1,658.99					
MW-2017-7	1698.25	39.26	1,658.99					
MW-2017-8	1717.23	28.70	1,688.53					
MW-2017-8D	1716.27	38.24	1,678.03					
MW-2017-9	1709.93	Not Measured	Not Measured					
*MW-2017-10	1692.15	33.48	1,658.67					
*MW-2017-11	1698.21	39.20	1,659.01					
**Missouri River elevation	at approximately 12:00 pr	approximately 12:00 pm on 9/11/2023						

Notes:

* Pending Verification of Top of Casing Elevation

** Elevation as reported at Leland Olds Station River Intake in Stanton ND.

Table 2. Estimated Groundwater Gradient and Seepage Velocity CCR Monitoring Wells LOS Pond 2 And Pond 3 - Multi-Unit Stanton, North Dakota

Date of event	d _l (ft)	d _h (ft)	i (ft/ft)	n _e	K (ft/day)	v _s (ft/day)		
3/12/2018		Insufficie	ent Data: Limited	site access due t	o high water			
4/17/2018	307	0.25	0.00081	0.33	1.16E+01	2.86E-02		
6/14/2018*	493	0.25	0.00051	0.33	1.16E+01	1.78E-02		
7/23/2018*	397	0.5	0.00126	0.33	1.16E+01	4.43E-02		
9/27/2018*	480	0.25	0.00052	0.33	1.16E+01	1.83E-02		
3/12/2019	337	0.5	0.00148	0.33	1.16E+01	5.22E-02		
3/27/2019	300	0.5	0.00167	0.33	1.16E+01	5.86E-02		
4/9/2019	303	0.75	0.00248	0.33	1.16E+01	8.70E-02		
11/11/2019*	300	0.1	0.00033	0.33	1.16E+01	1.17E-02		
6/8/2020*	960	0.29	0.00030	0.33	1.16E+01	1.06E-02		
10/5/2020	810	0.6	0.00074	0.33	1.16E+01	2.60E-02		
5/11/2021	620	0.2	0.00032	0.33	1.16E+01	1.13E-02		
9/21/2021	700	0.4	0.00057	0.33	1.16E+01	2.01E-02		
6/21/2022	610	0.04	0.000066	0.33	1.16E+01	2.30E-03		
10/4/2022	840	0.4	0.00048	0.33	1.16E+01	1.67E-02		
6/6/2023	1000	0.3	0.0003	0.33	1.16E+01	1.06E-02		
9/11/2023	1800	0.18	0.0001	0.33	1.16E+01	3.52E-03		

d_I = Horizontal separation between upgradient and downgradient locations perpendicular to potentiometric contours

d_h = Change in hydraulic head between upgradient and downgradient locations

i = Hydraulic gradient (change in elevation over distance)

 $n_{\rm e}\text{=}$ Site average porosity of 33%

K = Site average hydraulic conductivity of 11.6 ft/day from slug tests at site

v_s = Seepage velocity (ft/day)

* = Groundwater flow direction during event was from river to aquifer

Hydraulic Gradient Governing Equation¹ –

Seepage Velocity Governing Equation² –

 $i = -\frac{dh}{dl}_{v_s} = -K * i/n_e$

Table 3. 2023 Detection Monitoring (Appendix III) Analytical Results SummaryCCR Monitoring WellsLOS Pond 2 and Pond 3 - Multi-unitStanton, North Dakota

			Appendix III Constituents												
		cal Method nical Name Unit	SW6010C Boron mg/L	SW6010C Calcium mg/L	SW9056A Chloride mg/L	SW9056A Fluoride mg/L	Field Measure pH SU	SW9056A Sulfate mg/L	SM2540C TDS mg/L						
Well ID	Event	Date													
MW-2017-1	Event 16	6/13/23	0.62	182	13.4	0.34	7.08	243	1050						
MW-2017-1 Dup	Event 16	6/13/23	0.62	182	13.5	0.33	7.08	261	1070						
MW-2017-1	Event 17	9/12/23	0.47	208	13.9	0.34	7.10	268	1180						
MW-2017-2	Event 16	6/13/23	0.99	132.0	12.60	0.34	7.21	286	957						
MW-2017-2	Event 17	9/12/23	1.01	101	12.2	0.38	7.30	285	822						
MW-2017-3	Event 16	6/13/23	1.41	116.0	12.3	0.45	7.31	136	933						
MW-2017-3	Event 17	9/12/23	1.28	113	12.0	0.48	0.48 7.34		952						
MW-2017-4	Event 16	6/7/23	1.12	134	13.2	0.78	7.27	364	774						
MW-2017-4	Event 17	9/12/23	1.10	144	11.8	0.77	0.77 7.26		874						
MW-2017-5	Event 16	6/13/23	0.79	85.5	12.3	0.92	7.26	289	660						
MW-2017-5	Event 17	9/12/23	0.74	85.6	12.0	0.91	7.48	262	641						
MW-2017-6	Event 16	6/13/23	1.56	66.4	12.0	0.57	7.49	203	612						
MW-2017-6	Event 17	9/11/23	1.40	65.6	11.8	0.60	7.57	177	589						
MW-2017-7	Event 16	6/7/23	1.87	64.8	13.2	1.51	7.59	344	695						
MW-2017-7	Event 17	9/11/23	2.07	73.1	12.4	1.34	7.58	240	693						
MW-2017-8	Event 16	6/7/23	0.41	132	27.2	0.37	7.45	1900	3740						
MW-2017-8	Event 17	9/11/23	0.40	137	25.7	0.38	7.44	1720	3720						
MW-2017-8D	Event 16	6/7/23	0.65	8.55	18.7	0.61	8.04	489	1930						
MW-2017-8D	Event 17	9/11/23	0.69	8.97	17.6	0.59	8.01	365	1960						

Notes: mg/L = milligrams per liter SU = standard units TDS = total dissolved solids

Table 4. 2023 Characterization (Appendix III and IV) Analytical Results Summary CCR Monitoring Wells LOS Pond 2 and Pond 3 - Multi-unit Stanton, North Dakota

					Appen	dix III Cons	tituents			Appendix IV Constituents													
	Analytical	Method	SW6010C	SW6010C	SW9056A	SW9056A	Field Measure	SW9056A	SM2540C	SW6020A	SW6020A	SW6020A	SW6020A	SW6020A	SW6020A	SW6020A	SW6020A	SW6010C	7470A	SW6020A	Ra226_Ra228	SW6020A	SW6020A
	Chemic	al Name		Calcium	Chloride	Fluoride	рН	Sulfate	TDS	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum		Selenium	Thallium
Well ID	Event	Unit Date	mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L	mg/L	mg/L
MW-2017-10	Event 01	5/3/23	1.02	86.2	12.0	0.76	7.25	269	640	< 0.001	0.0025	0.0806	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0082	0.75	< 0.005	< 0.0005
MW-2017-10	Event 02	6/6/23	0.95	86.1	12.2	0.80	7.50	265	670	< 0.001	0.0029	0.0796	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0079	0.75	< 0.005	< 0.0005
MW-2017-10-Dup	Event 02	6/6/23	0.97	88.7	12.3	0.79	7.50	353	655	< 0.001	0.0031	0.0795	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0083	0.80	< 0.005	< 0.0005
MW-2017-10	Event 03	6/26/23	0.97	90.8	11.7	0.77	7.47	328	682	< 0.001	0.0032	0.0837	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0085	0.75	< 0.005	< 0.0005
MW-2017-10	Event 04	9/12/23	0.93	90.3	11.6	0.81	7.47	298	667	< 0.001	0.0032	0.0737	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0080	0.60	< 0.005	< 0.0005
MW-2017-11	Event 01	5/3/23	1.29	65.4	12.2	0.75	7.28	189	577	< 0.001	0.0084	0.0485	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	0.0321	< 0.0002	0.0095	0.75	< 0.005	< 0.0005
MW-2017-11 Dup	Event 01	5/3/23	1.23	63.2	12.1	0.75	7.28	184	581	< 0.001	0.0083	0.0445	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	0.0308	< 0.0002	0.0093	0.75	< 0.005	< 0.0005
MW-2017-11	Event 02	6/6/23	1.23	63.1	12.4	0.77	7.57	175	504	< 0.001	0.0088	0.0458	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	0.0319	< 0.0002	0.0097	0.75	< 0.005	< 0.0005
MW-2017-11	Event 03	6/26/23	1.30	68.3	11.7	0.70	7.50	219	571	< 0.001	0.0100	0.0493	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	0.0323	< 0.0002	0.0100	0.70	< 0.005	< 0.0005
MW-2017-11 Dup	Event 03	6/26/23	1.31	68.8	11.9	0.71	7.50	223	583	< 0.001	0.0100	0.0490	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	0.0324	< 0.0002	0.0108	0.75	< 0.005	< 0.0005
MW-2017-11	Event 04	9/12/23	1.17	63.7	11.7	0.73	7.49	199	592	< 0.001	0.0084	0.0392	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	0.0294	< 0.0002	0.0090	0.70	< 0.005	< 0.0005
MW-2017-11 Dup	Event 04	9/12/23	1.20	65.6	11.8	0.72	7.49	202	581	< 0.001	0.0089	0.0399	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	0.0302	< 0.0002	0.0090	0.65	< 0.005	< 0.0005

Notes: mg/L = milligrams per liter SU = standard units

pCi/L = picocuries per liter TDS = total dissolved solids

< = value less than reporting limit, not detected

Appendix A

Analytical Laboratory Reports 2023 Detection-Mode Monitoring and Characterization Events MAY 2023



1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Account #:2040Client:Basin Electric Power CooperativeWorkorder:New LOS CCR Wells (14750)PO:790708-04 LOS

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 Carlep

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



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Account #: 2040

Client: Basin Electric Power Cooperative

Workorder Summary

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.

Unreported samples to update sample identifications on 14750003 and 14750004. CC 8Jun23

Analysis Results Comments

14750004 (MW-2016-13)

Matrix spike and/or matrix spike duplicate recovery was high; the associated laboratory fortified blank recovery was acceptable.(Chloride)

14750004 (MW-2016-13)

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

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Account #:		Client:	Basin Electric Power Cooperative							
Analytical	Resul	ts								
Lab ID: Sample ID:	147500 MW-20)17-10	Date Collected: Date Received:		05/03/2023 13:45 05/05/2023 16:05			Matrix: Collector:	Groundwater Client	
Temp @ Recei	pt (C):	4.8								
Method: ASTM [D516-16									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate			269	mg/L	5	1	05/10/2023 11:49	05/10/2023 11:49	AMC	
Method: EPA 24	5.1									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury			<0.0002	mg/L	0.0002	1	05/09/2023 11:11	05/09/2023 11:40	MDE	
Method: EPA 60	10D									
Parameter			Results	Units	RDL	DF	Prepared 05/05/2023	Analyzed 05/11/2023	Ву	Qual
Boron			1.02	mg/L	0.1	1	17:01	09:23	MDE	
Calcium			86.2	mg/L	1	1	05/05/2023 17:01	05/09/2023 11:40	MDE	
Lithium			<0.02	mg/L	0.02	1	05/05/2023 17:01	05/11/2023 13:44	MDE	
Method: EPA 60	20B									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony			<0.001	mg/L	0.001	5	05/05/2023 17:01	05/12/2023 17:14	MDE	
Arsenic			0.0025	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:14	MDE	
Barium			0.0806	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:14	MDE	
Beryllium			<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:14	MDE	
Cadmium			<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:14	MDE	
Chromium			<0.002	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:14	MDE	
Cobalt			<0.002	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:14	NIDE	
Lead			<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:14	MDE	
Molybdenum			0.0082	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:14	MDE	
Selenium			<0.005	mg/L	0.005	5	05/05/2023 17:01	05/12/2023 17:14	MDE	
Thallium			<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:14	MDE	

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Account #:	2040		Client:	Basin	Electri	ic Power Coop	perative		
Analytical	Results								
Lab ID: Sample ID:	14750001 MW-2017-10		Date Collected: Date Received:		/03/2023 /05/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei	pt (C): 4.8								
Method: SM4500	0-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		12.0	mg/L	2.0	1	05/09/2023 13:56	05/09/2023 13:56	AMC	
Method: SM4500	0-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.76	mg/L	0.1	1	05/09/2023 14:41	05/09/2023 14:41	RAA	
Method: USGS I	-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids	640	mg/L	10	1	05/09/2023 16:10	05/09/2023 16:10	RAA	



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Analytical Results Lab ID: 14750002 Sample ID: MW-2017-11 Date Collected: 05/03/2023 11:40 05/05/2023 16:05 Matrix: Groundwater Collector: Cilent Temp @ Receipt (C): 4.3 Method: ASTM D516-16 Parameter Results Units Rol 07/07/07/07 Matrix: Groundwater Collector: Cilent Method: ASTM D516-16 Parameter Results Units Rol 07/07/07/07 Matrix: Groundwater Collector: Cilent Method: EPA 245.1 Parameter Results Units Rol 07/07/07/03 Matrix: Groundwater Colspan="4">Ground 2000 Matrix: Groundwater Collector: Cilent Method: EPA 245.1 Parameter Results Units Rol 000 Method: EPA 6010D Parameter Results Units Rol 07/07/07/03 Of/07/07/03 Of/07/07/03 Of/07/07/03 Of/07/07/03 Of/07/07/03 <th colspan<="" th=""><th>Account #: 2040</th><th></th><th>Client:</th><th colspan="7">Basin Electric Power Cooperative</th></th>	<th>Account #: 2040</th> <th></th> <th>Client:</th> <th colspan="7">Basin Electric Power Cooperative</th>	Account #: 2040		Client:	Basin Electric Power Cooperative						
Sample ID: WW-2017-11 Date Received: 05/05/2023 16.05 Collector: Clent Temp @ Receipt (C): 4.3 Method: ASTM D516-16 Parameter Results Units RD PF Prepared Analyzed By Qual Sulfate 189 mg/L 5 1 05/07/02023 05/07/02023 AMC Parameter Results Units RDL DF Prepared Analyzed By Qual Metor: Parameter Results Units RDL DF Prepared Analyzed By Qual Boron 1.29 mg/L 0.1 1 05/05/2023 05/11/2023 MDE Lithium 0.3021 mg/L 0.1 1 17.201 05/05/2023 05/11/2023 MDE Lithium 0.3021 mg/L 0.2 1 05/05/2023 05/11/2023 MDE 2 Antimony <0.001 mg/L 0.02	Analytical Results										
Method: Association Analyzed By Qual Parameter Results Units RDL DF Prepared Analyzed By Qual Sulfate 189 mg/L 5 1 05/10/2023 05/10/2023 AMC Method: EPA 245.1 Parameter Results Units RDL DF Prepared Analyzed By Qual Mercury <0.0002 mg/L 0.0002 1 05/05/2023 05/09/2023 MDE DE Method: EPA 6010D Parameter Results Units RDL DF Prepared Analyzed By Qual Boron 1.29 mg/L 0.1 1 05/05/2023 05/01/2023 MDE Lithium 0.0321 mg/L 0.02 1 05/05/2023 05/11/2023 MDE Antimony <0.001 mg/L 0.001 5 05/05/2023 05/12/2023 MDE Arsenic 0.0084											
Results Units RDL DF Prepared Analyzed By Qual Sulfate 189 mg/L 5 1 06/10/2023 11:50 05/10/2023 11:50 AMC Method: EPA 245.1 Parameter Results Units RDL DF Prepared Analyzed By Qual Mercury <0.0002 mg/L 0.0002 1 05/09/2023 11:11 05/09/2023 11:11 05/09/2023 11:11 05/09/2023 11:11 MDE Method: EPA 6010D Parameter Results Units RDL DF Prepared Analyzed By Qual Boron 1.29 mg/L 0.1 1 05/05/2023 05/01/12/023 05/09/2023 MDE Calcium 65.4 mg/L 0.02 1 07/05/2023 05/01/12/023 05/01/2023 MDE Lithium 0.0321 mg/L 0.02 1 17/01 11.40 MDE Parameter Results Units RDL DF Prepared Analyzed	Temp @ Receipt (C): 4.8										
Sulfate 189 mg/L 5 1 05/10/2023 11:50 05/10/2023 11:50 AMC Method: EPA 245.1 Parameter Results Units RDL DF Prepared Analyzed By Qual Mercury <0.0002 mg/L 0.0002 1 05/09/2023 05/09/2023 05/09/2023 05/09/2023 MDE Method: EPA 6010D Parameter Results Units RDL DF Prepared Analyzed By Qual Boron 1.29 mg/L 0.1 1 17/101 05/05/2023 05/01/2023 MDE Calcium 65.4 mg/L 1 1 17/101 11.40 MDE Method: EPA 6020B Parameter Results Units RDL DF Prepared Analyzed By Qual Antimony <0.001 mg/L 0.002 1 05/05/2023 05/12/2023 MDE Barium 0.0485 mg/L 0.002 17/101 16	Method: ASTM D516-16										
Sulfate 199 ng/L 5 1 11:50 11:50 AMIC Method: EPA 245.1 Parameter Results Units RDL DF Prepared Analyzed By Qual Mercury <0.0002 mg/L 0.0002 1 05/09/2023 05/09/2023 05/09/2023 11:40 MDE Parameter Results Units RDL DF Prepared Analyzed By Qual Boron 1.29 mg/L 0.1 1 05/05/2023 05/11/2023 MDE Calcium 65.4 mg/L 1 1 05/05/2023 05/11/2023 MDE MDE Lithium 0.0321 mg/L 0.02 1 17:01 13:46 MDE MDE MDE Method: EPA 6020B MDE MDE MDE MDE Si (1/2/2023) MDE	Parameter	Results	Units	RDL	DF		-	-	Qua		
Parameter Results Units RDL DF Prepared Analyzed By Qua Mercury <0.0002	Sulfate	189	mg/L	5	1			AMC			
Mercury <0.0002 mg/L 0.0002 1 05/09/2023 11:11 05/09/2023 11:11 05/09/2023 11:11 MDE Method: EPA 6010D Parameter Results Units RDL DF Prepared Analyzed By Qual Boron 1.29 mg/L 0.1 1 05/05/2023 05/09/2023 MDE Calcium 65.4 mg/L 1 1 05/05/2023 05/09/2023 MDE Lithium 0.0321 mg/L 0.02 1 05/05/2023 05/01/1/2023 MDE Method: EPA 6020B mg/L 0.02 1 05/05/2023 05/12/2023 MDE Antimony <0.001	Method: EPA 245.1										
Mercury <0.0002 mg/L 0.0002 1 11:11 11:40 MDE Method: EPA 6010D Parameter Results Units RDL DF Prepared Analyzed By Qual Boron 1.29 mg/L 0.1 1 17:01 09:25 MDE Calcium 65.4 mg/L 0.1 1 17:01 09:25 MDE Lithium 0.0321 mg/L 0.02 1 05/05/2023 05/01/12023 MDE Method: EPA 6020B mg/L 0.02 1 05/05/2023 05/12/2023 MDE Antimony <0.001	Parameter	Results	Units	RDL	DF	-		-	Qua		
Parameter Results Units RDL DF Prepared Analyzed By Qual Boron 1.29 mg/L 0.1 1 05/05/2023 05/11/2023 MDE Calcium 65.4 mg/L 1 1 05/05/2023 05/09/2023 MDE Lithium 0.0321 mg/L 0.02 1 05/05/2023 05/11/2023 MDE Method: EPA 6020B mg/L 0.02 1 05/05/2023 05/12/2023 MDE Matimony <0.001	Mercury	<0.0002	mg/L	0.0002	1			MDE			
Boron 1.29 mg/L 0.1 1 05/05/2023 17:01 05/05/2023 05/05/2023 05/11/2023 09:25 MDE Calcium 65.4 mg/L 1 1 05/05/2023 05/05/2023 05/09/2023 05/09/2023 MDE Lithium 0.0321 mg/L 0.02 1 05/05/2023 05/05/2023 05/11/2023 05/11/2023 MDE Method: EPA 6020B Parameter Results Units RDL DF Prepared Analyzed By Qua Antimony <0.001	Method: EPA 6010D										
Boron 1.29 mg/L 0.1 1 17:01 09:25 MDE Calcium 65.4 mg/L 1 1 105/05/2023 05/09/2023 MDE Lithium 0.0321 mg/L 0.02 1 05/05/2023 05/11/2023 MDE Method: EPA 6020B Parameter Results Units RDL DF Prepared Analyzed By Qua Antimony <0.001	Parameter	Results	Units	RDL	DF	-			Qua		
Calcium 65.4 mg/L 1 1 17:01 11:40 MDE Lithium 0.0321 mg/L 0.02 1 05/05/2023 05/11/2023 MDE Method: EPA 6020B Parameter Results Units RDL DF Prepared Analyzed By Qua Antimony <0.001	Boron	1.29	mg/L	0.1	1			MDE			
Lithium 0.0321 mg/L 0.02 1 17:01 13:46 MDE Method: EPA 6020B Parameter Results Units RDL DF Prepared Analyzed By Qua Antimony <0.001	Calcium	65.4	mg/L	1	1	17:01	11:40	MDE			
Parameter Results Units RDL DF Prepared Analyzed By Qua Antimony <0.001	Lithium	0.0321	mg/L	0.02	1			MDE			
Antimony <0.001 mg/L 0.001 5 05/05/2023 05/12/2023 MDE Arsenic 0.0084 mg/L 0.002 5 17:01 16:55 MDE Barium 0.0485 mg/L 0.002 5 17:01 16:55 MDE Barium 0.0485 mg/L 0.002 5 17:01 16:55 MDE Baryllium 0.0485 mg/L 0.002 5 17:01 16:55 MDE Cadmium <0.0005	Method: EPA 6020B										
Antimony <0.001 mg/L 0.001 5 17:01 16:55 MDE Arsenic 0.0084 mg/L 0.002 5 05/05/2023 05/12/2023 MDE Barium 0.0485 mg/L 0.002 5 17:01 16:55 MDE Beryllium 0.0485 mg/L 0.002 5 05/05/2023 05/12/2023 MDE Cadmium <0.0005	Parameter	Results	Units	RDL	DF	-			Qua		
Arsenic 0.0084 mg/L 0.002 5 17:01 16:55 MDE Barium 0.0485 mg/L 0.002 5 05/05/2023 05/12/2023 MDE Beryllium <0.0005	Antimony	<0.001	mg/L	0.001	5			MDE			
Barium 0.0485 mg/L 0.002 5 05/05/2023 05/12/2023 MDE Beryllium <0.0005	Arsenic	0.0084	mg/L	0.002	5			MDE			
Beryllium <0.0005 mg/L 0.0005 5 17:01 16:55 MDE Cadmium <0.0005	Barium	0.0485	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 16:55	MDE			
Cadmium <0.0005 mg/L 0.0005 5 05/05/2023 17:01 05/12/2023 16:55 MDE Chromium <0.002	Beryllium	<0.0005	mg/L	0.0005	5			MDE			
Chromium <0.002 mg/L 0.002 5 17:01 16:55 MDE Cobalt <0.002	Cadmium	<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 16:55	MDE			
Cobalt <0.002 mg/L 0.002 5 05/05/2023 17:01 05/12/2023 16:55 MDE Lead <0.0005	Chromium	<0.002	mg/L	0.002	5			MDE			
Lead <0.0005 mg/L 0.0005 5 05/05/2023 05/12/2023 MDE Molybdenum 0.0095 mg/L 0.002 5 05/05/2023 05/12/2023 MDE Selenium <0.005	Cobalt	<0.002	mg/L	0.002	5	05/05/2023	05/12/2023	MDE			
Molybdenum 0.0095 mg/L 0.002 5 17:01 16:55 MDE Selenium <0.005	Lead	<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 16:55	MDE			
Selenium <0.005 mg/L 0.005 5 05/05/2023 17:01 05/12/2023 16:55 MDE Thallium <0.0005	Molybdenum	0.0095	mg/L	0.002	5			MDE			
	Selenium	<0.005	mg/L	0.005	5	05/05/2023 17:01	05/12/2023 16:55	MDE			
17:01 16:55 MDL	Thallium	<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 16:55	MDE			

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Account #:	2040		Client:	Basin	i Electri	ic Power Coop	perative		
Analytical	Results								
Lab ID: Sample ID:	14750002 MW-2017-11		Date Collected: Date Received:		5/03/2023 5/05/2023		Matrix: Collector:	Groundwater Client	
Temp @ Rece	eipt (C): 4.8								
Method: SM450	00-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		12.2	mg/L	2.0	1	05/09/2023 13:57	05/09/2023 13:57	3 AMC	
Method: SM450	00-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.75	mg/L	0.1	1	05/09/2023 15:01	05/09/2023 15:01	³ RAA	
Method: USGS	I-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved	Solids	577	mg/L	10	1	05/09/2023 16:10	05/09/2023 16:10	B RAA	
Total Dissolved	Solids	577	mg/L	10	1			' RAA	



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Account #: 2040		Client:	Basin Electric Power Cooperative						
Analytical Resul	ts								
Lab ID: 147500 Sample ID: MW-2000		te Collected: te Received:		04/2023 05/2023		Matrix: Collector:	Groundwater Client		
Temp @ Receipt (C):	4.8								
Method: ASTM D516-16									
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua	
Sulfate	53.9	mg/L	5	1	05/10/2023 11:51	05/10/2023 11:51	AMC		
Method: EPA 245.1									
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua	
Mercury	<0.0002	mg/L	0.0002	1	05/09/2023 11:11	05/09/2023 11:40	MDE		
Method: EPA 6010D									
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua	
Boron	0.23	mg/L	0.1	1	05/05/2023 17:01	05/11/2023 09:26	MDE		
Calcium	36.7	mg/L	1	1	05/05/2023 17:01	05/09/2023 11:41	MDE		
Lithium	<0.02	mg/L	0.02	1	05/05/2023 17:01	05/11/2023 13:46	MDE		
Method: EPA 6020B									
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua	
Antimony	<0.001	mg/L	0.001	5	05/05/2023 17:01	05/12/2023 16:59	MDE		
Arsenic	<0.002	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 16:59	MDE		
Barium	0.0628	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 16:59	MDE		
Beryllium	<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 16:59	MDE		
Cadmium	<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 16:59	MDE		
Chromium	<0.002	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 16:59	MDE		
Cobalt	<0.002	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 16:59	MDE		
Lead	<0.0005	mg/L	0.0005	5	05/05/2023 17:01 05/05/2023	05/12/2023 16:59 05/12/2023	MDE		
Molybdenum	0.0150	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 16:59	MDE		
Selenium	<0.005	mg/L	0.005	5	05/05/2023 17:01	05/12/2023 16:59	MDE		
Thallium	<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 16:59	MDE		

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Account #:	2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical	Results								
Lab ID: Sample ID:	14750003 MW-2016-12	-	Date Collected: Date Received:		/04/2023 /05/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei	ipt (C): 4.8								
Method: SM450	0-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		37.5	mg/L	2.0	1	05/09/2023 13:58	05/09/2023 13:58	AMC	
Method: SM450	0-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.55	mg/L	0.1	1	05/09/2023 15:07	05/09/2023 15:07	RAA	
Method: USGS	-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids	1240	mg/L	10	1	05/09/2023 16:10	05/09/2023 16:10	RAA	



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Account #:		Client:	Basin Electric Power Cooperative							
Analytical	Result	ts								
Lab ID: Sample ID:	147500 MW-20		Date Collected: Date Received:		05/04/2023 09:18 05/05/2023 16:05			Matrix: Collector:	Groundwater Client	
Temp @ Rece	ipt (C):	4.8								
Method: ASTM	D516-16									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate			58.1	mg/L	5	1	05/10/2023 11:52	05/10/2023 11:52	AMC	*
Method: EPA 24	45.1									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury			<0.0002	mg/L	0.0002	1	05/09/2023 11:11	05/09/2023 11:40	MDE	
Method: EPA 60)10D									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Boron			0.34	mg/L	0.1	1	05/05/2023 17:01	05/11/2023 09:26	MDE	
Calcium			29.7	mg/L	1	1	05/05/2023 17:01	05/09/2023 11:42	MDE	
Lithium			<0.02	mg/L	0.02	1	05/05/2023 17:01	05/11/2023 13:47	MDE	
Method: EPA 60)20B									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Antimony			<0.001	mg/L	0.001	5	05/05/2023 17:01	05/12/2023 17:04	MDE	
Arsenic			<0.002	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:04	MDE	
Barium			0.0928	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:04	MDE	
Beryllium			<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:04	MDE	
Cadmium			<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:04	MDE	
Chromium			<0.002	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:04	MDE	
Cobalt			<0.002	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:04	MDE	
Lead			<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:04	MDE	
Molybdenum			0.0651	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:04	MDE	
Selenium			<0.005	mg/L	0.005	5	05/05/2023 17:01	05/12/2023 17:04	MDE	
Thallium			<0.0005	mg/L	0.0005	5	05/05/2023	05/12/2023	MDE	

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Account #:	2040		Client:	lient: Basin Electric Power Cooperative					
Analytical	Results								
Lab ID: Sample ID:	14750004 MW-2016-13		Date Collected: Date Received:		/04/2023 /05/2023		Matrix: Collector:	Groundwater Client	
Temp @ Rece	ipt (C): 4.8								
Method: SM450	0-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		56.0	mg/L	2.0	1	05/09/2023 13:59	05/09/2023 13:59	B AMC	*
Method: SM450	0-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.48	mg/L	0.1	1	05/09/2023 15:15	05/09/2023 15:15	⁸ RAA	
Method: USGS	I-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved	Solids	1460	mg/L	10	1	05/09/2023 16:10	05/09/2023 16:10	³ RAA	



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Sample ID: Dup Date Received: 05/05/2023 16:05 Collector: Clent: Temp @ Receipt (C): 4.8 sthod: ASTM D516-16 traemeter Results Units RDL DF Prepared Analyzed By Qual alfate 184 mg/L 5 1 05/10/2023 05/10/2023 AMC athod: EPA 245.1 traemeter Results Units RDL DF Prepared Analyzed By Qual arcury <0.0002 mg/L 0.0002 1 05/09/2023 05/09/2023 MDE DE athod: EPA 6010D rcury 1 1 05/05/2023 05/11/2023 MDE MDE atom 63.2 mg/L 0.1 1 05/05/2023 05/11/2023 MDE MDE atom 0.308 mg/L 0.2 1 05/05/2023 05/11/2023 MDE MDE atom 0.001 mg/L <th>Account #:</th> <th>2040</th> <th></th> <th>Client:</th> <th colspan="7">Basin Electric Power Cooperative</th>	Account #:	2040		Client:	Basin Electric Power Cooperative						
Sample ID: Dup Date Received: 05/05/2023 16:05 Collectr: Client Temp @ Receivt (C: 4.8 sthod: ASTM D516-16 trameter Results Units RDL DF Prepared Analyzed By Qual affate 184 mg/L 5 1 05/05/2023 05/07/0223 AMC athod: EPA 245.1 trameter Results Units RDL DF Prepared Analyzed By Qual arcorry <0.0002 mg/L 0.0002 1 05/05/2023 05/07/2023 MDE MDE arcorry <0.0002 mg/L 1 05/05/2023 05/11/2023 MDE arcorry 63.2 mg/L 1 1 05/05/2023 05/11/2023 MDE arcord 63.2 mg/L 0.2 1 05/05/2023 05/11/2023 MDE arcord 0.0308 mg/L 0.2 1 05/05/2023 05/11/2023 MDE	Analytical F	Results									
asthod: ASTM D516-16 irrameter Results Units RDL DF Prepared Analyzed By Qual iffate 184 mg/L 5 1 05/10//2023 05/10//2023 AMC athod: EPA 245.1 Irrameter Results Units RDL DF Prepared Analyzed By Qual arcury <0.0002 mg/L 0.0002 1 05/09/2023 05/09/2023 MDE arteury <0.0002 mg/L 0.0002 1 05/09/2023 05/09/2023 MDE arteury <0.0002 mg/L 0.1 1 05/05/2023 05/01/2023 MDE arteury <0.02 mg/L 1 1 05/05/2023 05/01/2023 MDE arteury <0.0308 mg/L 0.02 1 05/05/2023 05/01/2023 MDE alcium <0.0308 mg/L 0.02 1 05/05/2023 05/11/2023 MDE arameter<	Lab ID: Sample ID:										
rarmeter Results Units RDL DF Prepared Analyzed By Qual ilfate 184 mg/L 5 1 05/10/2023 05/10/2023 12:03 AMC sethod: EPA 245.1 urameter Results Units RDL DF Prepared Analyzed By Qual ercury <0.0002 mg/L 0.0002 1 05/05/2023 05/09/2023 MDE MDE ethod: EPA 6010D mg/L 0.1 1 05/05/2023 05/09/2023 MDE Qual oron 1.23 mg/L 0.1 1 05/05/2023 05/01/12023 MDE MDE sideium 63.2 mg/L 1 1 17:01 11:43 MDE MDE triameter Results Units RDL DF Prepared Analyzed By Qual ritimony <0.001 mg/L 0.02 1 17:01 11:43 M	Temp @ Receip	ot (C): 4.8									
Ifate 184 mg/L 5 1 05/10/2023 12:03 05/10/2023 12:03 05/10/2023 12:03 AMC ethod: EPA 245.1 Intermeter Results Units RDL DF Prepared Analyzed By Qual arcury <0.0002 mg/L 0.0002 1 05/09/2023 05/09/2023 05/09/2023 05/01/2023 MDE ethod: EPA 6010D Intermeter Results Units RDL DF Prepared Analyzed By Qual atom 63.2 mg/L 0.1 1 17/01 11/43 MDE hium 0.0308 mg/L 0.02 1 05/05/2023 05/11/2023 MDE sthod: EPA 6020B Irrameter Results Units RDL DF Prepared Analyzed By Qual rtimony <0.001 mg/L 0.002 5 05/05/2023 05/11/2023 MDE rarmeter Results Units RDL DF Prepared Analyze	Method: ASTM D	516-16									
Initiate 184 mg/L 5 1 12:03 12:03 12:03 AMC sethod: EPA 245.1 trameter Results Units RDL DF Prepared Analyzed By Qual arcury <0.0002	Parameter		Results	Units	RDL	DF		-	-	Qual	
Arrameter Results Units RDL DF Prepared Analyzed By Qual arcury <0.0002	Sulfate		184	mg/L	5	1			AMC		
ercury <0.0002 mg/L 0.0002 1 05/09/2023 11:11 05/09/2023 11:40 05/09/2023 MDE ethod: EPA 6010D rrameter Results Units RDL DF Prepared Analyzed By Qual oron 1.23 mg/L 0.1 1 05/05/2023 05/11/2023 05/05/2023 MDE alcium 63.2 mg/L 1 1 05/05/2023 05/11/2023 05/11/2023 MDE hium 0.0308 mg/L 0.02 1 17:01 13:48 MDE ethod: EPA 6020B 0.001 5 05/05/2023 05/12/2023 MDE atrium 0.0445 mg/L 0.002 5 17:01 17:09 MDE admium <0.0005	Method: EPA 245	5.1									
Produty \$0.0002 mg/L 0.0002 1 11:11 11:40 MDE ethod: EPA 6010D trameter Results Units RDL DF Prepared Analyzed By Qual oron 1.23 mg/L 0.1 1 05/05/2023 05/11/2023 MDE alcium 63.2 mg/L 1 1 05/05/2023 05/01/2023 MDE hium 0.0308 mg/L 0.02 1 05/05/2023 05/11/2023 MDE ethod: EPA 6020B 17:01 11:43 MDE MDE titimony 0.001 mg/L 0.001 5 05/05/2023 05/12/2023 MDE senic 0.0083 mg/L 0.002 5 05/05/2023 05/12/2023 MDE arium 0.0445 mg/L 0.002 5 05/05/2023 05/12/2023 MDE arium 0.0025 mg/L 0.0005 5 05/0	Parameter		Results	Units	RDL	DF		Analyzed	Ву	Qual	
Results Units RDL DF Prepared Analyzed By Qual pron 1.23 mg/L 0.1 1 17:01 09:27 MDE alcium 63.2 mg/L 1 1 17:01 09:27 MDE alcium 0.308 mg/L 1 1 17:01 11:43 MDE hium 0.0308 mg/L 0.02 1 05/05/2023 05/11/2023 MDE ethod: EPA 6020B mameter Results Units RDL DF Prepared Analyzed By Qual trimony <0.001	Mercury		<0.0002	mg/L	0.0002	1			MDE		
bron 1.23 mg/L 0.1 1 05/05/2023 17:01 05/11/2023 09:27 MDE alcium 63.2 mg/L 1 1 05/05/2023 05/05/2023 05/09/2023 05/11/2023 MDE hium 0.0308 mg/L 0.02 1 05/05/2023 05/05/2023 05/11/2023 05/11/2023 MDE ethod: EPA 6020B mameter Results Units RDL DF Prepared Analyzed By Qual senic 0.0083 mg/L 0.002 5 05/05/2023 05/12/2023 05/12/2023 MDE arium 0.0445 mg/L 0.002 5 17:01 17:09 MDE admium <0.005	Method: EPA 601	10D									
nron 1.23 mg/L 0.1 1 17:01 09:27 MDE alcium 63.2 mg/L 1 1 17:01 05/05/2023 05/09/2023 MDE hium 0.0308 mg/L 0.02 1 05/05/2023 05/11/2023 MDE ethod: EPA 6020B mg/L 0.02 1 05/05/2023 05/12/2023 MDE senic 0.001 mg/L 0.001 5 05/05/2023 05/12/2023 MDE senic 0.0083 mg/L 0.002 5 05/05/2023 05/12/2023 MDE arium 0.0445 mg/L 0.002 5 17:01 17:09 MDE admium <0.005	Parameter		Results	Units	RDL	DF	-		Ву	Qual	
Alcium 63.2 ng/L 1 1 05/05/2023 17:01 05/09/2023 11:43 MDE hium 0.308 ng/L 0.02 1 05/05/2023 17:01 05/11/2023 13:48 MDE ethod: EPA 6020B E V V 0.001 5 Prepared Analyzed By Qual ntimony <0.001	Boron		1.23	mg/L	0.1	1			MDE		
Inium 0.0308 mg/L 0.02 1 17:01 13:48 MDE ethod: EPA 6020B Image: Constraint of the second of the seco	Calcium		63.2	mg/L	1	1	05/05/2023 17:01	05/09/2023 11:43	MDE		
Arrameter Results Units RDL DF Prepared Analyzed By Qual ntimony <0.001	₋ithium		0.0308	mg/L	0.02	1			MDE		
vitimony <0.001 mg/L 0.001 5 05/05/2023 05/12/2023 MDE senic 0.0083 mg/L 0.002 5 17:01 17:09 MDE arium 0.0445 mg/L 0.002 5 17:01 17:09 MDE arium 0.0445 mg/L 0.002 5 17:01 17:09 MDE aryllium <0.0005	Method: EPA 602	20B									
Number <0.001 mg/L 0.001 5 17:01 17:09 MDE senic 0.0083 mg/L 0.002 5 05/05/2023 05/12/2023 MDE arium 0.0445 mg/L 0.002 5 05/05/2023 05/12/2023 MDE arium 0.0445 mg/L 0.002 5 05/05/2023 05/12/2023 MDE arium <0.0005	Parameter		Results	Units	RDL	DF	-	· ·	Ву	Qual	
senic 0.0083 mg/L 0.002 5 17:01 17:09 MDE arium 0.0445 mg/L 0.002 5 05/05/2023 05/12/2023 MDE eryllium <0.0005	Antimony		<0.001	mg/L	0.001	5			MDE		
arium 0.0445 mg/L 0.002 5 05/05/2023 05/12/2023 MDE aryllium <0.0005	Arsenic		0.0083	mg/L	0.002	5	05/05/2023	05/12/2023	MDE		
admium <0.0005 mg/L 0.0005 5 17:01 17:09 MDE admium <0.0005	Barium		0.0445	mg/L	0.002	5	05/05/2023	05/12/2023	MDE		
admium <0.0005 mg/L 0.0005 5 05/05/2023 05/12/2023 MDE nromium <0.002	Beryllium		<0.0005	mg/L	0.0005	5			MDE		
Arromium <0.002 mg/L 0.002 5 17:01 17:09 MDE obalt <0.002	Cadmium		<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:09	MDE		
obalt <0.002 mg/L 0.002 5 05/05/2023 17:01 05/12/2023 17:01 MDE ad <0.0005	Chromium		<0.002	mg/L	0.002	5			MDE		
ad <0.0005 mg/L 0.0005 5 05/05/2023 17:01 05/12/2023 17:01 MDE blybdenum 0.0093 mg/L 0.002 5 05/05/2023 17:01 05/12/2023 17:01 MDE blenium <0.005	Cobalt		<0.002	mg/L	0.002	5	05/05/2023	05/12/2023	MDE		
Stybeenum 0.0093 mg/L 0.002 5 17:01 17:09 MDE elenium <0.005	ead		<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:09	MDE		
elenium <0.005 mg/L 0.005 5 05/05/2023 05/12/2023 MDE valium <0.005	Molybdenum		0.0093	mg/L	0.002	5			MDE		
	Selenium		<0.005	mg/L	0.005	5	05/05/2023 17:01	05/12/2023 17:09			
	Thallium		<0.0005	mg/L	0.0005	5			MDE		



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Account #:	2040		Client:	Basin	Electri	ic Power Coop	perative		
Analytical	Results								
Lab ID: Sample ID:	14750005 Dup	_	oate Collected: oate Received:		5/03/2023 5/05/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei	ipt (C): 4.8								
Method: SM450	0-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		12.1	mg/L	2.0	1	05/09/2023 14:00	05/09/2023 14:00	AMC	
Method: SM450	0-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.75	mg/L	0.1	1	05/09/2023 15:21	05/09/2023 15:21	RAA	
Method: USGS I	-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids	581	mg/L	10	1	05/09/2023 16:10	05/09/2023 16:10	RAA	



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Account #: 2040

Client: Basin Electric Power Cooperative

Result	ts Summary							WO #:	147	50
Sulfate				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate N Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB			100	93.4			85	115		
Fil.			100	103.0			85	115		
FB			100	92.8			85	115		
FB.			100	85,3			85	115		
FB			190	101.0			85	115		
16		ŝ								
48		4								
45		(så)								
AST		-(5)								
9		d								
50	14345001		500	84.5		87.9	89	115	2.0	20
50	14570002		100	74.9		73.0	85	115	0,8	20
50	14750004		100	77.3		77.1	85	115	0.0	20
sa	14750005		100	88.5		92.9	85	115	2.5	20
hloride				Units:	mg/L					
C Type	Original Sample (D	Blank Result	5pike Atnount	Spike % Recovery	-	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
10			30	93.0			90	110		
ß			NU.	93.2			90	110		
18			30	93,3			90	110		
ib.			10	93.3			90	110		
в			10	93.9			90	110		
0			30	94.7			90	110		
-n			10-	94,5			90	(110-		
10		-1.00								
8		~1.00								
N		-<1.00								
a		-<2.00								
18		\$2.00								

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Account #: 2040

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Chloride DC Type	Original Sample (D.	Blank Result	Spike Amount	Units: Spike %	mg/L	Splke Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
	Grightan aaropie 10.		Share Humonia	Recovery		R Renzivery	Limit (%)	Limit (%)	Harth (M)	ne b thint (sig
46		12.0								
450	14232003		30	89.5		90.0	80	120	10.3	20
450	14485001		150	132,1		1814	80	320	0.3	20
45.0	-14750004		10	131.0		130.2	80	120	0.2	20
Calcium				Units:	mg/L					
ас Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Recovery	Lawer Control Limit (9()	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
050	14750005		100	97.5		98.5	75-	125	0,6.	50
Antimony	1.00			Units:	mg/L				-	
DC Type FB-MS	Original Sample (D	Blank Result	5pike Amount 0.1	Spike % Recovery 104.0	_	Spike Duplicate % Recovery	Lower Control Limit (56) 85	Upper Control Limit (%)	100 (<i>M</i>)	RPD Limit (%)
			10.0	104.11						
40		10.001								
450	14544003		0.4	107.0		104.0	70	130	38	20
Arsenic				Units:	mg/L					
QC Type	Original Sample (D)	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-M5			0.1	96.2			85	115		
in.		0.000								
190	14544003		0.4	104.0		108.0	70	130	1.0	20.
Barium				Units:	mg/L					
ас туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Splike Duplicate Ils Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
Fil-MS			0.1	101.0			95	115		
AW		\$0.007								
4510	14544003		0.4	103.0		102.0	70	130	1.0	20
Beryllium				Units:	mg/L		_			
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	C, C	Splike Duplicate	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	98.2			85	115		
AE		-0,0005								
150	14644003		<u>0.4</u>	108/0		106.0	70	130	1.9	20
Cadmium				Units:	mg/L					_
ас туре	One mail Sample ID	Blank Result	Spare Amount	Spike % Recovery		Spike Duplicate 18. Recovery	Lower Control Limit (%)	Upper Control Limit (%)	1040-1107	RPD Limit (%)
FB-M5			1.0	110.0			85	115		
AC.		-0.0000								
100	14644003		0.4	110.0						

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Chromium				Units:	mg/L					
QC Type	Original Sample (D.	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Resovery	Lawer Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-M5			0.1	110.0			85	Ins		
wa.		<0.003								
MSD	14544003		0.4	112.0		112.0	70	130	0.0	20
Cobalt				Units:	mg/L					
ос туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	- ur	Spike Duplicate	Lawer Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	110.0			85	115		
Met		-0.007								
458	14644003		0.4	111.9		110.0	70	110	0.9	20
Lead				Units:	mg/L					
qć Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-M5			0,1	09.4			85	115		
AG		<0.0005								
450	14644003		0.4	106.0		-105 0	70	(130	-1:0	20
Molybdenum				Units:	mg/L					
ас туре	Original Sample ID	Blank Result	Spille Amount	Spike W. Recovery		Spike Duplicate II. Resovery	Lower Control Limit (NJ)	Upper Control Umit (%)	KPD (%)	RPD Limit (%)
FB-MS			1.0	112.0			85	115		
As		<0.002								
M5D	14544003		:D.4	114.0		112.0	70	130	L8	20
Selenium				Units:	mg/L	_				
QC Type	Original Sample ID	Blank Result	Spille Amount	Spike % Recovery	_	Spike Duplicate Becovery	Lower Control Limit (%)	Lipper Control Limit (%)	NPD (%)	RPD Limit (%)
FBIMS			1.0	97.8			89	115		
wa:		-0.01								
1771	-14644003		n.a	105-0		103.0	70	110	7.0	-911-
Thallium				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lawer Control Limit (%)	Upper Control Limit (%)	HPD (96)	RPD Limit (%)
FB-M5			0,1	98.8			85	115		
dù		-0.0005								
450	14684003		9.4	105-0		105.0	10	140	1.0	-20
Antimony				Units:	mg/L					
DC Type	Original Sample (D	Blank Résult	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
9%D	14109001		0.1	92,9		90.2	75	125	0.3	20

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Arsenic C Type	Original Sample ID	Blank Result	Spike Amount	Units: Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (Si)
		bians, Nessais		Recovery		N. Renzwery	Limit (%)	Limit (%)		
PKD	14106001		0.1	90.1		88.2	75	()25	. at	20
íx.	14750001		1.0	95.E			75	125		
Barium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike Recovery		Spike Duplicate % Recovery	Lawer Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
РКО	14105001		D.I.	89.8		R9.5	75	125	0.3	20
Pr	14750001		ñ.i	95.A			76	125		
Beryllium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lawer Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
Ps]	14106001		0,1	94,2			75	0.25		-
PKD	14106001		0.1	92.7		98.4	75	125	44	20
Cadmium				Units:	mg/L					
ас Туре	Original Sample ID	Blank Result	Spille Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
PKD	14106001		0,1	97.6		92.3	75	125	0,4	20
Chromium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate M.Racovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
PKD	14106001		0.1	95-1		97.7	75	325	2.7	20
NK.	14750001		D.I.	103.0			75	125		
Cobalt				Units:	mg/L	_				
ас Турл	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Linvit (%)
PKD	14105001		D.1	96.0		96.8	75	125	0.8	20.
PK	14750001		ñ.i	103.0			75	125		
ead				Units:	mg/L					
LC Type	Original Sample ID	Blank Result	Spike Amount	Spike Recovery		Spike Duplicate	Lawer Control Elmit (%)	Lipper Control Limit (%)	(%) O9R	RPD Linit (%)
PKD	14106001		0.1	89,4		88.9	75	025	Ø.5	20
PK	14750001		.01	95.0			75.	125		
Molybdenum				Units:	mg/L				-	
IC Type	Original Sample (D)	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	10PD-(%)	RPD Limit (15)
PKD	14106001		0.1	94.7		93.6	75	125	1.2	20
PK	14750001		ü.r	97,Z			75	125		
Selenium				Units:	mg/L		_			
IC Type	Original Sample IEX	Black Result	Spike Amount	Spike % Recovery	-	Spike Duplicate To Recovery	Lower Control Limit (%)	Upper Centrol Limit (%)	RPD (%)	RPD Limit (%)
PXD	14105001		.D.I.	84.7		9 <u>2</u> M	75	125	2.0	212

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Thallium				Units:	mg/L					
QC Type	Original Sample ID:	Blank Result	Spike Amount	Spike % Recovery	1	Spike Duplicate R. Ranzvery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
IPKD	14106001		0.1	83.9		R4-6	75	325	0.1	20
RPX:	14750001		1.0	89.E			75	125		
Boron				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Splike Amount	Spike %	Jul81 e	Spike Duplicate	Lawer Control	Upper Control	RPD (%)	RPD Limit (55)
FII-OE			D.4	Recovery 99.3	-	% Recovery	Limit (%) 85	Limit (96) 115		
dig										
tsa	14750001		0.4	98.3		105.0	75-	125	1.9	50
Calcium				Units:	mg/L	_				
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	10PD (%)	RPD Limit (%)
FB-MI			100	Recovery 109.0	-	% Recovery	Limit (56) 85	Umit (%) 115		
6M		-11-								
SUP.	14705001								2.9	20.
ithium				Units:	mg/L					
QC Type	Original Sample (D)	Blank Result	Spike Amount	Spike %	mg/ r	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-DE			6,4	Recovery 103.0	-	% Recovery	Elmit (%) 85	Limit (%)		
ła		×0.04								
190	14750001		0.4	100.0		100.0	78	329	0.1	20.
Antimony				Units:	mg/L	_	-			_
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	-	Splike Duplicate Ils Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (5))
FB-M5			0.1	03.0 MECOVERY		- move life	80	120		
48		50.001								
4510	14750001		0.4	35.9		99.3	75	125	6.3	20
Arsenic				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Splike Duplicate % Recovery	Lower Control	Lipper Control Limit (%)	RPD (%)	RPD Limit (5)
FB-M5			0.1	92.1	-	and direct	80	120		
FB-TC			0.1	101.0			80	120		
			We .	00000			-			
46		#0.002								
450	14750001		0.4	94.6-		08.8	.25-	125	1.9	- 10
Tarium				Units:	mell					
Barium DC Type	Original Sample (D	Blank Result	Spike Amount	Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (85)
			0.1	Recovery 95.5	_	% Recovery	Limit (%) 30	Limit (%) 120	- 110	
FB-M5										
FB-M5 78		<0.002								

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Account #: 2040

Client: Basin Electric Power Cooperative

Cadmium CC Type	Original Sample (D	Blank Result	Spike Amount	Units: Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
18-M5			0.1	Recovery 101.0		R. Recovery	Limit (%) 80	Limit (%) 120	-	
(B		(0.0003								
45D	14750001		0.4	100.0		102.0	11	125	2.0	20
Chromium				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Lipper Control	RPD (96)	RPD Limit (%)
F6-M5			0.1	Recovery 105.0	-	5 Recovery	Limit (%) 80	Gimit (%)		
AET		~0.007								
450-	14750001		0.4	104.0		102.0	75	125	17	20
adai.	Largebart.		0.4	Truch		(m.s.	(a)	121	.1.4	
Cobalt			_	Units:	mg/L	_				_
1C Type	Oniginal Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	KPD (%)	RPD Limit (%)
FB-M5			0.1	Recovery 105.0	_	% Recovery	Limit (%) 80	Limit (%) 120		
AU		-0.001								
150	14750001		0.4	102.0		-102.0	25	(125)	0.0	20
nau ²	147 300/12		0.4	102.0		104.0		1123	10.0	20.
ead				Units:	mg/L					
aC Type	Original Sample ID	Blank Revult	Spille Amount	Spike W.		Spike Duplicate	Lower Control	Upper Control	KPD (%)	RPD Limit (%)
FB-MS		_	0.1	Recovery 96.8	-	Resovery	Limit (%) 80	Limit (%) 120		
Ae		<0,0005								
15D	14750001		0.4	101.0		101.0	75	125	0.0	20
Volybdenum				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spill # Amount	Spike % Recovery		Spike Duplicate Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FBIMS			D.I.	98.5		a secondy	80	120		
Am		-0.002								
100	14750001		D.6	96.2		07.3	75	125	48.	-20.
Selenium				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike S Recovery		Spike Duplicate % Recovery	Lawer Control Limit (%)	Upper Control Limit (%)	HPD (96)	RPD Limit (%)
FB-M5			0,1	91.9			80	170		
in ac				<i>a</i>			40	180		
18 TC			9.1	96.6			60	750		
AB		+0.005								
150	14750001		0.4	96.7		98.0	75	125	1.3	50
Thallium				Units:	mg/L					
IC Type	Onitinal Sample ID	Blank Result	Spike Amount	Spike %	inder e	Spike Duplicate	Lower Control	Upper Control	KPD (%)	RPD Limit (15)
FILMS			0.1	Recovery 92.0	_	the Recovery	Limit (%) 80	Limit (%)		
No.		-:0.0005-								

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Account #: 2040

Client: Basin Electric Power Cooperative

Thallium				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate R. Recovery	Lower Control Lonit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
M5D	14750001		0.4	96.4		96-4	75	J25	0.3	20
Mercury				Units	mg/L					-
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike *		Spille Doplicate Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (96)	RPD Limit (%)
148			0.003	105.0			85	115		
UNB		0.0002								
MSG	11691001		0,002	102.0		100.0	70	140	ê ê	20 -
MISE	14644007		0,002	65.6		67.4	30	130	3,8	-20
MSD	14750005		0.002	99.1		89.1	70	130	10.5	20
Fluoride		_		Units:	mg/L	_				_
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control	Upper Control Limit (%)	KPD (%)	RPD Limit (%)
CRM-F			3.19	98.8			83,8	111		
1984			0.5	104.0			90	110		
1884			.0.5	104.0			90	010		
MD-F		-:0.1								
MRE		-(0:1								
MSD-F	14750001		0,5	108.0		114.0	80	120	1.8	20,
Total Dissolve	ed Solids			Units:	mg/L					
QC Type	Original Sample (D)	Blank Result	Spike Amount	Spike % Recovery	-	Splike Duplicate N Recovery	Lawer Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
CRM.			736	.90.0			90.35	110.95		

MB

DUP 1475005 1.2 20

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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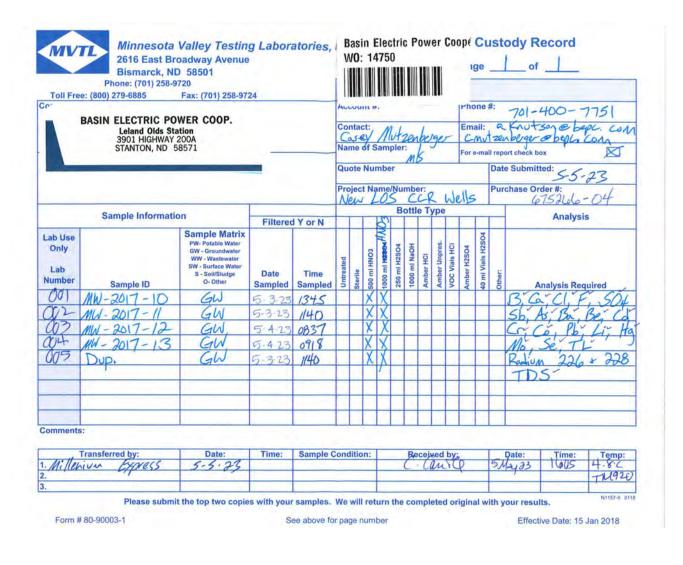


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Account #: 2040

Client: Basin Electric Power Cooperative



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Account #:2040Client:Basin Electric Power CooperativeWorkorder:New LOS CCR Wells (14751)PO:790708-04 LOS

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 Carlep

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 SD SDWA

Subcontracted Analyses

Analyzed By	Company	Address	Phone	Certification
SUBv	Energy Labs Casper	2393 Salt Creek Highway, Casper. WY 82601	307-235-0515	CERT



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Account #: 2040

Client: Basin Electric Power Cooperative

Workorder Summary

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.

Unreported samples to update sample identifications on 14751003 and 14751004. CC 8Jun23



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Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Groundwater Lab ID: 14751001 Date Collected: 05/03/2023 13:45 Matrix: Sample ID: MW-2017-10 Date Received: 05/05/2023 16:05 Collector: Client

Temp @ Receipt (C): 4.8

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See Attached			1	06/02/2023 14:58	06/02/2023 14:58	SUBv	
Radium 228	See Attached			1	06/02/2023 14:58	06/02/2023 14:58	SUBv	



Radium 228

MINNESOTA VALLEY TESTING LABORATORIES, INC.

Attached

Attached

See

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SUBv

Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Lab ID: 14751002 Date Collected: 05/03/2023 11:40 Groundwater Matrix: Sample ID: MW-2017-11 Date Received: 05/05/2023 16:05 Collector: Client Temp @ Receipt (C): 4.8 **Contract Lab** Method: Contracted Result Parameter Units RDL DF Analyzed Results Prepared By Qual See 06/02/2023 06/02/2023 Radium 226 1 SUBv

14:58

14:58

1

06/02/2023

14:58

14:58

06/02/2023



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Account #: 2040 Client: Basin Electric Power Cooperative Analytical Results

Analytical	Results					
Lab ID:	14751003	Date Collected:	05/04/2023 08:37	Matrix:	Groundwater	
Sample ID:	MW-2016-12	Date Received:	05/05/2023 16:05	Collector:	Client	
Temp @ Rece	eipt (C): 4.8					

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual	
Radium 226	See		1		1 06/02/2023 06/02/2023		SUBv	SUBV	
	Attached			•	14:58	14:58	0000		
Radium 228	See		1		1 06/02/2023 06/02/2023		SUBv		
	Attached			'	14:58	14:58	CODV		



Radium 228

MINNESOTA VALLEY TESTING LABORATORIES, INC.

Attached

Attached

See

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SUBv

Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Lab ID: 14751004 Date Collected: 05/04/2023 09:18 Groundwater Matrix: Sample ID: MW-2016-13 Date Received: 05/05/2023 16:05 Collector: Client Temp @ Receipt (C): 4.8 **Contract Lab** Method: Contracted Result Parameter Units RDL DF Analyzed Results Prepared By Qual See 06/02/2023 06/02/2023 Radium 226 1 SUBv

14:58

14:58

1

06/02/2023

14:58

14:58

06/02/2023



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Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results										
Lab ID:	14751005	Date Collected:	05/03/2023 11:40	Matrix:	Groundwater					
Sample ID:	Dup	Date Received:	05/05/2023 16:05	Collector:	Client					
Temp @ Rece	ipt (C): 4.8									
Temp @ Rece	apt (C). 4.0									

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See		06/02/2023 06/02/2023	SUBv	IBV			
Naululli 220	Attached			1	14:58	14:58	3000	
Radium 228	See		1		1 06/02/2023 06/02/2023		SUBv	
Naululli 220	Attached				14:58	14:58	3000	



The analyses presented in this report were performed by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601. unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist,

05/03/23 11:40

05/10/23

Groundwater

Same As Above

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager .

Report Approved By:

C23050455-005

14751005; Dup

Cahly Julion Digitally signed by Ashley L. Wilson Date: 2023.06.09 13:14:41 -06:00

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Account #:	2040	Client:	Basin Electric Power Cooperative
		Trust our People. Trust our Data.	Billings, MT 800,735,4489 + Casper, WY 868,235,0515 Gillette, WY 866,686,7175 + Helena, MT 877,472,0711
	CLIENT: Minneso Project: 14751	Minnesola Valley Testing Laboratories	Revised Date: 06/09/23 Report Date: 06/01/23
	Work Order:	G23050455	CASE NARRATIVE

Revised 6/9/2023

Sample ID 14751003; MW-2017-12 (C23050455-003) has been updated to 14751003; MW-2016-12 and Sample ID 14751004; MW-2017-13 (C23050455-004) has been updated to 14751004; MW-2016-13 per the emailed request from Claudette Carroll on 6/08/2023. No analytical data was affected.

This revised report replaces any previously issued reports in its entirety.

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Account #: 2040

Client: Basin Electric Power Cooperative

Analyses		Result Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
Client Sample ID:	14751001; MW-2017-	10				_	Matrix: Groundwater
Lab ID:	C23050455-001					DateRe	ceived: 05/10/23
Project:	14751					Collectio	on Date: 05/03/23 13:45
Client:	Minnesota Valley Test	ing Laboratories				Repo	rt Date: 06/01/23
		Prepared b	Y ANALYTICA by Casper, WY E		ORT	Revise	ed Date: 06/09/23
ENERGY	Trust our People.						20,735.4489 + Casper, WY 868.235.0515 66.686.7175 + Helena, MT 877.472.0711
		100 C 100					

RADIONUCLIDES, TOTAL				
Radium 226	0.2 pCi/L	U	E903.0	05/23/23 11:12 / kdk
Radium 226 precision (±)	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 226 MDC	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 228	0,5 pC//L	U	RA-05	05/18/23 13:08 / trs
Radium 228 precision (±)	0.8 pCi/L		RA-05	05/18/23 13:08 / trs
Radium 228 MDC	1.3 pCi/L		RA-05	05/18/23 13:08 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) - MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

Client: Minnesota Valley Testing Laboratories Collection Date: 05/03/23 11:40
LABORATORY ANALYTICAL REPORT Prepared by Casper, WY Branch Revised Date: 06/09/23 Client: Minnesota Valley Testing Laboratories Report Date: 06/01/23 Project: 14751 Collection Date: 05/03/23 11:40
LABORATORY ANALYTICAL REPORT Prepared by Casper, WY Branch Revised Date: 06/09/23 Client: Minnesota Valley Testing Laboratories Report Date: 06/01/23
LABORATORY ANALYTICAL REPORT Prepared by Casper, WY Branch Revised Date: 06/09/23
LABORATORY ANALYTICAL REPORT
Landscharpegnes (Wr Beb, 29, 46 Strange, Wr Beb, 29, 47 Seb, 29, 4
ENERGY Trust our People. Trust our Data. Rillings. MT 800,735,4489 • Casper. WY 868,235,05

C. S. C. A. S. S. S. S. S. S. S. S. S.				
RADIONUCLIDES, TOTAL				
Radium 226	0.2 pCi/L	U	E903.0	05/23/23 11:12 / kdk
Radium 226 precision (±)	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 226 MDC	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 228	0.1 pCVL	U	RA-05	05/18/23 13:08 / trs
Radium 228 precision (±)	0.8 pCi/L		RA-05	05/18/23 13:08 / Irs
Radium 228 MDC	1.3 pCi/L		RA-05	05/18/23 13:08 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) - MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

Analyses			Result	Units	Qualifiers	RL	MCL/	Method	Anal	ysis Date / By	
Client Sample ID:	14751003;	WW-2016-12							Matrix:	Groundwater	
Lab ID:	C23050455	-003						DateRe	ceived:	05/10/23	
Project:	14751							Collectio	n Date:	05/03/23 09:37	
Client:	Minnesota	/alley Testing	Labora	tories				Repo	rt Date:	06/01/23	
		LA			Casper, WY E		DR1	Revise	d Date:	06/09/23	
				TOPY			DT				
ENERGY	E	ist our l'eople. Tru ar en architer com	st our Dat	λ.						89 + Casper, WY 888.2 75 - Heléna, MT 877.4	

RADIONUCLIDES, TOTAL					
Radium 226	0.3	pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 226 precision (±)	0.2	pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 226 MDC	0.2	pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 228	0.05	pCi/L	U	RA-05	05/18/23 13:08 / trs
Radium 228 precision (±)	0.8	PCI/L		RA-05	05/18/23 13:08 / trs
Radium 228 MDC	1.3	pCi/L		RA-05	05/18/23 13:08 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) - MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

Client Sample ID:	197.9 (009, 1							and the second second second	
	14751004	W-2016-13						Matrix: Groundwater	
Lab ID:	C23050455	-004					DateRe	ceived: 05/10/23	
Project:	14751						Collectio	n Date: 05/03/23 09:1	8
Client:	Minnesota \	alley Testing	Labora	atories			Repo	rt Date: 06/01/23	
		LA			ANALYTICA Casper, WY E	 DRT	Revise	d Date: 06/09/23	
	E In	st our People. Trus wein mitch rum	it our Dat	a.				10,735.4489 = Casper, WY 888 66,686.7175 = Helena, MT 877	1

RADIONUCLIDES, TOTAL				
Radium 226	0.2 pCi/L	U	E903.0	05/23/23 11:12 / kdk
Radium 226 precision (±)	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 226 MDC	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 228	0,2 pCi/L	U	RA-05	05/18/23 13:08 / trs
Radium 228 precision (±)	0.8 pCi/L		RA-05	05/18/23 13:08 / trs
Radium 228 MDC	1.3 pCi/L		RA-05	05/18/23 13:08 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) - MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

E903.0

05/23/23 11:12 / kdk

ENERGY		ust our People. Trust our Da	tá.						89 + Casper, WY 868.235.051 75 - Helena, MT 877.472.071
		LABORA	TORY	ANALYTICA	L REPO	RT			
		Prep	ared by	Casper, WY B	ranch		Revise	ed Date:	06/09/23
Client:	Minnesota	Valley Testing Labor	atories				Repo	ort Date:	06/01/23
Project:	14751						Collectio	on Date:	05/03/23 11:40
Lab ID:	C23050453	5-005					DateRe	ceived:	05/10/23
Client Sample ID:	14751005;	Dup						Matrix:	Groundwater
3-0-1				1.0.00	-	MCL/	2.12		12.11 P
Analyses		Result	Units	Qualifiers	RL	QCL	Method	Anal	ysis Date / By
RADIONUCLIDES	, TOTAL	0.2	pCi/L	U			E903.0	05/2	3/23 11:12 / kdk

Radium 226 MDC 0.2 pCi/L E903.0 05/23/23 11:12 / kdk Radium 228 0,6 pCi/L U RA-05 05/18/23 13:08 / trs Radium 228 precision (±) 0.8 pCi/L RA-05 05/18/23 13:08 / trs Radium 228 MDC 1,3 pCi/L RA-05 05/18/23 13:08 / Irs

0.2 pCi/L

Report Definitions:

Radium 226 precision (±)

RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) - MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

ENE		rust our Feopl		Data.				Hings, MT 800,735.4 illetta, WY 866.686.7			
					Summary by Casper, W	Y Bran	ch				
Client:	Minnesota Valley Te	sting Labo	ratories	-	Work Order:	C2305	0455	Report	Date:	05/24/23	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0								_	Batch: RA2	26-10894
Lab ID:	LCS-RA226-10894	3 Labo	oratory Cor	trol Sampl	e		Run: TENN	ELEC-3 230512B	p.	05/23	23 11:12
Radium 2	226		11	pCi/L		114	70	130			
Radium 2	226 precision (±)		2.3	pCi/L							
Radium 2	226 MDC		0.22	pCi/L							
ab ID:	MB-RA226-10894	3 Meth	od Blank				Run: TENN	ELEC-3_230512B		05/23	/23 11:12
Radium 2	226		0,1	pCi/L							U
Radium 2	226 precision (±)		0.2	pCi/L							
Radium 2	226 MDC		0.2	pCi/L							
Lab ID:	C23050423-001FDU	P 3 Sam	ple Duplic	ate			Run: TENN	ELEC-3_230512B		05/23	23 11:12
Radium 2	226		1.9	pCi/L					5.6	30	
Radium 2	226 precision (±)		0.48	pGi/L							
	226 MDC R result is 0.15.		0.23	pCi/L							

Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

LABORA			Feople, Trust our l gymb.com	Data.				llings, MT 100,735 illelte, WY 866,686			
Client:	Minnesota Valley Te	sting L			Summary by Casper, W ¹ Work Order:	Y Brand	ch	Repo	rt Date	: 05/24/23	
Analyte		Coun	t Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05									Batch: RA	228-7094
ab ID:	LCS-228-RA226-108	94 3	Laboratory Cor	ntrol Sample	8		Run: TENN	ELEC-3 230512	2A	05/18	/23 13:08
Radium 2	28		5.7	pCi/L		81	70	130			
Radium 2	28 precision (±)		1.4	pCI/L							
Radium 2	28 MDC		1.2	pCi/L							
ab ID:	MB-RA226-10894	3	Method Blank				Run: TENN	ELEC-3_230512	A	05/18	/23 13:08
Radium 2	28		2	pCi/L							
Radium 2	28 precision (±)		0.8	pGVL							
Radium 2	28 MDC		1	pCi/L							
ab ID:	C23050423-001FDU	. 3	Sample Duplic	ate			Run: TENN	ELEC-3_230512	A	05/18	/23 13:08
Radium 2	28		2,2	pCi/L					11	30	
Radium 2	28 precision (±)		0.91	pGi/L							
Radium 2	28 MDC		1.3	pCi/L							

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Account #: 2040

Client: Basin Electric Power Cooperative

C23050455

Billings, MT 406.252.6325 + Casper, WY 307.235.0515 Gilletre, WY 307.686.7175 + Melana, MT 406.442.0711

Work Order Receipt Checklist

Minnesota Valley Testing Laboratories

Trust our People Trust our Data.

Login completed by:	Manford E. Hurley		Dat	e Received: 5/10/2023	
Reviewed by:	cjohnson		F	Received by: slr	
Reviewed Date:	5/15/2023		C	arrier name: UPS	
Shipping container/cooler in	good condition?	Yes 🗹	No 🗖	Not Present	
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes	No 🔲	Not Present	
Custody seals intact on all s	ample bottles7	Yes	No 🗖	Not Present	
Chain of custody present?		Yes 🔽	No 🗖		
Chain of custody signed wh	en relinquished and received?	Yes 🗹	No 🗌		
Chain of custody agrees wit	h sample labels?	Yes 🗹	No 🖂		
Samples in proper contained	/bottle?	Yes 🗹	No 🗔		
Sample containers infact?		Yes 🔽	No 🔲		
Sufficient sample volume fo	r indicated lest?	Yes 🔽	No 🗖		
All samples received within (Exclude analyses that are o such as pH, DD, Res Cl, Si	considered field parameters	Yes 🗹	No 🗌		
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable	
Container/Temp Blank temp	eratura:	12.0 °C No Ice			
Containers requiring zero he bubble that is <6mm (1/4*).	adspace have no headspace or	Yes 🔲	No 🛄	No VOA yials submitted	Z
Water - pH acceptable upon	receipt?	Yes 🔽	No 🗖	Not Applicable	

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as -dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

None

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Client:

1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com

Basin Electric Power Cooperative



Account #: 2040

5/0 Page ditric acid, Trace Metal Grade (002) 29 CFR 1910 SAFETY DATA SHEET Inside the USA: 800-424-6000 Outside the USA: 001-703-527 509-212; A509-500; A509P212; Revision Date 24-Dec-2021 инероту инероту инероту инероту Page 1/5 1. Ident , Trace M d(s) CHEMTREOR. litric acid, 7697.37.2 Arotic acid; E Food, dnut. Thermo Fisher s cie N TIFIC 2000 12-3460 Date 7

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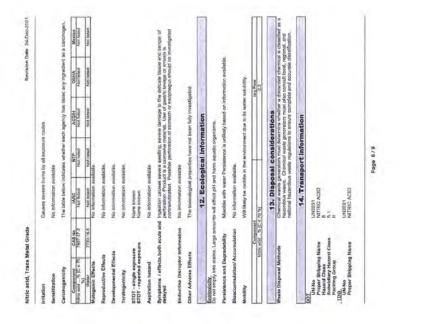
Client:

1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Account #: 2040

Basin Electric Power Cooperative



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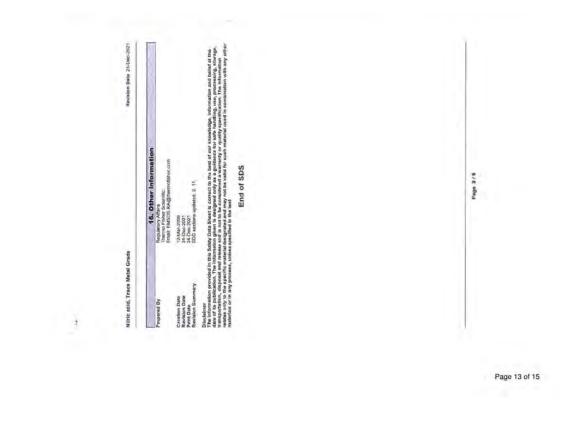


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Account #: 2040

Client: Basin Electric Power Cooperative





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Account #: 2040

Client: Basin Electric Power Cooperative

	LABOR 2616 E B	LABORATORIES, Inc. 2616 E Broadway Ave Biomatck ND 68601		Chain	Chain of Custody Record	tod	Y R	Sec	ord	Page 1 of 1
	(101)	258-9720 5-00 / 704/ 758 0724								WO #14751
ompany Nar	Company Name and Address:	441 (101) 200-0144		Account #:						Phone #: 701-258-9720
	Dete E Broadway	T		Contact:	Claudette	tte			-	Fax #: For faxed report check box
	Bismarck, ND 58501	ND 58501		Name of Sampler:	mpler:					E-mail: ccarroll@mvtl.com
illing Addre	Billing Address (indicate if different from above): PO Rov 249	erent from above): DO Roy 249		Quote Number	ber					Date Submitted: 8-May-23
	New Ulm.	New Ulm, MN 56073		Project Name/Number:	ne/Number					Purchase Order #: BL6690
		Sample Information					Bottle Type	e Ty	e	Analysis
IML Lab Number	MVTL Lab Number	Cilent Sample ID	Sample Type	Date Sampled	Time Sampled	Untreated	AOC AISIS	Glass Jar Umpreserved	Ofher	Analysis Required
	14751001	MW-2017-10	GW	3-May-23	1345		2			Ra226 & Ra228
	14751002	MW-2017-11	GW	3-May-23	1140		2			Ra226 & Ra228
	14751003	MW-2017-12	GW	3-May-23	0937		2	_		Ra226 & Ra228
	14751004	MW-2017-13	GW	3-May-23	0918		2	-		Ra226 & Ra228
	14751005	Dup	GW	3-Mav-23	1140		2	-		Ra226 & Ra228
		2								(23050455
							-	-		
		All results	All results must be reported as a numerical value	eported :	as a nur	neri	cal	val	an	
Tra	Transferred by:	Date: Time:	T	Sample Condition:	R	Received by:	d by			Date: Temp:
r. Olson		8-May-23	1700		Shelp, Kichins	g	I	A	5	1044
						-				0/0/02

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1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Account #: 2040

Client: Basin Electric Power Cooperative

	2616 E I Bismarr	LABORATORIES, Inc. 2616 E Broadway Ave Bismarck. ND 58501	, Inc. ve		Cuain	chain of custody record	ğ		D	0		Page 1 of 1
Toll Free: 0	Phone: (701) 258-9720 Toll Free: (800) 279-6885 Fax: (70	258-9720 Fax: (701) 258-9724	-9724			_					WO #14751	51
ompany Nan					Account #:						Phone #:	701-258-9720
	2616 E	MVTL 2616 E Broadwav			Contact:	Claudette	tte		1		Fax #: For faxed	For faxed report check box
Iline Address	Bismarck, ND 58501	Bismarck, ND 58501			Name of Sampler:	mpler					E-mail:	II: ccarroll@mvtl.com
anng Addres	s (maicate il allifereni PO B	PO Box 249			Quote Number	ber					Date Submitted:	in report check box [sd: 8-Mav-23
	New Ulm	New Ulm, MN 56073			Project Name/Number:	ne/Number					Purchase Order #: E	ler #: BL6690
		Sample Information	rmation					Bottle Type	e T	ype		Analysis
IML Lab Number	MVTL Lab Number	Client Sample ID	mple ID	Sample Type	Date Sampled	Time Sampled	Untreated	AOC AISIS	Umpreserved	Glass Jar		Analysis Required
	14751001	MW-2017-10	017-10	GW	3-May-23	1345		2		_		Ra226 & Ra228
	14751002	MW-2017-11	17-11	GW	3-May-23	1140		2	-	-		Ra226 & Ra228
	14751003	MW-2017-12	017-12	GW	3-May-23	0937		2		-		Ra226 & Ra228
	14751004	MW-20	MW-2017-13	GW	3-May-23	0918		2	-	-	1111	Ra226 & Ra228
	14751005	Ō	Dup	GW	3-May-23	1140		2				Ra226 & Ra228
											3	23050455
							+	-	-	-		
		All r	All results must be reported as a numerical value	ist be re	sported a	as a nun	leri	cal	va	ne		
Trac	Transferred by:	Date:	Time:	Sample (Sample Condition:	Re	ceiv	Received by:			Date:	Temp:
T. Olson		8-May-23	1700			Shel	5	Richias	4	S	1 mil	12

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The analyses presented in this report were performed by Energy Laboratories. Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist,

05/10/23

05/10/23

Groundwater Same As Above

Same As Above

Groundwater

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager

05/03/23 11:40

14751004; MW-2017-13 05/03/23 9:18

14751005; Dup

Report Approved By:

C23050455-004

C23050455-005

Digitally signed by Jeannie G. Gharib Date: 2023.06.01 17:53:51 -06:00

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Account #: 2040

Client: Basin Electric Power Cooperative

Ten Conserve	0.004.04460.0				_	MCL/		Caro.	
Client Sample ID:	14751001: N	W-2017-10						Matrix:	Groundwater
Lab ID:	C23050455-	001					DateRec	eived:	05/10/23
Project:	14751						Collection	Date:	05/03/23 13:45
Client:	Minnesota V	alley Testing	Laboratories				Report	Date:	06/01/23
		LA		ANALYTICA Casper, WY E		RT			
ENERGY		t our People. Trus	rour Data.						9 = Casper, WY 868,235.051 5 = Helèna, MT 877-472.071

Analyses	Result Units	Qualifiers	RL	QCL Method	Analysis Date / By
RADIONUCLIDES, TOTAL					
Radium 226	0.2 pCi/L	U		E903.0	05/23/23 11:12 / kdk
Radium 226 precision (±)	0.2 pCi/L			E903.0	05/23/23 11:12 / kdk
Radium 226 MDC	0.2 pCi/L			E903.0	05/23/23 11:12 / kdk
Radium 228	0,5 pC/L	U		RA-05	05/18/23 13:08 / trs
Radium 228 precision (±)	0.8 pCi/L			RA-05	05/18/23 13:08 / trs
Radium 228 MDC	1.3 pCi/L			RA-05	05/18/23 13:08 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) - MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

Client: Minnesota Valley Testing Laboratories Report Date: 06/01/23 Project: 14751 Collection Date: 05/03/23 11:4

Analyses	Result Office	Quaimers	n.	 Method	Analysis Date / Dy
RADIONUCLIDES, TOTAL					
Radium 226	0.2 pCi/L	U		E903.0	05/23/23 11:12 / kdk
Radium 226 precision (±)	0.2 pCi/L			E903.0	05/23/23 11:12 / kdk
Radium 226 MDC	0.2 pCi/L			E903.0	05/23/23 11:12 / kdk
Radium 228	0.1 pCi/L	U		RA-05	05/18/23 13:08 / trs
Radium 228 precision (±)	0.8 pCi/L			RA-05	05/18/23 13:08 / Irs
Radium 228 MDC	1,3 pCi/L			RA-05	05/18/23 13:08 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) - MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Account #: 2040

Client: Basin Electric Power Cooperative

					MCL/		
Client Sample ID:	14751003; MW-2017-12						Matrix: Groundwater
Lab ID:	C23050455-003					DateRe	ceived: 05/10/23
Project:	14751					Collectio	on Date: 05/03/23 09:37
Client:	Minnesota Valley Testin	g Laborato	ries				rt Date: 06/01/23
	Ļ	100000		ALYTICA asper, WY B	 DRT		
ENERGY LABORATORIES	Trust our People. Tr		1				20.735.4489 + Casper. WY 868.235.0515 66.686.7175 + Helena, WT 877.472.0711

RADIONUCLIDES, TOTAL				
Radium 226	0.3 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 226 precision (±)	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 226 MDC	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 228	0.05 pCi/L	U.	RA-05	05/18/23 13:08 / trs
Radium 228 precision (±)	0.8 pCi/L		RA-05	05/18/23 13:08 / trs
Radium 228 MDC	1.3 pCi/L		RA-05	05/18/23 13:08 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) - MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Account #: 2040

Client: Basin Electric Power Cooperative

Project: Lab ID: Client Sample ID:	14751 C23050455-00 14751004: MM					DateReceiv	ate: 05/03/23 09:18 ved: 05/10/23 trīx: Groundwater
Client:	Minnesota Vall	Pr	epared by	ANALYTICA Casper, WY B	RT	Report D	ate: 06/01/23
ENERGY	US NUMBER	ar People. Trust our ar arctiste com					15.4489 = Casper, WY 868.235.051 16.7175 = Helena, MT 877.472.071

runarjose	result only	- Addition a	The Hope Internet	raidijeis sate (sj
RADIONUCLIDES, TOTAL				
Radium 226	0.2 pCi/L	U	E903.0	05/23/23 11:12 / kdk
Radium 226 precision (±)	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 226 MDC	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 228	0,2 pCi/L	U	RA-05	05/18/23 13:08 / trs
Radium 228 precision (±)	0.8 pCi/L		RA-05	05/18/23 13:08 / Irs
Radium 228 MDC	1,3 pCi/L		RA-05	05/18/23 13:08 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) - MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Account #: 2040

Client: Basin Electric Power Cooperative

Analyses			Result Ur	nits	Qualifiers	RL	MCL/ QCL	Method	Anal	ysis Date / By
Client Sample ID:	14751005	Dup							Matrix:	Groundwater
Lab ID:	C2305045							DateRe	ceived:	05/10/23
Project:	14751							Collectio	on Date:	05/03/23 11:40
Client:	Minnesota	Valley Te	esting Laborator	ries	-			Repo	rt Date:	06/01/23
			LABORATO		ANALYTICA Casper, WY B		ORT			
ENERGY	Ø	rust our Peo www.enu in th	ple. Trust our Data.							19 + Casper, WY 868.23 75 - Helena, MT 877.472

RADIONUCLIDES, TOTAL				
Radium 226	0.2 pCi/L	U	E903.0	05/23/23 11:12 / kdk
Radium 226 precision (±)	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 226 MDC	0.2 pCi/L		E903.0	05/23/23 11:12 / kdk
Radium 228	0,6 pC//L	U	RA-05	05/18/23 13:08 / trs
Radium 228 precision (±)	0.8 pCi/L		RA-05	05/18/23 13:08 / trs
Radium 228 MDC	1.3 pCi/L		RA-05	05/18/23 13:08 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) - MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Account #: 2040

Client: Basin Electric Power Cooperative

ENE		rust our Feopl		Data.				Hings, MT 800,735.4 illetta, WY 866.686.7			
					Summary by Casper, W	Y Bran	ch				
Client:	Minnesota Valley Te	sting Labo	ratories	-	Work Order:	C2305	0455	Report	Date:	05/24/23	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0								-	Batch: RA2	26-10894
Lab ID:	LCS-RA226-10894	3 Labo	oratory Cor	trol Sampl	e		Run: TENN	ELEC-3 230512B	p.	05/23	23 11:12
Radium a	226		11	pCi/L		114	70	130			
Radium 2	226 precision (±)		2.3	pCi/L							
Radium 2	226 MDC		0.22	pCi/L							
ab ID:	MB-RA226-10894	3 Meth	od Blank				Run: TENN	ELEC-3_230512B		05/23	/23 11:12
Radium 2	226		0,1	pCi/L							U
Radium 2	226 precision (±)		0.2	pCi/L							
Radium 2	226 MDC		0.2	pCi/L							
Lab ID:	C23050423-001FDU	P 3 Sam	ple Duplic	ate			Run: TENN	ELEC-3_230512B		05/23	23 11:12
Radium 2	226		1.9	pCi/L					5.6	30	
Radium 2	226 precision (±)		0.48	pGi/L							
	226 MDC R result is 0.15.		0.23	pCi/L							

Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

LABORA			People, Trust our l gymb.com	Data.				lings, MT 100.735 illette, WY 866.686			
					Summary by Casper, W	Brand	ch				
Client:	Minnesota Valley Te	sting L	aboratories		Work Order:	C2305	60455	Repo	rt Date	: 05/24/23	-
Analyte		Count	t Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05								_	Batch: RA	228-7094
ab ID:	LCS-228-RA226-108	34 3	Laboratory Co	ntrol Sample	8		Run: TENN	ELEC-3_23051	A	05/18	/23 13:08
Radium 2	28		5.7	pCi/L		81	70	130			
Radium 2	28 precision (±)		1.4	pCI/L							
Radium 2	28 MDC		1.2	pCi/L							
ab ID:	MB-RA226-10894	3	Method Blank				Run: TENN	ELEC-3_23051	A	05/18	/23 13:08
Radium 2	28		2	pCi/L							
Radium 2	28 precision (±)		0.8	pGVL							
Radium 2	28 MDC		1	pCi/L							
ab ID:	C23050423-001FDU	. 3	Sample Duplic	ate			Run: TENN	ELEC-3_230512	AS	05/18	/23 13:08
Radium 2	28		2,2	pCi/L					11	30	
Radium 2	28 precision (±)		0.91	pGi/L							
Radium 2	28 MDC		1.3	pCi/L							

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

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1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Account #: 2040

Client: Basin Electric Power Cooperative

C23050455

Billings, MT 406.252.6325 + Casper, WY 307.235.0515 Gilletre, WY 307.686.7175 + Melana, MT 406.442.0711

Work Order Receipt Checklist

Minnesota Valley Testing Laboratories

Trust our People Trust our Data.

Login completed by:	Manford E. Hurley		Dat	e Received: 5/10/2023	
Reviewed by:	cjohnson		F	Received by: slr	
Reviewed Date:	5/15/2023		C	arrier name: UPS	
Shipping container/cooler in	good condition?	Yes 🗹	No 🗖	Not Present	
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes	No 🔲	Not Present 🔽	
Custody seals intact on all s	ample bottles7	Yes	No 🗖	Not Present	
Chain of custody present?		Yes 🔽	No 🗖		
Chain of custody signed wh	en relinquished and received?	Yes 🗹	No 🗌		
Chain of custody agrees wit	h sample labels?	Yes 🗹	No 🖂		
Samples in proper container	/bottle?	Yes 🗹	No 🗖		
Sample containers infact?		Yes 🔽	No 🔲		
Sufficient sample volume for	r indicated lest?	Yes 🗹	No 🗖		
All samples received within (Exclude analyses that are of such as pH, DO, Res CI, Se	considered field parameters	Yes 🗹	No 🗌		
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable	
Container/Temp Blank temp	erature:	12.0 °C No Ice			
Containers requiring zero he bubble that is <6mm (1/4").	adspace have no headspace or	Yes 🔲	No 🛄	No VOA vials submitted	2
Water - pH acceptable upon	receipt?	Yes 🔽	No 🗖	Not Applicable	

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as -dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

None

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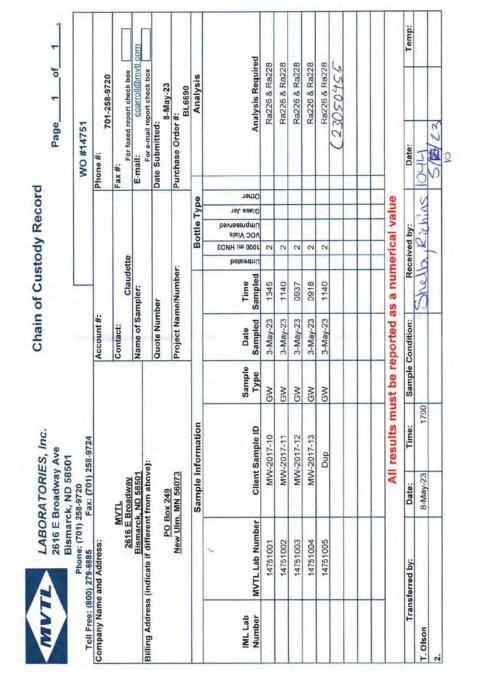


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Client: Basin Electric Power Cooperative



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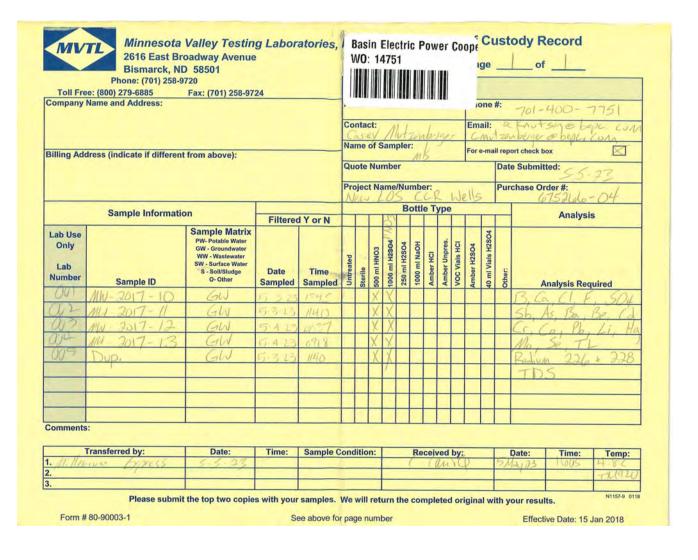


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JUNE 6-7, 2023



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Account #:2040Client:Basin Electric Power CooperativeWorkorder:LOS CCR Wells (17868)PO:790708-04 LOS

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 Carlep

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



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Account #: 2040

Client: Basin Electric Power Cooperative

Workorder Summary

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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Account #:	2040			Client:	Basin	Electr	ic Power Coop	perative		
Analytical	Result	S								
Lab ID: Sample ID:	178680 MW-20			Date Collected: Date Received:		06/2023 08/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receij	pt (C):	3.2								
Method: ASTM D	0516-16									
Parameter		I	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate		2	265	mg/L	5	1	06/13/2023 14:52	06/13/2023 14:52	AMC	
Method: EPA 24	5.1									
Parameter		I	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury		•	<0.0002	mg/L	0.0002	1	06/15/2023 14:30	06/16/2023 09:52	MDE	
Method: EPA 60	10D									
Parameter		I	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron		(0.95	mg/L	0.1	1	06/08/2023 17:48	06/12/2023 12:57	MDE	
Calcium		8	36.1	mg/L	1	1	06/08/2023 17:48	06/12/2023 14:09	SLZ	
Lithium		•	<0.02	mg/L	0.02	1	06/08/2023 17:48	06/22/2023 10:27	SLZ	
Method: EPA 602	20B									
Parameter		I	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony			<0.001	mg/L	0.001	5	06/08/2023 17:48	06/15/2023 17:13	MDE	
Arsenic		(0.0029	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:13	MDE	
Barium		(0.0796	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:13	MDE	
Beryllium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:13	MDE	
Cadmium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:13	MDE	
Chromium		•	<0.002	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:13	MDE	
Cobalt		•	<0.002	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:13	MDL	
Lead			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:13	MDE	
Molybdenum		(0.0079	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:13	MDE	
Selenium		•	<0.005	mg/L	0.005	5	06/08/2023 17:48	06/15/2023 17:13	MDE	
Thallium		•	<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:13	MDE	



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Account #:	2040		Client:	Basin	Electri	ic Power Coop	perative		
Analytical	Results								
Lab ID: Sample ID:	17868001 MW-2017-10	-	Date Collected: Date Received:		6/06/2023 6/08/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei	ipt (C): 3.2								
Method: SM450	0-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		12.2	mg/L	2.0	1	06/09/2023 15:32	06/09/2023 15:32	AMC	
Method: SM450	0-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.80	mg/L	0.1	1	06/12/2023 13:04	06/12/2023 13:04	B RAA	
Method: USGS I	-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids	670	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	



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Account #:	2040			Client:	Basin	Electri	ic Power Coop	perative		
Analytical	Result	s								
Lab ID: Sample ID:	178680 MW-20			ate Collected: ate Received:		06/2023 08/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei	ipt (C):	3.2								
Method: ASTM I	D516-16									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Sulfate			175	mg/L	25	5	06/13/2023 14:53	06/13/2023 14:53	AMC	
Method: EPA 24	5.1									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Mercury			<0.0002	mg/L	0.0002	1	06/15/2023 14:30	06/16/2023 09:52	MDE	
Method: EPA 60	10D									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Boron			1.23	mg/L	0.1	1	06/08/2023 17:48	06/12/2023 13:02	MDE	
Calcium			63.1	mg/L	1	1	06/08/2023 17:48	06/12/2023 14:10	SLZ	
Lithium			0.0319	mg/L	0.02	1	06/08/2023 17:48	06/22/2023 10:29	SLZ	
Method: EPA 60	20B									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Antimony			<0.001	mg/L	0.001	5	06/08/2023 17:48	06/15/2023 17:30	MDE	
Arsenic			0.0088	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:30	MDE	
Barium			0.0458	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:30	MDE	
Beryllium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:30	MDE	
Cadmium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:30	MDE	
Chromium			<0.002	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:30	MDE	
Cobalt			<0.002	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:30	MDE	
Lead			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:30	MDE	
Molybdenum			0.0097	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:30	MDE	
Selenium			<0.005	mg/L	0.005	5	06/08/2023 17:48	06/15/2023 17:30	MDE	
Thallium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:30	MDE	



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Account #:	2040		Client:	Basin	Electri	ic Power Coop	perative		
Analytical F	Results								
Lab ID: Sample ID:	17868002 MW-2017-11	-	ate Collected: ate Received:		5/06/2023 5/08/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receip	ot (C): 3.2								
Method: SM4500	-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		12.4	mg/L	2.0	1	06/09/2023 15:33	06/09/2023 15:33	AMC	
Method: SM4500	-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.77	mg/L	0.1	1	06/13/2023 11:50	06/13/2023 11:50	RAA	
Method: USGS I-	1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved So	olids	504	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	



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Account #:	2040			Client:	Basin	Electri	ic Power Coop	perative		
Analytical	Resul	ts								
Lab ID: Sample ID:	17868 MW-20	003 016-12		ate Collected: ate Received:		07/2023 08/2023		Matrix: Collector:	Groundwater Client	
Temp @ Rece	eipt (C):	3.2								
Method: ASTM	D516-16									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate			35.2	mg/L	25	5	06/13/2023 14:54	06/13/2023 14:54	AMC	
Method: EPA 2	45.1									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury			<0.0002	mg/L	0.0002	1	06/15/2023 14:30	06/16/2023 09:52	MDE	
Method: EPA 6	010D									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron			0.23	mg/L	0.1	1	06/08/2023 17:48	06/12/2023 13:04	MDE	
Calcium			29.0	mg/L	1	1	06/08/2023 17:48	06/12/2023 14:12	SLZ	
₋ithium			<0.02	mg/L	0.02	1	06/08/2023 17:48	06/22/2023 10:29	SLZ	
Method: EPA 6	020B									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony			<0.001	mg/L	0.001	5	06/08/2023 17:48	06/15/2023 17:35	MDE	
Arsenic			<0.002	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:35	MDE	
Barium			0.0538	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:35	MDE	
Beryllium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:35	MDE	
Cadmium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:35	MDE	
Chromium			<0.002	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:35	MDE	
Cobalt			<0.002	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:35	MDL	
₋ead			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:35	MDE	
Molybdenum			0.0122	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:35	MDE	
Selenium			<0.005	mg/L	0.005	5	06/08/2023 17:48	06/15/2023 17:35	MDE	
Thallium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:35	MDE	



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Account #:	2040		Client:	Basin	Electri	ic Power Coop	perative		
Analytical	Results								
Lab ID: Sample ID:	17868003 MW-2016-12	_	ate Collected: ate Received:	06/07/202 06/08/202			Matrix: Collector:	Groundwater Client	
Temp @ Recei	pt (C): 3.2								
Method: SM4500	0-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		39.8	mg/L	2.0	1	06/09/2023 15:34	06/09/2023 15:34	AMC	
Method: SM4500	0-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.60	mg/L	0.1	1	06/12/2023 13:10	06/12/2023 13:10	RAA	
Method: USGS I	-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids	1380	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	



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Account #: 2040 Client:				Basin Electric Power Cooperative						
Analytical	Result	s								
Lab ID: 17868004 Sample ID: MW-2016-13			Date Collected: Date Received:		07/2023 08/2023		Matrix: Collector:	Groundwater Client		
Temp @ Receij	pt (C):	3.2								
Method: ASTM D	0516-16									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Sulfate			42.2	mg/L	25	5	06/13/2023 15:12	06/13/2023 15:12	AMC	
Method: EPA 24	5.1									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Mercury			<0.0002	mg/L	0.0002	1	06/15/2023 14:30	06/16/2023 09:52	MDE	
Method: EPA 60	10D									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Boron			0.32	mg/L	0.1	1	06/08/2023 17:48	06/12/2023 13:06	MDE	
Calcium			22.2	mg/L	1	1	06/08/2023 17:48	06/12/2023 14:17	SLZ	
₋ithium			<0.02	mg/L	0.02	1	06/08/2023 17:48	06/22/2023 10:30	SLZ	
Method: EPA 60	20B									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Antimony			<0.001	mg/L	0.001	5	06/08/2023 17:48	06/15/2023 17:39	MDE	
Arsenic			<0.002	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:39	MDE	
Barium			0.0713	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:39	MDE	
Beryllium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:39	MDE	
Cadmium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:39	MDE	
Chromium			<0.002	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:39	MDE	
Cobalt			<0.002	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:39	MDE	
_ead			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:39	MDE	
Molybdenum			0.0490	mg/L	0.002	5	06/08/2023 17:48	06/15/2023 17:39	MDE	
Selenium			<0.005	mg/L	0.005	5	06/08/2023 17:48	06/15/2023 17:39	MDE	
Fhallium			<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:39	MDE	



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Account #:	2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical	Results								
Lab ID: 17868004 Sample ID: MW-2016-13		_	Date Collected: Date Received:		/07/2023 /08/2023		Matrix: Collector:	Groundwater Client	
Temp @ Rece	ipt (C): 3.2								
Method: SM450	0-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		60.4	mg/L	2.0	1	06/09/2023 15:35	06/09/2023 15:35	AMC	
Method: SM450	0-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.52	mg/L	0.1	1	06/12/2023 13:16	06/12/2023 13:16	RAA	
Method: USGS	I-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids	1540	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	



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Account #:	unt #: 2040 Client:				Basin Electric Power Cooperative					
Analytical	Resul	ts								
Lab ID: 17868005 Sample ID: MW-2017-8D			Date Collected: Date Received:		07/2023 08/2023		Matrix: Collector:	Groundwater Client		
Temp @ Recei	pt (C):	3.2								
Method: ASTM I	D516-16									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Sulfate			489	mg/L	25	5	06/13/2023 15:14	06/13/2023 15:14	AMC	
Method: EPA 24	5.1									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Vercury			<0.0002	mg/L	0.0002	1	06/15/2023 14:30	06/16/2023 09:52	MDE	
/lethod: EPA 60	10D									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Boron			0.65	mg/L	0.1	1	06/09/2023 16:36	06/12/2023 16:03	MDE	
Calcium			8.55	mg/L	1	1	06/09/2023 16:36	06/15/2023 10:24	SLZ	
ithium			0.0612	mg/L	0.02	1	06/09/2023 16:36	06/22/2023 10:32	SLZ	
Method: EPA 60	20B									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Antimony			<0.001	mg/L	0.001	5	06/09/2023 16:36	06/16/2023 11:55	MDE	
Arsenic			<0.002	mg/L	0.002	5	06/09/2023 16:36	06/16/2023 11:55	MDE	
Barium			0.0459	mg/L	0.002	5	06/09/2023 16:36	06/16/2023 11:55	MDE	
Beryllium			<0.0005	mg/L	0.0005	5	06/09/2023	06/20/2023	MDE	
Cadmium			<0.0005	mg/L	0.0005	5	16:36 06/09/2023 16:36	10:10 06/16/2023 11:55	MDE	
Chromium			<0.002	mg/L	0.002	5	06/09/2023 16:36	06/16/2023 11:55	MDE	
Cobalt			<0.002	mg/L	0.002	5	06/09/2023 16:36	06/16/2023 11:55	MDE	
₋ead			<0.0005	mg/L	0.0005	5	06/09/2023 16:36	06/16/2023 11:55	MDE	
Nolybdenum			<0.002	mg/L	0.002	5	06/09/2023 16:36	06/16/2023 11:55	MDE	
Selenium			<0.005	mg/L	0.005	5	06/09/2023 16:36	06/16/2023 11:55	MDE	
Fhallium			<0.0005	mg/L	0.0005	5	06/09/2023 16:36	06/16/2023 11:55	MDE	



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Account #:	2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical	Results								
Lab ID: Sample ID:	17868005 MW-2017-8D		Date Collected: Date Received:		06/07/2023 08:45 06/08/2023 15:38		Matrix: Collector:	Groundwater Client	
Temp @ Rece	ipt (C): 3.2								
Method: SM450	0-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		18.7	mg/L	2.0	1	06/09/2023 15:36	06/09/2023 15:36	AMC	
Method: SM450	0-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.61	mg/L	0.1	1	06/12/2023 13:22	06/12/2023 13:22	RAA	
Method: USGS	I-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved	Solids	1930	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	



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Account #:	2040		Client:	Basin Electric Power Cooperative						
Analytical	Results									
Lab ID: Sample ID:	17868006 ^{Dup} MW	Da 2017-10 ^{Da}	ate Collected: ate Received:	06/06/2023 14:00 06/08/2023 15:38			Matrix: Collector:	Groundwater Client		
Temp @ Recei	ipt (C): 3.2	2								
Method: ASTM	D516-16									
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual	
Sulfate		353	mg/L	25	5	06/13/2023 15:26	06/13/2023 15:26	AMC		
Method: EPA 24	45.1									
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual	
Mercury		<0.0002	mg/L	0.0002	1	06/15/2023 14:30	06/16/2023 09:52	MDE		
Method: EPA 60)10D									
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual	
Boron		0.97	mg/L	0.1	1	06/09/2023 16:36	06/12/2023 16:04	MDE		
Calcium		88.7	mg/L	1	1	06/09/2023 16:36	06/15/2023 10:27	SLZ		
ithium		<0.02	mg/L	0.02	1	06/09/2023 16:36	06/22/2023 10:33	SLZ		
Method: EPA 60)20B									
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual	
Antimony		<0.001	mg/L	0.001	5	06/09/2023 16:36	06/16/2023 11:59	MDE		
Arsenic		0.0031	mg/L	0.002	5	06/09/2023 16:36	06/16/2023 11:59	MDE		
Barium		0.0795	mg/L	0.002	5	06/09/2023 16:36	06/16/2023 11:59	MDE		
Beryllium		<0.0005	mg/L	0.0005	5	06/09/2023 16:36	06/20/2023 10:12	MDE		
Cadmium		<0.0005	mg/L	0.0005	5	06/09/2023 16:36	06/16/2023 11:59	MDE		
Chromium		<0.002	mg/L	0.002	5	06/09/2023 16:36	06/16/2023 11:59	MDE		
Cobalt		<0.002	mg/L	0.002	5	06/09/2023 16:36	06/16/2023 11:59	MDE		
_ead		<0.0005	mg/L	0.0005	5	06/09/2023 16:36	06/16/2023 11:59	MDE		
Molybdenum		0.0083	mg/L	0.002	5	06/09/2023 16:36	06/16/2023 11:59	MDE		
Selenium		<0.005	mg/L	0.005	5	06/09/2023 16:36	06/16/2023 11:59	MDE		
Thallium		<0.0005	mg/L	0.0005	5	06/09/2023 16:36	06/16/2023 11:59	MDE		

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.



Total Dissolved Solids

655

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Account #: 2040 Client: **Basin Electric Power Cooperative** Analytical Results Date Collected: Groundwater Lab ID: 17868006 06/06/2023 14:00 Matrix: MW-2017-10^{Date Received:} Sample ID: Dup 06/08/2023 15:38 Collector: Client Temp @ Receipt (C): 3.2 Method: SM4500-CI-E 2011 RDL DF Parameter Results Units Prepared Analyzed Ву Qual 06/09/2023 06/09/2023 Chloride 12.3 mg/L 2.0 1 AMC 15:38 15:38 Method: SM4500-F-C-2011 Parameter Results Units RDL DF Prepared Analyzed By Qual 06/13/2023 06/13/2023 0.79 1 Fluoride mg/L 0.1 RAA 12:09 12:09 Method: USGS I-1750-85 Parameter Results Units RDL DF Analyzed Prepared By Qual

10

mg/L

1

06/09/2023

09:41

06/09/2023

09:41

RAA



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Account #: 2040 Client:						Basin Electric Power Cooperative						
Analytical	Resu	lts										
Lab ID: Sample ID:	17868 MW-2			Date Collected: Date Received:		6/07/2023 6/08/2023		Matrix: Collector:	Groundwater Client			
Temp @ Recei	ipt (C):	3.2										
Method: ASTM	D516-16											
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual		
Sulfate			1900	mg/L	50	10	06/13/2023 15:27	06/13/2023 15:27	AMC			
Method: EPA 60)10D											
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual		
Boron			0.41	mg/L	0.1	1	06/09/2023 16:36	06/12/2023 16:10	MDE			
Calcium			132	mg/L	5	5	06/09/2023 16:36	06/15/2023 10:27	SLZ			
Method: SM450	0-CI-E 20)11										
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual		
Chloride			27.2	mg/L	2.0	1	06/09/2023 15:39	06/09/2023 15:39	AMC			
Method: SM450	0-F-C-20	11										
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual		
Fluoride			0.37	mg/L	0.1	1	06/13/2023 12:15	06/13/2023 12:15	RAA			
Method: USGS	I-1750-85											
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual		
Total Dissolved S	Solids		3740	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA			



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Account #: 2040		Client:	Basin	Electr	c Power Coop	perative		
Analytical Result	S							
Lab ID: 178680 Sample ID: MW-207		Date Collected: Date Received:		6/07/2023 6/08/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receipt (C):	3.2							
Method: ASTM D516-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	344	mg/L	25	5	06/13/2023 15:17	06/13/2023 15:17	AMC	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	1.87	mg/L	0.1	1	06/09/2023 16:36	06/12/2023 16:12	MDE	
Calcium	64.8	mg/L	1	1	06/09/2023 16:36	06/15/2023 10:28	SLZ	
Method: SM4500-CI-E 201	1							
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	13.2	mg/L	2.0	1	06/09/2023 15:45	06/09/2023 15:45	AMC	
Method: SM4500-F-C-2011	1							
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	1.51	mg/L	0.1	1	06/13/2023 12:21	06/13/2023 12:21	RAA	
Method: USGS I-1750-85								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	695	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	



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Account #: 2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical Results								
Lab ID: 17868009 Sample ID: MW-2017-4	Date Collected: Date Received:			6/07/2023 6/08/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receipt (C): 3.2								
Method: ASTM D516-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Sulfate	364	mg/L	25	5	06/13/2023 15:37	06/13/2023 15:37	AMC	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Boron	1.12	mg/L	0.1	1	06/09/2023 16:36	06/12/2023 16:14	MDE	
Calcium	134	mg/L	1	1	06/09/2023 16:36	06/15/2023 10:29	SLZ	
Method: SM4500-CI-E 2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Chloride	13.2	mg/L	2.0	1	06/09/2023 15:46	06/09/2023 15:46	AMC	
Method: SM4500-F-C-2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Fluoride	0.78	mg/L	0.1	1	06/13/2023 12:29	06/13/2023 12:29	RAA	
Method: USGS I-1750-85								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Total Dissolved Solids	774	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	



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Account #: 2040

Client: Basin Electric Power Cooperative

C Result	ts Summary						WO #:	178	68
Sulfate	0.000	Blank Result.		Units: mg/L Spike %	Spike Duplicate		linear the state	000.000	
QC Түре FB	Original Sample ID	edate nesuri	Spike Amount	Spike % Recovery 100.0	Spike Dupkcate % Recovery	Lower Control Limit (%) RS	Lipper Control Limit (%) 115	APD (%)	RPD Limit (96)
HB			100	100.0		85	115		
10			100	97.3		85	115		
FB			100	97.4		85	115		
-6			100	05.5		85	115		
HD			100	95.5		22	115		
H			100	107.0		65	115		
TB			100	89.8		85	115		
ù.			100	97.9		85	115		
-B			100	3.107.C		85	115		
10			100	114.0		85	115		
0									
18		3							
a		-55							
4		4							
ið.		6							
an a		-							
40		4							
48		4							
6		4							
10		4							
	and the second se								
IS/MSD	17714005		100	83-3	82.5	85	115	0.9	20
ts/MSD	178469834		100	84.2	85.0	85	115	8.7	20
ormyws	17546014		2000	85.4	92.1	61	115	2.6	20-
IS/MSD	17646024		1000	nt.9	84.7	85.	115	1.0	20
IS/MSD	17846034		100	96.2	96.0	RS	145	0.0	3D
IS/MSD	17858003		500	:109.3	\$10.5	RS	115	0.0	20
IS/MSD	17876004		100	311.8	112.4	65	115	0.7	20-
es/wast	16044001		1000	81.0	81.7	85	115	0.5	20
Chloride				Units: mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate 'N Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)



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Account #: 2040

Client: Basin Electric Power Cooperative

Chloride QC Type	Original Sample ID	Blank Result	Spike Amount	Units: Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
	Configuration Security (C)	some meand.		Recovery	_	% Recovery	Lower Control Limit (%)	Limit (%)	Section.	- n ministral
IRI			301	195-6			90	110:		
5-0			30	96.1			90	110		
10			30	95.5			\$0	im		
58			30	95.9			90	110		
10			30	90.6			9 0	מרנ		
FD			30	95.0			90	2.333		
rn -			30	95.4			90	110		
10			30	95.4			90	110		
rn			30	95.6				110		
70			30	95.1			10	110		
Ma		k2.0								
Mis		-4.0								
uin		<2.0								
, in		<2.0								
40		4.0								
40		<2.0								
un		<2.0								
ah		<2.0								
wa.		2.0								
MD		<2.0								
MQ.		<2.0								
ns/mso	17448005		30	137.1		138.9	80	120	0.0	20
M5/M5D	17710004		BO	134.8		134.5	80	120	0.0	20
dsW/Msb	17846019		30	314.6		114.8	30	120	0.0	30-
M5/M5D	17846039		30	117.0		116.5	60	120	0.2	.20
ws/wsb	17874001		30	134.0		133.4	80	120	0.0	20
Calcium				Units:	mg/L					_
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-M9			100	108,0			85	335		
FBLAN			100	100.0			85	115		



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Account #: 2040

Client: Basin Electric Power Cooperative

Calcium	0.000	March P	Presi income		g/L	in the second	(Income States of	more real	harry 1 million
QC Type	Original Sample ID	Blank Result	Spike Amount	Spille % Recovery	Spike Duplicate % Recovery	Lower Control Lond (16)	Lipper Control Limit (%)	RPD (%)	RPD L(mit (%)
FEI-MI			100	112.0		85	115		
FB-MI			100	105-0		85	115		
MB		și.							
чя		a.							
мв		si							
MB		d.							
OUP	177.14002							6,3	:2D
DUP	17719001							18	25
oue:	17546029							0.0	20
DUP	17852001							1.0	20
DUP	17868007							0.9	20-
oue	17858005							0.0	20
aue.	57879003							28	20-
Lithium				Units: m	g/L				
DC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Ouplicate	Lower Control Limit (%)	Upper Control Lumit (%)	RPD [%)	RPD LEvet (%)
JB-0E			0,4	109.0	(CHECOTOF)	85	115		
18-05			0.4	109.4		85	115		
VIL)		-0.04							
MD		+0.04							
MS/MSD	17858001		0.4	99.0	105.0	70	1.90.	3.0	20
						1.4			
M5/M5D	17868006		0.4	102.0	101.0	70	130	1.2	20
Calcium				Units: m	g/L				
ОС Туре	Original Sample ID	Blank Result	Spike Amount	Spike %	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (96)
PD5/PDS0	17268007		100	Recovery 103.0	% Recovery 306.0	Limit (%). 75	Umit (%) 125	-2.1	20
PDS/PDSD	17268007		100	1010	103.0	75	125	0.3	20
POS/POSO	17448005		500	97.3	103.0	75	125	31	20
POS/POSO	17734005		100	96.1	106.0	75	125	54	- 26
P05/P050	17714006		100	107.0	106.0	75	125	95	201
	17546012		500	105.0	208.0	ri.	125	1.5	2D
PDS/PDSD									
POS/POSD POS/POSD	17876004		100	108.0	105.0	75	175	5.0	.70



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Account #: 2040

Client: Basin Electric Power Cooperative

Calcium	All internet	March P	-	Units:	mg/L	Column To a	launa and	(Income Street, or	1000 1000	han i se han
QC Type	Original Sample ID	Blank Result	Spike Amount	Spille % Recovery	213	Spike Duplicate % Recovery	Lower Control Limit (16)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
PD5/PD50	18219007		100/	105.0		\$07.0	75	125	0.9	20
DS/PDSD	18304005		100	99.5		101.0	75	125	08	20
05/2050	18304016		100	102.0		108-0	75	125	18	20
PDS/PDS0	18304023		100	96.1		92.7	75	125	1.7	20
-05/7150	10.3040423		100	96.1		92.7		125	1.7	20
Antimony				Units:	mg/L					
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery	3.1	Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-A45			0.5	-00 (F			65	135		
40		<0.001								
45/M50	17717002		0.4	:102.0		99.6	70	130	1.2	20
MS/MSD	13/908000		0.4	107.0		107.0	70	130	0.5	20
Arsenic				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Si Recovery	Lower Control Limit (%)	Upper Control Limit (%)	R/PD (%)	RPD Linut (%)
FB-MS			01	97.1			85	115		
dia.		=9.005								
ds/wsu	17717002		0.8	101.0		99.Z	70	130	1.8	20
insymptic	1771(001		0.4	101.0		534	10	130	14	4.0
AS/MSD	17908002		0.4	101.0		103.0	70	130	1.7	20
Barium				Units:	mg/L					
QC Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RFD (%)	RPD Limit (%)
PI-M5			0.1	101.0			85	115		
UNV		<0.002								
CITAN/IN	17717002		0.4	03.7		94	70	1362	-0.2	20-
M5/M5D	13001003		-0.4	95.7		75.0	70	130T	0.0	.30
Beryllium				Units:	mg/L				_	
ас Тура	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Lunut (%)
F0-M5			Ô,ŝ	94.5	-	the necovery	85	115		
48		10.0005								
VIS/MSD	17717002		0.4	102.0		105.0	70	130	2.7	- XD
NS/MSD	17900002		U.A	165.0		132.0	70	190	2.5	20
Cadmium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Špike % Recovery		Spike Duplicate	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
78-M5			0.1	106.0	-	- manufat	BS BS	115		
4B		c0.0005								



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Client: Basin Electric Power Cooperative

Cadmium				Units:	mg/L					
QC Type	Original Sample IO	Blank Result	Spike Amount	Spile % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
AS/MSD	17908003		0.4	WLS		901.4	70	130/	0.0	20
Chromium				Units:	mg/L		_		-	
дс тури	Original Sample ID	Elank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control- Lumit (%)	RPG (%)	RPE Limit (96)
F0-M5			0.1	106.0			85	115		
AD.		<0.002								
AS/MSD	17737002		0.4			101.0	10.	130	a,a	2/5
45/M3D	179080072		0,4	95.6		95.1	70	130	0.0	alti.
Cobalt				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Annunt	Spike %		Spike Duplicate	Lower Control	Lipper Control	RPD (N)	RPD Limit (%)
FILMS		_	0.1	Recovery 105.0		W Recovery	Limit (96) 185	Limit (%) 115		
18		<0.002								
IS/MSD	17717007		0.4	98.9		98.4	-70	130	0.6	. 20
HS/MSD	17908002		0.4	105.0		106.0	70	130	0.7	50
ead				Units:	mg/L					
ас Туре	Original Sample ID	Blank Nesult	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
RI-MS			0.1	101.0			85	115		
10		<0.0005								
M/MID	17717003		0.4	97.9		97.5	711	3.80	0.5	20
ni/MiD	17900002		0.4	· 98.5		93.2	711	LIKI.	0.3	ZD
Molybdenum				Units:	mg/L					
дс түре	Original Sample ID	Biank Result.	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	107.6			85	115		
4D		<0.002								
45/445D	\$7717002		0.4	101.0		100.0	70	130	1.0	atr
lis/MSD	17908002		0.4	106.0		507.0	70.	130	0.6	20
Selenium				Units:	mg/L					
ас Туре	Original Sample ID	Blank Result	Spike Amount	Spike N Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	KPD (%)	RPD Limit (%)
FB-MS			0,1	96,3			85	115		
Au		-0.01								
ASYAASID	17717002		0.6	107.6		107.0	70	130	4.5	20-



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Thallium				Units:	mg/L					and the second
QC Type	Original Sample ID	Blank Result	Spike Amount	Spille % Recovery	1.1	Spike Duplicate % Recovery	Lower Control Limit (16)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	95.9			85	115		
AB		<0.0005								
As/MSD	17737002		64	96.3		95.2	70.	130	10	20
ASYMASD	17908002		0.4	91.4		93.11	70	190	0.5	20
otimonu				Units:	mal					
Intimony IC Type	Original Sample (D	Blank Result	Spike Amount	Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD [%]	RPD Limit (%)
H.	17717007		0.1	Recovery 104.0		% Recovery	Limit (%) 75	Limit (%) 325-		
IX/SPKD	17717003		0.8	111.0		105.0	75	125	ar	.20
PK.	17908062		0.1	:106.0			75	125		
Arsenic				Units:	mg/L					
ос туре	Öriginal Sample ID	Blank Result	Spike Amount	Spike % Recovery	1	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Dimit (%)	RPD (%)	RPD Limit (%)
P6	17717002		0.1	101.0			75	125		
PK/SPKD	17717003		0.8	101.0		100.0	75	125	0.9	20
PE	17908002		0.1	101.0			75	125		
Jarium		_		Units:	mg/L				_	
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate N Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
75	17717002		0.1	97.6			75	125		
PK/APKD	17717003		0.8	91.8		92.5	75	125	1ž	20
PX.	1.718080602		0.1	n.tv						
ra -	17 506602		17.1	91.41			75	125		
Beryllium				Units:	mg/L	0.00				
QC Type	Original Sample ID	Blank Result.	Spike Amount	Spike % Recovery	1.1	Spike Duplicate S Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK -	17717002		0.1	98,8			75	125		
PK/SPKD	17717003		0.8	120.0		112 <i>0</i>	75	125	hT	20
PyC	17900002		0.1	114.0			75	125		
Cadmium		_		Units:	mg/L					
ас туре	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery	2	Spike Ouplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Linut (15)
PK	17717002		0.1	97.8			75	125		
PK/SPKD	17717003		0.8	96.0		102.0	75	125	6.5	.20
ni.	17908007		0.1	194			79	125		
hromium			-	Units:	mg/L					
	Original Sample ID	Blank Result	Spike Amount	Spile %	g/c	Spike Duplicate	Lower Control Limit (%)	Upper Control Lumit (%)	RPD (%)	RPD Limit (%)
IC Type										
КС Түрн РК	17717002		0.1	Recovery 1010		% Recovery	75	125		



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Chromium	Original Sample ID	Blank Result	Spike Amount	Units: Spile %	mg/L	Snike Duelinie	Lower Control	Lipper Control	RPD (%)	RPD L(mit (%)
1С Түре		BANK RESUL		Recovery	-	Spike Duplicate % Recovery	Limit (%)	Limit (%)	(non trat	(earn ritime (ag)
PK	17908007		0.1	\$7.1			75	125		
Cobalt				Units:	mg/L					
ас турн	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control- Lumit (%)	RPD (%)	RPD Lunit (m)
PK	17717002		0.1	98.9			75	125		
PK/SPKE	17717001		0.8	105.0		104.0	75	125	0.6	20
PK	17908002		0,1	104.0			75	125		
ead				Units:	mg/L		_			
ас Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
PK	17717002		0.1	96.6			75	125		
PK/SPKD	17717001		0.8	96.6		101.0	75	125	41	.20
P.K	17908002		0.1	10.5			75	125		
CA.	17900002		10	19.5			14	125		
Aolybdenum				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike Si Recovery		Spike Ouplicate S Recovery	Lower Control Limit (%)	Upper Control Lumit (%)	RPD (%)	RPD LEvet (%)
P.K.	17717002		0.1	106.0			75	325		
PN/SPND	17717003		8,0	101.0		98.6	75	125	22	-205
ri,	17908003		0.1	102.0			75	125		
elenium				Units:	mg/L		_			
C Type	Original Sample ID	Blank Result	Spike Amount	Spille 11 Recovery		Splike Duplicate	Lower Control Unit (%)	Lipper Control Limit (%)	164D (16)	RPD Limit (%)
PK	17717002		0.1	97.3			76	125		
PK/SPKD	17717003		0.6	06.I		101.0	78	125	3.8	20
PK	17908002		0.1	87.8			75	125		
	11408001		0,1	04.9			XA	125		
Thallium			1.0.0	Units:	mg/L					
ОС Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	_	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
PNC	17737002		0,2	92.2			75	125		
PN/SPND	17717003		0.8	95.4		97.2	75	125	6.7	30
PN	17908002		0.1	89-1			75	125		
loran				Units:	mr.ll					
Boron IC Type	Original Sample ID	Blank Result	Spike Amount	Spike is	mg/L	Spike Duplicate	Lower Control	Upper Control	RFD (%)	RPD Limit (%)
IB-DE			0.4	Recovery 97.3	_	% Recovery	Limit (%) ES	Limit (N) 115		
FB-DE			0.4	96.3			85	115		
FBIOE			0.4	08.6			RS	115		
FB-OE			0.4	102.0			#1	115		



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Boron QC Type	Original Sample ID	Blank Result	Spike Amount	Units: Spike M Recovery	mg/L	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
Wa		<0.1		RECOVERY		S RELEVELY	anna (m)	mint (w)		
AB		<0.1								
db.		-0.1								
45/MSD	17846001		0.4	87.8		55.8	75	125	0.5	20
vis/wsb	17846005		0.4	96,3		97.4	75	125	0.5	20
vis/ivisia	17846028		0,4	89.7		85.5	75	125	2.0	20
WS/MSD	17861001		0.4	109.0		76.0	75	125		.20
us/wsp	17858001		0.4	0.20		202.0:	76	125	12	20
NS/MSD	17868009		0.4	99.6		39.6	75	125	0.0	25
Antimony				Units:	mg/L		_			
ас туре	Original Sample ID	Blank Result	Spike Ammont	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Llinit (%)
FB-MS			01	99.5			90	120		
EB-MS			0.i	102.0			<u>ی</u>	320		
F6-M5			0.1	104.0			80'	120		
dia.		100.05								
48		<0.001								
đđ		100.02								
AS/MILIX	17714001		0.4	93.4		98.5	.71	325	10	10
AS/MAID	17846028		0.4	104.0		103.0	75	125	0.5	ZD
nay mana	170-4040			104.0		103.0				1417
//5/M50	17861001		0.4	107.6		104.0	75	125	2.4	20
AS/MSD	17258001		0.4	102.0		104.0	75	125	22	-2b-
/6////5D	17868006		0.4	:106.0		103.0	75	125	2.4	20
Arsenic				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spive Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-MS			0.1	Recovery 100.0	_	% Becovery	Linsii (45) BO	Limit (%) 120		
FB-MS			0.1	101.0			30	120		
FB-M5			A, i	97.2			30	3.20		
đđ		⊲1007								
		<0.002								
4D										
MB MB		<0.002								



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Arsenic					mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate & Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
W5/M5D	17846026		0.4	97.0		301.0	75	125	4.2	20
MS/MSD	17851001		0.4	103.0		504.0	75	125	0.5	20
ws/wsb	17858001		0.4	96.8		100.0	75	125	13	20
ws/Msd	57858006		0.4	97.9		98.7	75	125	0.8	20
Barium				Units:	mg/L	_	_			_
QC Type	Original Sample (D	Blank Result	Splike Amount	Spike %	ing/ -	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-MIS			0.1	Recovery 97.9	-	76 Recovery	Limit (%) 30	Limit (%)		
							~			
FD-MS			0.1	101.8			-80	120		
FIE-M5			0.1	99.2			50	120		
ма		×0.007								
un,		-0.002								
AB		30.002								
AS/MSD	17714001		0.4	97.0		96,2	75	125	20	-20
45/MSD	1784602.5		0.4	97 K		97.3	75	125	0.2	20
45/4450	17851001		0.4	101.6		972	75	125	31	20
AS/MBID	17858001		9.4	97.5		RE.A.	75	125	a.e.	20
45/14513	17868006		0,4	95.6		93.1	75	125	2.2	25
Beryllium		-		Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Splike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	KPD (%)	RPD Limit (%)
FB-MS			0.1	97.7			80	120		
FB-M5			0.1	105.0			10	120		
FB-645			0.1	105.0			-80	120		
dij.		<0.0005								
чл		<0.0005								
An		=9.0005								
45/44512	17714001			102.0		97.7	75	125	1.0	20
	17846028		0.4	102.0		103.0	75	125	16	20
ds/MSD	110-edniro									
AS/MSD AS/MSD			ψ.A	107.0		104.0	75	125		20
AS/MSD	17853001		Ψ,A	.107.¢		104.0	75	125	81	20
			ца 0.4	107.0		104.0	15	125	1.0	.25



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Cadmium				Units: mg/L					
QC Type	Original Sample IO	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate 36 Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
F8-M5			0.1	104.0		60	120		
FB-MS			01	98.8		80	120		
F0-M3			0.1	101.0		60.	120		
AB		<0.0005							
AB		<0.0005							
AB		<0.0005							
ns/msb	17714001		0.4	101.0	90.M	75	125	6.0	/ZD
ns/msb	17846028		0.4	.101.0	102.0	75	125	0.5	20
ns/mso	17861001		0.4	101.0	98.6	75.	125	15	.20
45/MSD	17858001		0.4	99.2	97.0	75	125	1a	20
45/MSD	17868006		0.4	102.0	102.0	75	125	0.2	30
Chromium				Units: mg/L					
ас Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Lijnit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
H8-M5			01	105-0	is necovery	30	120		
FB-MS			0.3	104-9		30	120		
FB-MS			0.3	102.0		30	320		
48		<0.002							
Ad		<0.002							
AD		<0.002							
ns/mso	17714001		0.4	.101.0	98.3	75	125	5.0	20
IS/MSD	17846025		0.4	103.0	105.0	75	125	31	20
N5/M5D	17851001		0.4	105.0	101.0	75	125	5.1	20
is/MSD	17868001		0.4	101-0	102.0	75	125	0.5	20-
IS/M5D	17858006		0.4	103-0	103.0	75	125	0.0	20
Cobalt			_	Units: mg/L				_	
дС Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Lumit (%)	RPD (%)	RPE(Lumit (%)
FB-M5			0/3	101.0		30	120		
B-MS			0.1	104.0		30	120		
IB-MS			0.1	105.0		80	120		
a.		<0.002							



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Cobalt				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spile % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD L(mit (%)
AB.		<0.002								
AS/MSD	17714001		0.4	101.0		97.2	75	125	33	20
AS/MSD	17846028		0.4	100.0	1	02.0	75	125	2.2	20
45/MSD	17861901		0.4	101.0	ł	20 B	75	125	47.	20
45/W5D	17868001		0.4	- mi y		01.0	75	125	2.0	-20
45/1450	17868006		0(4	mra.	4	101.0	75	125	1.7	20
Lead				Units: 1	mg/L					
QC Type	Original Sample (D	Blank Result	Spike Ampunt	Spike % Recovery	1	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-M5			0.1	95.9			80	120		
FB-MA5			0.1	99.7			80	120		
ru-M5			0.1	00.8			100	120:		
48		en 0005								
45		<0.0005								
AR		<0.0005								
45/1450	17714001		0.4	97.1	5	6.8	75	125	0.3	20
15/M50	17846028		<u>17,4</u>	98.2	6	6.5	75	125	1.8	20
15/M5D	17861001		0.4	98 S	8	7.6	75	125	k.t	20
dis/Adsid	17858001		0.4	198.7	i.	94	75	125	1.0	20
ns/msia	17868006		0.4	105.0		104.0	75	125	0.7	20
Molybdenum				Units:	mg/L					
2C Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery		Spike Duplicate S Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	HPD (%)	RPD Limit (%)
FB-M15		-	0.1	105.0			80	120		-
FB-MS			0.1	109.0			<u>ی</u>	120		
FB-M5			01	104.0			-	120		
AB.		<0.002								
48		-43.002								
18		<0.002								
KS/MSD	17714001		U.A.	100.0	1	17.8	75	125	2.5	an
ns/msD	17846078		0.4	0.801:	4	ins o	10	125	<i>0</i> .5	20
157/1/50	17861001		0.4	105.0	1	104.0	75	125	1.8	20
13/14/31/										



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Molybdenum QC Type	Original Sample ID	Blank Result	Spike Amount	Units: Spike % Recovery	mg/L	Spike Duplicate % Recovery	Lower Control Lond (%)	Lipper Control Lumit (%)	RPD (%)	RPD Limit (%)
M5/M3D	17858006		0.4	99.6	-	98.4	75	125	17	20
Selenium				Units:	mg/L					
QC Турн	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control Lumit (%)	RPD (15)	RPE Lunut (16)
F0-M5			0.1	104.0			80	120		
HB-MIS			0.1	104.0			30	120		
FRANS			0.5	97.9			30	320		
48		-0.005								
db		<0.005								
NO		<0.005								
MSWAND	-17714001-		0.4	105.0		101.0	75	175	34	20
M5/M5D	17845026		0.4	89.9		92.3	75	125	2.5	20
ws/wsb	17851001		0.4	105.0		105.0	75	125	2.3	20
ws/wsb	17868001		04	105.0		108-0	75	325	28	20
AS/MSD	17868006		0.4	105.0		100.0	75	125	67	20
Thallium				Units:	mg/L					
ас туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-M5			0.3	97.6			30	750		
PB-MS			0.1	A9/0			80	120		
PIH-MI			0.1	97.1			at .	120		
MID.		<0.0005								
AN.		<0.0005								
MB.		c0.0005								
ws/wsb	17734001		0.4	95.4		94.9	75	125	ō.a	-20
45/MSD	17840028		0.4	96.0		94.6	75	125	16	20
AS/MSD	17851001		6.4	96.0		946	75	125	14	20
AS/MSD	17868001		0.4	96.4		977	75	125	1.6	20
ds/MSD	17868006		0,4	100.0		99.3	75	125	0.8	20
Mercury		1.00		Units:	mg/L	A				
ас туре	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery	-	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	KPD (%)	RPD Limit (%)
.FB			0,002	103.0			85	115		



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Account #: 2040

Client: Basin Electric Power Cooperative

Mercury				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (16)	Lipper Control Limit (%)	KPD (%)	RPD Limit (%)
N5/MSD	17855006		0.002	96.0		97.0	70	130	0.0	20
Fluoride		_		Units:	mg/L	_		_		
дс турн	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Contro) Lumit (%)	RPD (%)	RPELLinut (95)
RAN E			3,39	103.0			8,68	111		
RM-F			3,35	98.8			83.8	111		
ra i			0.5	100.0			90	220		
FB-F			0.5	100.0			90	110		
1 .6			0.5	104.0			90	110		
97			0.5	:100.0			90	110		
en 6			0.5	300.0			9 0	110		
18-4			0.5	102.0			90	110		
84		aLi								
ŵ/		<11								
6.7		वान								
B.F		\$0.1								
BÆ		-40.1								
is é		50 I								
is/MSD-4	17946011		10	94.0		102.02	102	320	10	10
IS/MSD-1	17565002		0.5	- 104.0		98. <i>0</i>	80	120	1.0	ZD
IS/MSD-P	18057002		25	92.0		-86.0	80	120	2.0	20
otal Dissolve	d Solids			Units:	mg/L	-				
2С. Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
RM			736	1010			90.35	110.15		
RM			736	101.0			-90.35	110.23		
45		<10								
æ		~10								
uin.	17448005								a,i	20
UR -	17894001									

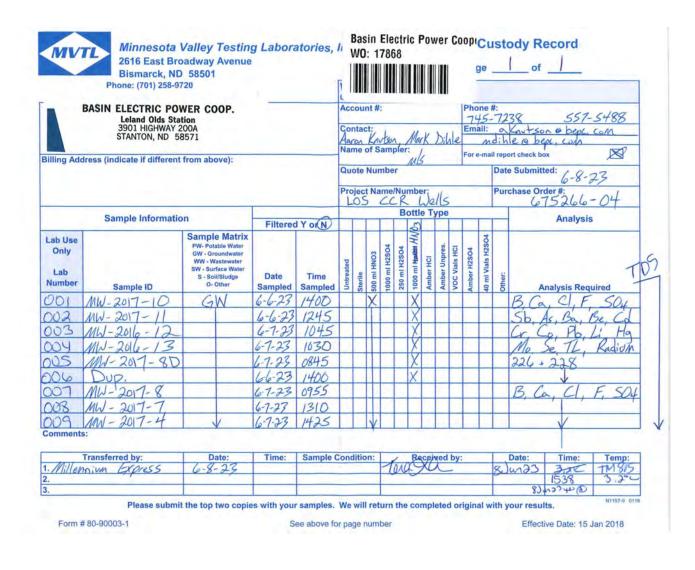


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Account #: 2040

Client: Basin Electric Power Cooperative





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Account #:2040Client:Basin Electric Power CooperativeWorkorder:LOS CCR Wells (17869)PO:790708-04 LOS

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 Carlep

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 SD SDWA

Subcontracted Analyses

Analyzed By	Company	Address	Phone	Certification
SUBv	Energy Labs Casper	2393 Salt Creek Highway, Casper. WY 82601	307-235-0515	CERT



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Account #: 2040

Client: Basin Electric Power Cooperative

Workorder Summary

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.



Radium 228

MINNESOTA VALLEY TESTING LABORATORIES, INC.

Attached

Attached

See

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SUBv

Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Lab ID: 17869001 Date Collected: 06/06/2023 14:00 Groundwater Matrix: Sample ID: MW-2017-10 Date Received: 06/08/2023 15:38 Collector: Client Temp @ Receipt (C): 3.2 **Contract Lab** Method: Contracted Result Parameter Units RDL DF Analyzed Results Prepared By Qual 07/20/2023 07/20/2023 See Radium 226 1 SUBv

15:55

15:55

1

07/20/2023

15:55

15:55

07/20/2023



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Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Groundwater Lab ID: 17869002 Date Collected: 06/06/2023 12:45 Matrix: Sample ID: MW-2017-11 06/08/2023 15:38 Date Received: Collector: Client Temp @ Receipt (C): 3.2 **Contract Lab** Method: Contracted Result 2 ----Desults l l mite וחח Amalymad -

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	ву	Quai
Radium 226	See			1	07/20/2023	07/20/2023	SUBv	
Radium 220	Attached			I	15:55	15:55	SUBV	
Dadium 222	See			4	07/20/2023	07/20/2023	SUBv	
Radium 228	Attached			I	15:55	15:55	SUDV	



Radium 226

Radium 228

MINNESOTA VALLEY TESTING LABORATORIES, INC.

Attached

Attached

See

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SUBv

SUBv

Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Lab ID: 17869003 Date Collected: 06/07/2023 10:45 Groundwater Matrix: Sample ID: MW-2016-12 Date Received: 06/08/2023 15:38 Collector: Client Temp @ Receipt (C): 3.2 **Contract Lab** Method: Contracted Result Parameter Units RDL DF Analyzed Results Prepared By Qual 07/20/2023 07/20/2023 See

1

1

15:55

15:55

07/20/2023

15:55

15:55

07/20/2023



Radium 226

Radium 228

MINNESOTA VALLEY TESTING LABORATORIES, INC.

Attached

Attached

See

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SUBv

SUBv

Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Lab ID: 17869004 Date Collected: 06/07/2023 10:30 Groundwater Matrix: Sample ID: MW-2016-13 Date Received: 06/08/2023 15:38 Collector: Client Temp @ Receipt (C): 3.2 **Contract Lab** Method: Contracted Result Parameter Units RDL DF Analyzed Results Prepared By Qual 07/20/2023 07/20/2023 See 1

15:55

15:55

1

07/20/2023

15:55

15:55

07/20/2023



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Account #: 2040 Client: Basin Electric Power Cooperative

Analytical	Analytical Results										
Lab ID: Sample ID:	17869005 MW-2017-8D	Date Collected: Date Received:	06/07/2023 08:45 06/08/2023 15:38	Matrix: Collector:	Groundwater Client						
Temp @ Rece	eipt (C): 3.2										

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See			1	07/20/2023	07/20/2023	SUBv	
Naululli 220	Attached			1	15:55	15:55	3000	
Radium 228	See			1	07/20/2023	07/20/2023	SUBv	
	Attached			1	15:55	15:55	5000	



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Account #: 2040 Client: Basin Electric Power Cooperative Analytical Results Date Collected: 06/06/2023 14:00 Matrix: Groundwater

Lab ID: Sample ID:	17869006 Dup	Date Collected: Date Received:	06/06/2023 14:00 06/08/2023 15:38	Matrix: Collector:	Groundwater Client	
Temp @ Recei	ipt (C): 3.2					
Contract Lab						

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See Attached			1	07/20/2023 15:55	07/20/2023 15:55	SUBv	
Radium 228	See Attached			1	07/20/2023 15:55	07/20/2023 15:55	SUBv	



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Account #:	2040		Client:	Basin Electric Power Cooperative							
	ENERGY	Trust our People. Tru	st our Data			Billings, MT 406,252,6325 + Casper, WY 307,235,0515 Giltetle, WY 307,686,7175 + Helena, MT 406,442,0711					
		ANALYTICAL SUMMARY REPORT									
	July 19, 2023										
	Minnesota Valley Testing Laboratories 1126 N Front St										
	New Ulm, MN 56073-1176										
	Work Order.	C23060624 Qu	lote ID: C1548	a							
	The second second	C23060624 Qu 17869	lote ID: C1548	a							
	Project Name:	17869			/innesota Valle	ey Testing Laboratories on 6/15/2023					
	Project Name: Energy Laborator	17869	ed the following		/linnesotá Vallé Matrix	ey Tésting Laboratories on 6/15/2023 Test					
	Project Name: Energy Laborator for analysis.	17869 ries, Inc. Casper WY receive	ed the following Collect Date	6 samples for M Receive Date		Test					
	Project Name: Energy Laborator for analysis. Lab ID	17869 nes, Inc. Casper WY receiv Client Sample ID	ed the following Collect Date 06/06/23 14:00	6 samples for M Receive Date 0 06/15/23	Matrix	Test Radium 226, Total					
	Project Name: Energy Laborator for analysis. Lab ID C23060624-001	17869 ries, Inc. Casper WY receiv Client Sample ID 17869001; MW-2017-10	ed the following Collect Date 06/06/23 14:00 06/06/23 12:43	6 samples for M Receive Date 0 06/15/23 5 06/15/23	Matrix Groundwater	Test Radium 226, Total Radium 228, Total					
	Project Name: Energy Laborator for analysis. Lab ID C23060624-001 C23060624-002	17869 nes, Inc. Casper WY receiv Client Sample ID 17869001; MW-2017-10 17869002; MW-2017-11	ed the following Collect Date 06/06/23 14:00 06/06/23 12:49 06/06/23 10:49	6 samples for M Receive Date 0 06/15/23 5 06/15/23 5 06/15/23	Matrix Groundwater Groundwater	Test Radium 226, Total Radium 228, Total Same As Above					
	Project Name: Energy Laborator for analysis. Lab ID C23060624-001 C23060624-002 C23060624-003	17869 nes, Inc. Casper WY receive Client Sample ID 17869001; MW-2017-10 17869002; MW-2017-11 17869003; MW-2016-12	ed the following Collect Date 06/06/23 14:00 06/06/23 12:49 06/06/23 10:40 06/06/23 10:30	6 samples for M Receive Date 0 06/15/23 5 06/15/23 5 06/15/23 0 06/15/23	Matrix Groundwater Groundwater Groundwater	Test Radium 226, Total Radium 228, Total Same As Above Same As Above Same As Above					

The analyses presented in this report were performed by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager .

Report Approved By:

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Account #: 2040

Client: Basin Electric Power Cooperative

			1.4	M	CLJ		1.000
Client Sample ID:	17869001; MW-2017-10					Matrix:	Groundwater
Lab ID:	C23060624-001				DateR	eceived:	06/15/23
Project:	17869				Collection	on Date:	06/06/23 14:00
Client:	Minnesota Valley Testing	Laboratories			Repo	ort Date:	07/19/23
	LA	BORATORY A	ANALYTICA Casper, WY B				
ENERGY	Trust our People. Trus unaw micrograd com	ist our Data.			and the second s	of a month of the fee	5 + Casper, WY 307.235.0515 5 = Helena, MT 406.442.0711
		1					

RADIONUCLIDES, TOTAL			
Radium 226	0.1 pCi/L U	E903.0	07/11/23 13:22 / kdk
Radium 226 precision (±)	0.2 pCI/L	E903.0	07/11/23 13:22 / kdk
Radium 226 MDC	0.3 pCi/L	E903.0	07/11/23 13:22 / kdk
Radium 228	0.6 pCi/L U	RA-05	07/06/23 15:28 / trs
Radium 228 precision (±)	0.8 pCi/L	RA-05	07/06/23 15:28 / trs
Radium 228 MDC	1.2 pCi/L	RA-05	07/06/23 15:28 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

Page 2 of 11

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Account #: 2040

Client: Basin Electric Power Cooperative

Analyses		Result Units	Qualifiers	ACL M	ethod Anal	vsis Date / Bv
Client Sample ID:	17869002: MW-2017-11				Matrix:	Groundwater
Lab ID:	C23060624-002				DateReceived:	06/15/23
Project:	17869			0	Collection Date:	06/06/23 12:45
Client:	Minnesota Valley Testing	g Laboratories			Report Date:	07/19/23
	LA	Prepared by	ANALYTICA Casper, WY B	¢		
ENERGY LABORATORIES	Trust our People. Trust our People. Trust our People. Trust				under un alemente bes	25 + Casper, WY 307.235.0515 75 + Helena, MT 406.442.0711

Result Units	Qualifiers	RL	QCL Method	Analysis Date / By
-0.1 pCi/L	0		E903.0	07/11/23 13:22 / kdk
0.2 pCI/L			E903.0	07/11/23 13:22 / kdk
0.3 pCI/L			E903.0	07/11/23 13:22 / kdk
0.3 pCi/L	U.		RA-05	07/06/23 15:28 / trs
0.7 pCi/L			RA-05	07/06/23 15:28 / trs
1.2 pCi/L			RA-05	07/06/23 15:28 / trs
	-0.1 pCi/L 0.2 pCi/L 0.3 pCi/L 0.3 pCi/L 0.7 pCi/L	-0.1 pC//L Ú 0.2 pC//L 0.3 pC//L 0.3 pC//L Ú 0.7 pC//L	-0.1 pC//L Ú 0.2 pC//L 0.3 pC//L 0.3 pC//L Ú 0.7 pC//L	-0.1 pCi/L Ú E903.0 0.2 pCi/L E903.0 0.3 pCi/L E903.0 0.3 pCi/L Ú RA-05 0.7 pCi/L RA-05

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

				1.00		MCL			1.000
Client Sample ID:	17869003; MW-2016-12	8						Matrix:	Groundwater
Lab ID:	C23060624-003						DateR	eceived:	06/15/23
Project:	17869						Collecti	on Date:	06/06/23 10:45
Client:	Minnesota Valley Testing	g Laboratori	ies				Rep	ort Date:	07/19/23
	L	an 202 (M.		NALYTICA asper, WY B	19 C	RT			
ENERGY LABORATORIES	Trust our People. In						all a second a start of the	25 + Casper, WY 307.235.051 75 = Helena, MI 406.442.071	
			1						

Fillingaoa	readir ones	audinitiona	14 245 0	ourou	Fatalysia onter by
RADIONUCLIDES, TOTAL					
Radium 226	0.07 pCi/L	Û.	ES	0.600	07/11/23 13:22 / kdk
Radium 226 precision (±)	0.2 pCi/L		ES	0.600	07/11/23 13:22 / kdk
Radium 226 MDC	0.3 pCi/L		ES	0.600	07/11/23 13:22 / kdk
Radium 228	-0.6 pCi/L	Ú.	R	A-05	07/06/23 15:28 / trs
Radium 228 precision (±)	0.7 pCi/L		R	A-05	07/06/23 15:28 / trs
Radium 228 MDC	1.2 pCi/L		R	A-05	07/06/23 15:28 / trs
	a set by reality				

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

	Trust our People. Trust our Data.	Billings, MT 406,252,6325 + Casper, WY 307,235.051
LABORATORIES	www.murgifab.com	Billette, WY 307.686.7175 > Helena, MI 406.442.071
	LABORATORY ANALYTICAL	LREPORT
	Prepared by Casper, WY B	ranch
Client:	Minnesota Valley Testing Laboratories	Report Date: 07/19/23
Project:	17869	Collection Date: 06/06/23 10:30
Lab ID:	C23060624-004	DateReceived: 06/15/23
Client Sample ID:	17869004; MW-2016-13	Matrix: Groundwater
1 months	1	MCL

Result Units	Qualifiers	RL	QCL Method	Analysis Date / By
0.03 pCi/L	0		E903.0	07/11/23 13:22 / kdk
0.1 pGI/L			E903.0	07/11/23 13:22 / kdk
0.2 pCI/L			E903.0	07/11/23 13:22 / kdk
0.04 pCi/L	Ú.		RA-05	07/06/23 15:28 / trs
0.7 pCi/L			RA-05	07/06/23 15:28 / trs
1.1 pCi/L			RA-05	07/06/23 15:28 / trs
	0.03 pCi/L 0.1 pCi/L 0.2 pCi/L 0.04 pCi/L 0.7 pCi/L	0.03 pC//L Ú 0.1 pC//L 0.2 pC//L 9.04 pC//L Ú 0.7 pC//L Ú	0.03 pCVL Ú 0.1 pCVL 0.2 pCVL 9.04 pCVL Ú 0.7 pCVL Ú	0.03 pC//L Ú E903.0 0.1 pC//L E903.0 0.2 pC//L E903.0 0.04 pC//L Ú RA-05 0.7 pC//L RA-05

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

	Test and	MCL/ iers RL QCL Method Analysis Date / By
Client Sample ID:	17869005; MW-2017-8D	Matrix: Groundwater
Lab ID:	C23060624-005	DateReceived: 06/15/23
Project:	17869	Collection Date: 06/06/23 08:45
Client:	Minnesota Valley Testing Laboratories	Report Date: 07/19/23
	LABORATORY ANALY Prepared by Casper,	
LABORATORIES	Trust our People. Trust our Data.	Brilings, MI 406,252.6325 + Casper, WY 307.235.851 Brillette, WY 307.685.7175 + Helena, MI 406.442.071

Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.2	pCi/L	U			E903.0	07/11/23 15:01 / kdk
Radium 226 precision (±)	0.1	pCi/L				E903.0	07/11/23 15:01 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	07/11/23 15:01 / kdk
Radium 228	0.3	pCi/L	U			RA-05	07/06/23 15:28 / trs
Radium 228 precision (±)	0.7	pCi/L				RA-05	07/06/23 15:28 / trs
Radium 228 MDC	1.1	pCi/L				RA-05	07/06/23 15:28 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

Exercise Sector Tust our People. Trust our Data. Billings. MI 406.252.6325 + Casper, WY 307.235.05 Billings. MI 406.252.6325 + Casper, WY 307.235.05 Billings. MI 406.252.6325 + Casper, WY 307.235.05 Billings. MI 406.252.6325 + Casper, WY 307.235.05 Billings. MI 406.252.6325 + Casper, WY 307.235.05 Billings. MI 406.252.6325 + Casper, WY 307.235.05 Billings. MI 406.252.6325 + Casper, WY 307.235.05 Billings. MI 406.442.07 Client: Minnesota Valley Testing Laboratories Project: 17869 Lab ID: C23060624-006 Client Sample ID: 178699006; Dup Matrix: Groundwater
LABORATORY ANALYTICAL REPORT Prepared by Casper, WY Branch Client: Minnesota Valley Testing Laboratories Report Date: 07/19/23 Project: 17869 Collection Date: 06/06/23 14:00
Client: Minnesota Valley Testing Laboratories Report Date: 07/19/23
LABORATORY ANALYTICAL REPORT Prepared by Casper, WY Branch
LABORATORY ANALYTICAL REPORT
Le DORATIONULS Billette, WY 307.686.7175 > Helena, MI 406.442.0
EN ED CAV Trust our People, Trust our Data. Billings, MT 406,252,6325 + Casper, WY 307,235,05

RADIONUCLIDES, TOTAL					
Radium 226	0.2 pCi/L	U	E903.0	07/11/23 15:01 / kdk	
Radium 226 precision (±)	0.2 pCI/L		E903.0	07/11/23 15:01 / kdk	
Radium 226 MDC	0.2 pCi/L		E903.0	07/11/23 15:01 / kdk	
Radium 228	0.9 pCi/L	U	RA-05	07/14/23 17:17 / trs	
Radium 228 precision (±)	0.8 pCi/L		RA-05	07/14/23 17:17 / trs	
Radium 228 MDC	1.4 pCi/L		RA-05	07/14/23 17:17 / trs	

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

ENER			eople. Trust our l	Data.				llings, MT 406.25 illette: WY 307.68		concentration of a concentration	
			Q		Summary by Casper, W						
Client: M	linnesota Valley Te	sting L	aboratories		Work Order:	C2306	0624	Repo	rt Date:	07/18/23	
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0									Batch: RA2	26-10942
Lab ID:	LCS-RA226-10942	3	Laboratory Con	trol Samp	le		Run: G542	N-2_230621A		07/11	23 11:43
Radium 226	6		9.9	pCi/L		99	70	130			
Radium 226	5 precision (±)		1.9	pCi/L							
Radium 226	MDC		0.24	PCIL							
ab ID:	MB-RA226-10942	3	Method Blank				Run: G542	N-2_230621A		07/11	23 11:43
Radium 226	5		-0.1	PCIL							U
Radium 226	precision (±)		0.1	pCi/L							
Radium 226	MDC		0.2	PCUL							
Lab ID:	C23060533-004EDU	3	Sample Duplic	ate			Run: G5421	M-2_230621A		07/11	23 11:43
Radium 226	5		1.7	pCi/L				and the second second	7.9	30	
Radium 226	3 precision (±)		0.40	pCI/L							
- The RER (0,25	pCi/L							

Qualifiers: RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

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Account	#:	2040
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Client: Basin Electric Power Cooperative

LABORA			People, Jrust our l	Jota,				illings, MT 406.25 illette, WY 307.68			
			Q		Summary						
Client:	Minnesota Valley Tes	ting l	aboratories	Prepare	d by Casper, W Work Order:			Repo	rt Date	: 07/18/23	
Analyte		Coun	t Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05							-		Batch: R/	228-7147
Lab ID:	LCS-228-RA226-1096	2 3	Laboratory Con	trol Same	le		Run: TENN	ELEC-3 23071	1A	07/14	23 16:47
Radium 2	28		7,4	pCi/L		108	70	130			
	28 precision (±)		1.6	pCi/L							
Radium 2	the state of the s		1.2	PCVL							
ab ID:	MB-RA226-10962	3	Method Blank				RUT: TENN	ELEG-3 23071	1A	07/14	/23 16:47
Radium 2	and the second states of the second sec		-0.7	PCIL			line level	and a family	4.1	Sur	U
Sec. 1999.	28 precision (±)		0.9	pGi/L							- 2 -
Radium 2			2	PCUL							
ab ID:	C23060522-011DDUP	3	Sample Duplic	ate			Run: TENN	ELEC-3 23071	1A	07/14	/23 16:47
Radium 2	28		1.0	pCi/L				and the second second	180	30	UR
Radium 2	28 precision (±)		1.3	DCVL							100
Radium 2			2.2	PCIL							
	te RPD is outside of the acce	plance		1 A C C C C C C C C C C C C C C C C C C	ever, the RER is less	than or e	qual to the lim	t of 3, the RER ret	sult is 0.57	· · · · · ·	
ab ID:	C23060938-002ADUP	3	Sample Duplic	ate			Run: TENN	ELEC-3_23071	1A	07/14	/23 16:47
Radium 2	228		0.089	pCVL					1700	30	UR
Radium 2	228 precision (±)		0.70	PCIL							
Radium 2	28 MDC		1.2	pGi/L							
- Duplicat	te RPD is outside of the acce	plance	range for this ana	lysis. How	iver, the RER is less	than or e	qual to the limit	t of 3, the RER re	sult is 0.20		
Method:	RA-05									Batch: R/	228-712
ab ID:	LCS-228-RA226-10942	z 3	Laboratory Cor	ntrol Samp	ole		Run: TENN	ELEC-4_23062	1A	07/06	/23 13:52
Radium 2	228		7.3	pCi/L		106	70	130			
	228 precision (±)		1.7	pCi/L							
Radium 2	28 MDC		0.97	PCVL							
ab ID:	MB-RA226-10942	3	Method Blank				Run: TENN	ELEC-4_23062	1A	07/06	/23 13:52
Radium 2	28		-0.5	pCi/L							U
Radium 2	28 precision (±)		0.5	PCVL							
Radium 2	28 MDC		1	pCi/L							
ab ID:	C23060533-004EDUP	3	Sample Duplic	ate			Bun: TENN	ELEC-4 23062	1A	07/06	/23 13:52
Radium 2	228		7.9	pCi/L					8.2	30	
Radium 2	28 precision (±)		1.6	PCI/L							
Radium 2	28 MDG		0.93	pCI/L							
	R result is 0.28										

Qualifiers:

RL - Analyte Reporting Limit

R - Relative Percent Difference (RPD) exceeds advisory limit

ND - Not detected at the Reporting Limit (RL) U - Not detected at Minimum Detectable Concentration (MDC)

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Account #: 2040

Client: Basin Electric Power Cooperative

C23060624

Billings, MT 406.252.6325 = Gasper, WY 307.235.0515

Gitlette, WY 307.686.7175 = Helena, MJ 406.442.0711

Eathoritanousing P	
Work Order	Receipt Checklist

ENERGY G

Minnesota Valley Testing Laboratories

Trust our People. Trust our Data.

Login completed by: Hannah R. Johnson			Date Received: 6/15/2023		
Reviewed by: cjohnson			Received by: gah		
Reviewed Date: 6/19/2023			Carrier name: UPS		
Shipping container/cooler in good condition?		Yes 🗹	No 🖂	Not Present	
Custody seals intact on all shipping container(s)/cooler(s)?		Yes 🛄	No 🗌	Not Present	
Custody seals intact on all sample bottles?		Yes 🔲	No 🗔	Not Present	
Chain of custody present?		Yes 🗹	No 🗖		
Chain of custody signed when relinquished and received?		Yes 🔽	No 🔲		
Chain of custody agrees with sample labels?		Yes 🔽	No 🗖		
Samples in proper container/bottle?		Yes 🗹	No.		
Sample containers intact?		Yes 🗹	No 🔲		
Sufficient sample volume for indicated test?		Yes 🔽	No 🖂		
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res CI, Sulfite, Ferrous Iron, etc.)		Yes 🗹	No 🗌		
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes	No 🗹	Not Applicable	
Container/Temp Blank temperature:		19.8°C No Ice			
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4*).		Yes 🔲	No 🗌	No VOA vials submitted	
Watar - pH acceptable upon receipt?		Yes 🗹	No 🖂	Not Applicable	

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as -dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

None

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Account #: 2040

Client: Basin Electric Power Cooperative

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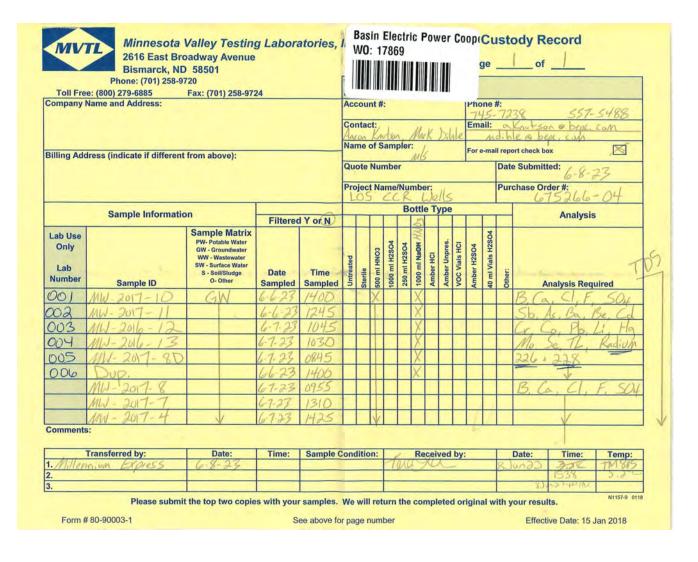


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Account #: 2040

Client: Basin Electric Power Cooperative



JUNE 26-27, 2023



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Account #:2040Client:Basin Electric Power CooperativeWorkorder:LOS CCR Wells (19625)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 autop

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



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Account #: 2040

Client: Basin Electric Power Cooperative

Workorder Summary

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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Account #:	2040		Client:	Basin	Electr	ic Power Coop	perative		
Analytical F	Results								
Lab ID: Sample ID:	19625001 LOS PON 2017-10		Date Collected: Date Received:		26/2023 28/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receip	ot (C): 5	5.6							
Method: ASTM D	516-16								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Sulfate		328	mg/L	25	5	07/07/2023 10:31	07/07/2023 10:31	AMC	
Method: EPA 245	5.1								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury		<0.0002	mg/L	0.0002	1	07/07/2023 12:05	07/10/2023 11:20	MDE	
Method: EPA 601	0D								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Boron		0.97	mg/L	0.1	1	06/29/2023 16:48	07/06/2023 10:37	SLZ	
Calcium		90.8	mg/L	1	1	06/29/2023 16:48	07/10/2023 12:26	SLZ	
Lithium		<0.02	mg/L	0.02	1	06/29/2023 16:48	07/05/2023 16:18	SLZ	
Method: EPA 602	20B								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Antimony		<0.001	mg/L	0.001	5	06/29/2023 16:48	07/06/2023 16:31	MDE	
Arsenic		0.0032	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:31	MDE	
Barium		0.0837	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:31	MDE	
Beryllium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/07/2023 10:33	MDE	
Cadmium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:31	MDE	
Chromium		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:31	MDE	
Cobalt		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:31	MDE	
Lead		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:31	MDE	
Molybdenum		0.0085	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:31	MDE	
Selenium		<0.005	mg/L	0.005	5	06/29/2023 16:48	07/06/2023 16:31	MDE	
Thallium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:31	MDE	



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Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Lab ID: 19625001 Date Collected: 06/26/2023 14:06 Matrix: Groundwater Sample ID: LOS POND MW-06/28/2023 16:24 Date Received: Collector: Client 2017-10 Temp @ Receipt (C): 5.6 Method: SM4500-CI-E 2011 Parameter Results Units RDL DF Prepared Analyzed By Qual 07/06/2023 07/06/2023 Chloride 11.7 mg/L 2.0 1 AMC 09:53 09:53 Method: SM4500-F-C-2011 Units RDL DF Parameter Results Prepared Analyzed By Qual 06/30/2023 06/30/2023 Fluoride 0.77 1 AMC mg/L 0.1 18:53 18:53 Method: USGS I-1750-85 Parameter Results Units RDL DF Prepared Analyzed Qual Ву 07/05/2023 07/05/2023 **Total Dissolved Solids** 682 mg/L 10 1 RAA 16:55 16:55



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Account #:	2040		Client:	Basin	Electr	ic Power Coop	perative		
Analytical	Result	s							
Lab ID: Sample ID:	196250 LOS PC 2017-11	DND MW-	Date Collected: Date Received:			3 12:11 3 16:24	Matrix: Collector:	Groundwater Client	
Temp @ Recei	ipt (C):	5.6							
Method: ASTM I	D516-16								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate		219	mg/L	25	5	07/07/2023 10:32	07/07/2023 10:32	AMC	
Method: EPA 24	5.1								
Parameter		Results	Units	RDL	DF	Prepared 07/07/2023	Analyzed 07/10/2023	Ву	Qual
Mercury		<0.0002	mg/L	0.0002	1	12:05	11:20	MDE	
Method: EPA 60	10D								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron		1.30	mg/L	0.1	1	06/29/2023 16:48	07/06/2023 10:40	SLZ	
Calcium		68.3	mg/L	1	1	06/29/2023 16:48	07/10/2023 12:26	SLZ	
Lithium		0.0323	mg/L	0.02	1	06/29/2023 16:48	07/05/2023 16:23	SLZ	
Method: EPA 60	20B								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony		<0.001	mg/L	0.001	5	06/29/2023 16:48	07/06/2023 16:49	MDE	
Arsenic		0.0100	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:49	MDE	
Barium		0.0493	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:49	MDE	
Beryllium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/07/2023 10:44	MDE	
Cadmium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:49	MDE	
Chromium		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:49	MDE	
Cobalt		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:49	MDE	
Lead		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:49	MDE	
Molybdenum		0.0100	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:49	NIDE	
Selenium		<0.005	mg/L	0.005	5	06/29/2023 16:48	07/06/2023 16:49	MDE	
						06/29/2023	07/06/2023	MDE	



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Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Lab ID: 19625002 Date Collected: 06/26/2023 12:11 Matrix: Groundwater Sample ID: LOS POND MW-06/28/2023 16:24 Date Received: Collector: Client 2017-11 Temp @ Receipt (C): 5.6 Method: SM4500-CI-E 2011 Parameter Results Units RDL DF Prepared Analyzed By Qual 07/06/2023 07/06/2023 Chloride 11.7 mg/L 2.0 1 AMC 09:54 09:54 Method: SM4500-F-C-2011 Units RDL DF Parameter Results Prepared Analyzed By Qual 06/30/2023 06/30/2023 Fluoride 0.70 1 AMC mg/L 0.1 19:10 19:10 Method: USGS I-1750-85 Parameter Results Units RDL DF Prepared Analyzed Qual Ву 07/05/2023 07/05/2023 **Total Dissolved Solids** 571 mg/L 10 1 RAA 16:55 16:55



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Account #:	2040		Client:	Basin	Electri	ic Power Coop	perative		
Analytical F	Results								
Lab ID: Sample ID:	19625003 Dup		te Collected: te Received:		26/2023 28/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receip	ot (C): 5.6								
Method: ASTM D	516-16								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate		223	mg/L	25	5	07/07/2023 10:33	07/07/2023 10:33	AMC	
Method: EPA 245	5.1								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury		<0.0002	mg/L	0.0002	1	07/07/2023 12:05	07/10/2023 11:20	MDE	
Method: EPA 601	0D								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Boron		1.31	mg/L	0.1	1	06/29/2023 16:48	07/06/2023 10:40	SLZ	
Calcium		68.8	mg/L	1	1	06/29/2023 16:48	07/10/2023 12:27	SLZ	
Lithium		0.0324	mg/L	0.02	1	06/29/2023 16:48	07/05/2023 16:24	SLZ	
Method: EPA 602	0B								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Antimony		<0.001	mg/L	0.001	5	06/29/2023 16:48	07/06/2023 16:53	MDE	
Arsenic		0.0100	mg/L	0.002	5	06/29/2023	07/06/2023	MDE	
Barium		0.0490	mg/L	0.002	5	16:48 06/29/2023 16:48	16:53 07/06/2023 16:53	MDE	
Beryllium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/07/2023 10:46	MDE	
Cadmium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:53	MDE	
Chromium		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:53	MDE	
Cobalt		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:53	MDE	
Lead		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:53	MDE	
Molybdenum		0.0108	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:53	MDE	
Selenium		<0.005	mg/L	0.005	5	06/29/2023 16:48	07/06/2023 16:53	MDE	
Thallium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:53	MDE	



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Account #:	2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical	Results								
Lab ID: Sample ID:	19625003 Dup		Date Collected: Date Received:		6/26/2023 6/28/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei	ipt (C): 5.6								
Method: SM450	0-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		11.9	mg/L	2.0	1	07/06/2023 09:56	07/06/2023 09:56	AMC	
Method: SM450	0-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.71	mg/L	0.1	1	06/30/2023 19:16	06/30/2023 19:16	AMC	
Method: USGS I	-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids	583	mg/L	10	1	07/05/2023 16:55	07/05/2023 16:55	RAA	



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Account #:	2040		Client:	Basin	Electr	ic Power Coop	perative		
Analytical	Result	S							
Lab ID: Sample ID:	1962500 LOS LA MW2010	NDFILL	Date Collected: Date Received:		26/2023 28/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei	pt (C):	5.6							
Method: ASTM I	0516-16								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate		41.4	mg/L	5	1	07/07/2023 10:55	07/07/2023 10:55	AMC	
Method: EPA 24	5.1								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury		<0.0002	mg/L	0.0002	1	07/07/2023 12:05	07/10/2023 11:20	MDE	
Method: EPA 60	10D								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron		0.23	mg/L	0.1	1	06/29/2023 16:48	07/06/2023 10:41	SLZ	
Calcium		23.6	mg/L	1	1	06/29/2023 16:48	07/10/2023 12:28	SLZ	
_ithium		<0.02	mg/L	0.02	1	06/29/2023 16:48	07/05/2023 16:25	SLZ	
Method: EPA 60	20B								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony		<0.001	mg/L	0.001	5	06/29/2023 16:48	07/06/2023 16:58	MDE	
Arsenic		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:58	MDE	
Barium		0.0476	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:58	MDE	
Beryllium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/07/2023 10:49	MDE	
Cadmium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:58	MDE	
Chromium		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:58	MDE	
Cobalt		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:58	MDE	
_ead		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:58	MDE	
Volybdenum		0.0105	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:58	MDE	
Selenium		<0.005	mg/L	0.005	5	06/29/2023 16:48	07/06/2023 16:58	MDE	
Thallium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:58	MDE	



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Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Lab ID: 19625004 Date Collected: 06/26/2023 08:40 Matrix: Groundwater LOS LANDFILL Sample ID: 06/28/2023 16:24 Date Received: Collector: Client MW2016-12 Temp @ Receipt (C): 5.6 Method: SM4500-CI-E 2011 Parameter Results Units RDL DF Prepared Analyzed By Qual 07/06/2023 07/06/2023 Chloride 38.9 mg/L 2.0 1 AMC 10:04 10:04 Method: SM4500-F-C-2011 Units RDL DF Parameter Results Prepared Analyzed By Qual 06/30/2023 06/30/2023 Fluoride 0.60 1 AMC mg/L 0.1 19:22 19:22 Method: USGS I-1750-85 Parameter Results Units RDL DF Prepared Analyzed Qual Ву 07/05/2023 07/05/2023 **Total Dissolved Solids** 1360 mg/L 10 1 RAA 16:55 16:55



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Account #:	2040		Client:	Basin	Electr	ic Power Coop	perative		
Analytical	Results								
Lab ID: Sample ID:	19625005 LOS LANDF 2016-13	ILL MW-	Date Collected: Date Received:		26/2023 28/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei									
Method: ASTM I	J516-16	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate		45.7	mg/L	5	1	07/07/2023 10:56	07/07/2023	-	
Method: EPA 24	5.1								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury		<0.0002	mg/L	0.0002	1	07/07/2023 12:05	07/10/2023 11:20	MDE	
Method: EPA 60	10D								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron		0.33	mg/L	0.1	1	06/29/2023 16:48	07/06/2023 10:42	SLZ	
Calcium		23.6	mg/L	1	1	06/29/2023 16:48	07/10/2023 12:29	SLZ	
Lithium		<0.02	mg/L	0.02	1	06/29/2023 16:48	07/05/2023 16:27	SLZ	
Method: EPA 60	20B								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony		<0.001	mg/L	0.001	5	06/29/2023 16:48	07/06/2023 17:02	MDE	
Arsenic		0.0021	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 17:02	MDE	
Barium		0.0588	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 17:02	MDE	
Beryllium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/07/2023 10:52	MDE	
Cadmium		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 17:02	MDE	
Chromium		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 17:02	MDE	
Cobalt		<0.002	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 17:02	MDE	
Lead		<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 17:02	MDE	
Molybdenum		0.0545	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 17:02	MDE	
Selenium		<0.005	mg/L	0.005	5	06/29/2023 16:48	07/06/2023 17:02	MDE	
Thallium		<0.0005	mg/L	0.0005	5	06/29/2023	07/06/2023	MDE	



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Account #: 2040 Client: **Basin Electric Power Cooperative Analytical Results** Lab ID: 19625005 Date Collected: 06/26/2023 07:50 Matrix: Groundwater Sample ID: LOS LANDFILL MW-06/28/2023 16:24 Date Received: Collector: Client 2016-13 Temp @ Receipt (C): 5.6 Method: SM4500-CI-E 2011 Parameter Results Units RDL DF Prepared Analyzed By Qual 07/06/2023 07/06/2023 Chloride 59.6 mg/L 2.0 1 AMC 10:05 10:05 Method: SM4500-F-C-2011 Units RDL DF Parameter Results Prepared Analyzed By Qual 06/30/2023 06/30/2023 Fluoride 0.50 1 AMC mg/L 0.1 19:30 19:30 Method: USGS I-1750-85 Parameter Results Units RDL DF Prepared Analyzed Qual Ву 07/05/2023 07/05/2023 **Total Dissolved Solids** 1500 mg/L 10 1 RAA 16:55 16:55



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Account #: 2040

Client: Basin Electric Power Cooperative

Result	ts Summary						WO #:	196	25
iulfate				Units: mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB			100	101.0	a necosety	ES ES	115		
-6			100	105.0		85	115		
Ð			100	107 0		85	115		
-6			100	101.0		85	115		
-8			100	94.5		85	115		
			100						
FB			100	98.2		85	115		
ù.			100	94.6		85	115		
			100	(100,0)		85	115		
ND .		14							
ua -		-5							
10,		-5							
la		5							
10		4							
ili		0							
iū.		-5							
18		-05							
					-				
IS/MSD	19619001		1000	88.0	88.3	85	115	0.0	50
IS/M5D	19625002		500	108.2	107,1	85	115	07	3()
s/MSD	19772001		500	111.6	120.6	85	115	0.7	20
S/MSD	19801002		500	62.1	76.4	85	115	5,6	26
IS/MSD	19801017		1000	85.9	38.5	61	115	1.3	20
S/MSD	19922005		500	84.4	88.0	85	115	2.5	20
5/MSD	20040001		500	60.5	66.3	85	115	4.2	20
hloride				Units: mg/L	_				
(С Түре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate	Lower Control Limit (%)	Upper Control Umit (%)	RPD (%)	RPD Limit (35)
40			30	93.3		90	110		
i i			30	93.5		90	110		
			-						
8			30	92.1		90	110		
FB			30	92.7		190	110		



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Chloride QC Type	Original Sample ID	Blank Result	Spike Amount	Units: Spile %	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD L(mit (%)
	Unginal Semple to	Brank Actin		Recovery	-	≫ Recoverγ	Lania (16)	Limit (%)	(0.0 f.e).	New Dimetral
fai			30	93.9			90	110		
FB			30	92.9			90	110		
FA			âŭ	92.6			90.	iio		
48		<2.0								
WB.		42.0								
BN		42 n								
dh		-2.0								
MD.		-2.0								
dh		<2.0								
44		<2.0								
distantin	19619003		30	114.0		115.2	80	120	0.3	30
M5/M5D	19772006		30	94.0		94.1	80	120	0.0	20
ws/instr	19926001		30	1680		123.3	90	120	0.7	20-
nsymou	199200.1		30	166.0		125.3	au	129	4.6.	30
Boron				Units:	mg/L					
QC TYpe	Original Sample ID	Blank Result	Spike Amount	Spike S Recovery		Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Linut (%)
TB-OE			0,4	101.0		A Hernard	85	115		
4B		- +0.1								
vis/MSD	19025001		D.A	103.6		113.0	70	1.182	1.0	20
20.2					_					
Calcium				Units:	mg/L					
OC Type	Original Sample ID	Blank Result	Splike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD [%]	RPD Limit (%)
FB-MI			300	110.0			BS	115		
a.		4								
ATA	19526001								10	20
				2016-2						
Lithium QC Type	Original Sample ID	Blank Result	Spike Amount	Units: Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	BPD (%)	RPD Limit (%)
	Outgatai Sample in	Brank Hesun		Recovery		% Recovery	Limit (%)	Limit (%)	BPD (76)	Red France (16)
FB-OE			0,4	106.0			85	115		
48		-0.04								
WS/MSD	19625001		0.4	107.6		101.0	70.	(16)	63	- X0-
Boron				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike M	angle -	Spile Duplicate	Lower Control Limit (%)	Lipper Control	RPD (%)	RPD Limit (%)
	and a second sec		the state of the	Recovery		% Recovery		Limit (%)	···· · · · · · · · · · · · · · · · · ·	Country Land



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Account #: 2040

Client: Basin Electric Power Cooperative

Calcium	- Antiperson	Louis-	A. Carter	Units:	mg/L	Constantion .	an anna an	and some of	C2.0x	
QC Type	Original Sample ID	Blank Result	Spike Amount	Spile % Recovery		Spike Duplicate % Recovery	Lower Control Lond (16)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
D5/PD50	17346005		\$001	105.0		105.0	75	125	0.2	20
05/P030	19772001		100	95.9		97.6	75	125	0.7	20
DS/PDSD	19807001		100	106.0		105.0	75	125	àž	-20
05/PD50	19922006		100	97.9		97.5	75	125	0.2	20
D5/PDSD	19922008		100	108-0		108.0	76	125	0.0	25
Antimony				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Amount	Spike N. Recovery		Splike Duplicate	Lower Control Limit (N)	Lipper Control Limit (N)	RPD (%)	RPD Limit (%)
ns/misd	19637001		0,4	103.0		102.0	70	130	15	20
Arsenic				Units;	mg/L					
ас Туре	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spille Duplicate	Lower Contral Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (36)
N5/MSD	19637001		0.4	103.0		101.0	70	130	2.7	20
Barium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recayery		Spike Ouplicate S Recovery	Lower Control Limit (%)	Upper Control Lumit (%)	RPD (%)	RPD (Enut (%)
IS/MSD	19637001		0,4	98.8		98.1	70	130	0.7	20
Beryllium				Units:	mg/L					
ас Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD [%)	RPD Limit [(E)
NS/MSD	19637001	_	0,4	:101.0	-	98.5	70	130	2.3	20
Cadmium		_		Units:	mg/L					
остуре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
45/MSD	19637001		0.4	102.0		303.0	70	130	12	20
Chromium				Units:	mg/L					
да Түрн	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Lumit (%)	RPD (%)	RPD Lunit (%)
AS/MSD	19637001		0,4	103,0		102.0	70	130	0,7	-20
Cobalt				Units:	mg/L					
астуре	Original Sample ID	Blank Result	Spike Amount	Spike is Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (15)	KPD (%)	RPD Limit (16)
ns/mso	19637001		0,4	103.0		1,02.0	- CM	130	1.0	26
ead				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spille th Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	HPD (%)	RPD Limit (%)
45/MSD	19637001		0.4	97.9		97.1	70	130:	1.0	20
Volybdenum	-			Units:	mg/L	6				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Umit (%)	RPD (%)	RPD Limit (%)
IS/MSD	19537001		0.4	105.0		110.0	70	130	16	20
Selenium				Units:	mg/L				_	
	Original Sample (D	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)



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Account #: 2040

Client: Basin Electric Power Cooperative

hallium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Lond (%)	Lipper Control Lumit (%)	RPD (%)	RPD Limit (%)
IS/MBD	19637001		0.4	95.3		94.2	70	130	9	20
Antimony				Units:	mg/L	_				
QC Турн	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control- Lumit (%)	RPD (15)	RPD Limit (96)
×.	19637001		0.5	107.0	-	Sincovery	75	125		
Arsenic				Units:	mg/L				-	
IC Type	Original Sample ID	Blank Nesult	Spike Amount	Spike in		Spike Duplicate	Lower Control Limit (%)	Upper Control- Limit (%)	RPD (%)	RPD Limit (%)
PK.	19637001		0,1	Recovery 104.0		% Recovery	75	125		
larium			_	Units:	mg/L				_	
K. Type	Original Sample ID	Blank Result	Spike Amount	Spike th		Spike Duplicate	Lower Control	Upper Control	HPD (%)	RPD Limit (90
PX .	19637001		0.1	Recovery 100.6	-	% Recovery	Limit (%) 75	Limit (%) 125		
Beryllium			-	Units:	mg/L		_			
C Type	Original Sample ID	Blank Result	Spike Aroount	Spike %	mg/ L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
PK.	19637001		01	Recovery 114.0	1	% Recovery	Limit (%) 75	Limit (%) 125	10- MI	are encount
			-							
admium				Units:	mg/L					
IC Type	Original Sample (D	Blank Result	Spike Amount	Spike Ri Riscovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (N)	RPD [%]	RPD Limit (%)
P#:	19637001		0.1	98.9			75	125		
hromium				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike W.		Spike Duplicate	Lower Control Limit (%)	Lipper Control	RPE (%)	BPD Limit (%)
ж	19837001		0.1	Regivery 104.0		K Recovery	75	Limit (%) 125		
obalt				Units:	mg/L					
С Туря	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Ouplicate	Lower Control	Upper Control	RPD (%)	RPD Lunit (%)
PAC	19637001		0.2	Recovery 105.0	-	% Recovery	Limit (%) 75	125 125		
ead				Units:	mg/L					
C. Type	Original Sample ID	Blank Result	Spike Amount	Spike W		Spike Duplicate	Lower Control	Upper Control	KPD (%)	RPD Lamit (%)
×.	19637061		0,1	Recovery 96.1		% Recovery	Umit (%) 75	Limit (%) 125	0.00	110,001
				_	_					
Aolybdenum	-	-		Units:	mg/L	and the second	and a		-	
(С Туре	Original Sample ID	Blank Result.	Spike Amount	Spike % Recovery	1.1	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limic (%)
K.	19637001		0.1	112.0			75	125		
elenium			-	Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate S Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD LETUE (96)
PK.	19637001		£.0	98.2			75	125		
hallium				Units:	mg/L	-				
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Soike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD [%]	RPD Limit (%)
P8;	19637001		0.1	92.0			75	125		
intimony				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike N-		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
			0.1	Becovery 101.0		% Recovery	Limit (%)	Limit (%) 5207		



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Account #: 2040

Client: Basin Electric Power Cooperative

Antimony				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spile % Recovery		Spike Duplicate & Recovery	Lower Control Lonia (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
al		<0.001								
AS/MSD	19625001		0.4	101.0		103.0	75	125	1.7	20
Arsenic				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Ouplicate	Lower Control	Upper Control	RPD (%)	RPD Librit (%)
IB-M5			0.1	Recovery 101.0		% Recovery	Limit (%)	Limit (%)		
40		<0.002								
10		\$0.007								
45/141512	19625001		0,4	104.0		101.0	75	125	3.4	3/B
Barium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Annuat	Spike % Recovery		Soike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (91)
FB-MS			0.1	:100.0		The property is	80	120		
13		<0.002								
		militale.								
IS/MSD	19675001		0.4	100.0		99.5	75	125	0.4	.20
Beryllium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %	ting/ c	Spike Ouplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-M5			0.1	Recovery 99.0		% Recovery	Limit (%) 30	Limit (%) 120		
10		<0.0005								
ns/mst	19625001		0.4	99.8		58.4	75.	125	33.	.ZD
Cadmium				Units:	mg/L	_				_
16. Type	Original Sample ID	Blank Result	Spike Ampont	Spike %		Spike Duplicate	Lower Control	Lipper Control	KPD (%)	RPD Limit (%)
FB-ME		_	9.1	Recovery 107.0		% Recovery	Limit (%) RD	Limit (%) 120		
40		ri) 0005								
45/MSD	19625001		0.4	102.0		102.0	75	125	0.5	20
Chromium				Units:	mg/L					
C Type	Original Sample ID	Blank Besult	Spike Amnunt	Spike hi	mg/ c	Spile Duplicate	Lowie Control	Upper Control	RPD (%)	RPD Limit (m)
FB-445			0.1	Recovery (08.0		% Recovery	Limit (%) 30	Limit (%) 120		
(B)		<0.007								
ns/msb	19675001		0,4	102.0		101.0	75	125	1.0	20
Cobalt			_	Units:	mg/L	_	_	-	_	
IC Type	Original Sample (D	Blank Result	Spike Amount	Spike W		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-MI5			0.1	Recovery 110.0		% Recovery	Limit (%) 80	Limit (%) 120		
a		0.007								
C.,										



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Account #: 2040

Client: Basin Electric Power Cooperative

Lead					ng/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	5	pike Duplicate Recovery	Lower Control Lond (%)	Lipper Control Limit (%)	RPD (%)	RPD L(mit (%)
FRI-MS			0.1	104.0			80	120		
MB		<2.0005								
MS/MSD	19625001		04	102.0	10	92.0	75	125	2.0	20
Molybdenum				Units: m	ng/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike Wi Recovery		pike Duplicite i Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
JF8-M5			0,2	112.0		(incornit)	30	120		
ME		-30.002								
MS/MBD	19025001		0.4	104.0	10	05.0	a	125	11	.ZD -
Selenium				Units: m	ng/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	5	pile Duplicate Recovery	Lower Contral Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (96)
FB-M5			0.1	95.7		Theorem .	80	120		
Mil		<0.005								
MS/MSD	19625001		0.4	101.0	50	0.60	75	125		20
Thallium				Units: m	ng/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	9	pike Duplicate Recovery	Lower Control Limit (75)	Upper Control Limit (16)	RPD (%)	RPD Limit (%)
JII-MS			0.1	99.4			81	120		
MB		<0.0005								
M5/M5D	19675001		0.4	1.80	98	9.01	75	125	1.0	20
Mercury				Units: m	ng/L					
QC Type	Original Sample ID	Blank Result	Spike Ammont	Špike % Recovery	5	oike Duplicate Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
176			0.002	87.8			85	115		
MB		<0.0002								
MS/MSD	19227003		0.002	95.6	67	5.a	70	130	54	20
M5/MSD	19625004		0.002	87-2	12	10	70	150	57	30
M5/MSD	19922001		0.002	96.8	.00	2.0	m	130	0.0	20
M5/MSD	19922012		0.002	910	4	м	m	1.00	.5.4	20
MS/MSD	20090001		0.002	91.6	34	4.6	70.	190	0.0	20
Fluoride		_		Units: m	ng/L		-			
QC Type	Original Sample ID	Blank Result	Spike Amount	Spille % Recovery	5	pike Duplicate L Recovery	Lower Control Limit (94)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
CRM-F			3.39	97.3			61.R	111		
10-F			0.5	DILO			90	110		
							-50	110		
urbri			0.5	0.60			30	110		



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Client: Basin Electric Power Cooperative

Fluoride				Units: mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Špike % Recovery	Spile Duplicate # Recovery	Lower Control Lond (%)	Upper Control Lumit (%)	RPD (%)	RPD L(mit (%)
MB-F		<0.1							
WB-F		×0.1							
AB-IT		-0.1							
AS/MSD-4	19625001		0.5	102.0	104.0	80	12/1	0.0	20
ds/MSD-F	19770001		0.5	102.0	104.0	30.	320	12	25
Total Dissolv	ed Solids			Units: mg/L					
ас туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (N)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
RM			736	98.0		90.35	110.13		
W0		>10							
N/F	19224001							0.0	30
NJF .	1957.5005							0.0	20



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Client: Basin Electric Power Cooperative

Toll Free: (80	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 ompany Name and Address Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571 Willing Address (indicate if different from above)					Pow	ver		Page of Work Order # Lab Use Only Phone # 701-745-7238 701-557-5488 Emails mdihle@bepc.comaknutson@bepc.com jermey.hurshman@aecom.com jason.lach@aecom.com Date Submitted			
						0		Phone # Emails mdihle@ jermey.h jason.la				
_	_			Project Na	ame/Numb LOS CC		ells		Purchase Ord	6/28/2023 er # 675266-04		
Lab Use Only Lab	Sar	nple ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A		Analysis R	equired		
001	LOS PONT	MW-2017-10	GW	6/26/2023	1406	100			, SO ₄ , Sb, As, I Se, TI, Ra226,		C 14 10 14 19 19 19	
002	LOS POND		GW	6/26/2023	1211	3		B, Ca, Cl, F Li, Hg, Mo,	, SO ₄ , Sb, As, I Se, TI, Ra226,	Ba, Be, Cd, Ra228, TD	Cr, Co,Pb, S	
003		Dup	GW	6/26/2023	1211	3	N		, SO ₄ , Sb, As, I Se, Tl, Ra226,			
004	LOS LANDFI	LL MW2016-12	GW	6/27/2023	840	3	N	Li, Hg, Mo,	, SO ₄ , Sb, As, I Se, TI, Ra226, , SO ₄ , Sb, As, I	Ra228, TD	S	
005	LOS LANDFI	LL MW-2016-13	GW	6/27/2023	750	3	N		Se, TI, Ra226,			
	-											
Comments:												
Tran MILLENNIUM E 2.	sferred by XPRESS	Date	Time	Received	by		Dat	te Time 23 /624	5.6%	ROI Y/N Y/N	Therm. # TM 920	

Form # 80-910005-1

samples. We will return the completed original with your results. See above for page number Effective Date: 26 Aug 2022



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Account #:2040Client:Basin Electric Power CooperativeWorkorder:LOS CCR Wells (19634)PO:790708-04 LOS

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 Carlep

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 SD SDWA

Subcontracted Analyses

Analyzed By	Company	Address	Phone	Certification
SUBv	Energy Labs Casper	2393 Salt Creek Highway, Casper. WY 82601	307-235-0515	CERT

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Account #: 2040

Client: Basin Electric Power Cooperative

Workorder Summary

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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Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

Lab ID: Sample ID:	19634001 LOS Pond MW-2017- 10	Date Collected: Date Received:	06/26/2023 14:06 06/28/2023 16:24	Matrix: Collector:	Groundwater Client	

Temp @ Receipt (C): 5.6

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See			1	08/07/2023	08/07/2023	SUBv	
	Attached See			4	08:04 08/07/2023	08:04 08/07/2023		
Radium 228	Attached			1	08:05	08:05	SUBv	



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Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

Lab ID: Sample ID:	19634002 LOS Pond MW-2017- 11	Date Collected: Date Received:	06/26/2023 12:11 06/28/2023 16:24	Matrix: Collector:	Groundwater Client	

Temp @ Receipt (C): 5.6

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See Attached			1	08/07/2023 08:05	08/07/2023 08:05	SUBv	
Radium 228	See Attached			1	08/07/2023 08:05	08/07/2023 08:05	SUBv	



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Account #: 2040 Client: Basin Electric Power Cooperative

Analytical	Results					
Lab ID:	19634003	Date Collected:	06/26/2023 12:11	Matrix:	Groundwater	
Sample ID:	Dup	Date Received:	06/28/2023 16:24	Collector:	Client	
Temp @ Rece	ipt (C): 5.6					

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See			1	08/07/2023	08/07/2023	SUBv	
Naululli 220	Attached			1	08:05	08:05	50DV	
Radium 228	See			1	08/07/2023	08/07/2023	SUBv	
Naululli 220	Attached			1	08:05	08:05	SUBV	



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Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Res	sul	tS
-----------------------	-----	----

o ID: mple ID:	19634004 LOS Landfill MW- 2016-12	Date Collected: Date Received:	06/27/2023 08:40 06/28/2023 16:24	Matrix: Collector:	Groundwater Client	

Temp @ Receipt (C): 5.6

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See Attached			1	08/07/2023 08:05	08/07/2023 08:05	SUBv	
Radium 228	See Attached			1	08/07/2023 08:05	08/07/2023 08:05	SUBv	



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

Analy	vtical	Results
Allar	<i>L</i> ICUI	I C C C C C C C C C C

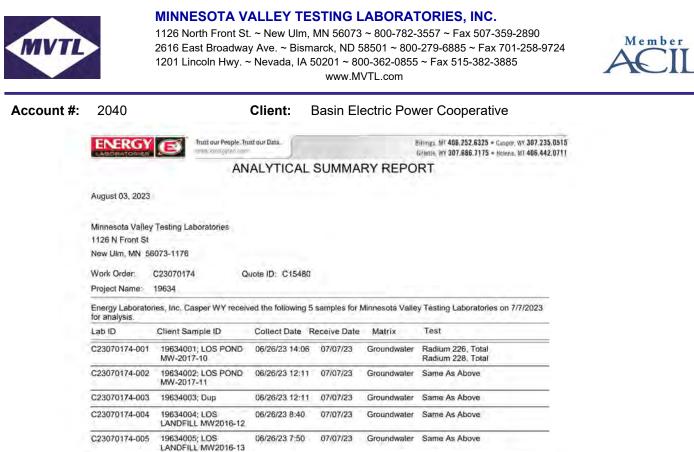
Lab ID: Sample ID:	19634005 LOS Landfill MW- 2016-13	Date Collected: Date Received:	06/27/2023 07:50 06/28/2023 16:24	Matrix: Collector:	Groundwater Client				

Temp @ Receipt (C): 5.6

Con	tract	Lab
-----	-------	-----

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See Attached			1	08/07/2023 08:05	08/07/2023 08:05	SUBv	
Radium 228	See Attached			1	08/07/2023 08:05	08/07/2023 08:05	SUBv	



The analyses presented in this report were performed by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager

Report Approved By:

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Account #: 2040

Client: Basin Electric Power Cooperative

ENERGY	Trust our People. Trust our Data.	Billings, MI 406,252.6325 + Casper, WY 307,235.051 Billetle, WY 307,886,7175 ⇒ Helena, MI 406,442.071
	LABORATORY ANALYTIC Prepared by Casper, WY	
Client:	Minnesota Valley Testing Laboratories	Report Date: 08/03/23
Project:	19634	Collection Date: 06/26/23 14:06
Lab ID:	C23070174-001	DateReceived: 07/07/23
Client Sample ID:	19634001; LOS POND MW-2017-10	Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.09	pCi/L	0			E903.0	07/24/23 14:41 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	07/24/23 14:41 / kdk
Radium 226 MDC	0.3	pCi/L				E903.0	07/24/23 14:41 / kdk
Radium 228	-0.1	pCi/L	Ú.			RA-05	07/18/23 14:34 / trs
Radium 228 precision (±)	0.7	pCi/L				RA-05	07/18/23 14:34 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	07/18/23 14:34 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

ENERGY	Trust our People. Trust our Data.	Billings, MI 406,252,6325 + Gasper, WY 307,235,051 Billette, WY 307,686,7175 + Helena, MI 406,442,071
	LABORATORY ANALYTICA Prepared by Casper, WY B	
Client:	Minnesota Valley Testing Laboratories	Report Date: 08/03/23
Project:	19634	Collection Date: 06/26/23 12:11
Lab ID:	C23070174-002	DateReceived: 07/07/23
Client Sample ID:	19634002; LOS POND MW-2017-11	Matrix: Groundwater

Analyses	Result Uni	ts Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL						
Radium 226	0.04 pCi	L U			E903.0	07/24/23 14:41 / kdk
Radium 226 precision (±)	0.1 pCi	L			E903.0	07/24/23 14:41 / kdk
Radium 226 MDC	0.2 pCi	L			E903.0	07/24/23 14:41 / kdk
Radium 228	-0.5 pCi	L U			RA-05	07/18/23 15:06 / trs
Radium 228 precision (±)	0.7 pCi	L			RA-05	07/18/23 15:06 / trs
Radium 228 MDC	1.2 pCi	L			RA-05	07/18/23 15:06 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit Q - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

Analyses		Result	Units	Qualifiers	RL	MCL/	Method	Analysis Date / By
Client Sample ID:	19634003; E	up				_		Matrix: Groundwater
Lab ID:	C23070174-	003					DateRe	eceived: 07/07/23
Project:	19634						Collectio	on Date: 06/26/23 12:11
Client:	Minnesota V	alley Testing Labor	atories				Repo	ort Date: 08/03/23
			2012/02/02	ANALYTICA Casper, WY B		ORT		
ENERGY		t our People. Trust our Da Cimienzaliaŭ com	ta.					06,252.6325 + Casper, WY 307.235.051 07.685.7175 > Helena, MI 406.442.071
	-		- (m)					

RADIONUCLIDES, TOTAL				
Radium 226	-0.03 pCi/L	U	E903.0	07/24/23 14:41 / kdk
Radium 226 precision (±)	0.1 pGI/L		E903.0	07/24/23 14:41 / kdk
Radium 226 MDC	0.2 pCi/L		E903.0	07/24/23 14:41 / kdk
Radium 228	-0.9 pCi/L	U	RA-05	07/18/23 15:06 / trs
Radium 228 precision (±)	0.7 pCi/L		RA-05	07/18/23 15:06 / trs
Radium 228 MDC	1.3 pCi/L		RA-05	07/18/23 15:06 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

ENERGY	Trust our People. Trust our Data.	Billings, MI 406,252.6325 + Casper, WY 307.235.051 Billette, WY 307.686.7175 + Helena, MI 406.442.071
	LABORATORY ANALYTICA Prepared by Casper, WY I	
Client:	Minnesota Valley Testing Laboratories	Report Date: 08/03/23
Project:	19634	Collection Date: 06/26/23 08:40
Lab ID:	C23070174-004	DateReceived: 07/07/23
Client Sample ID:	19634004; LOS LANDFILL MW2016-12	Matrix: Groundwater

					MCL/		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.1	pCi/L	U			E903.0	07/24/23 14:41 / kdk
Radium 226 precision (±)	0.1	pCi/L				E903.0	07/24/23 14:41 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	07/24/23 14:41 / kdk
Radium 228	-0.3	pCi/L	U			RA-05	07/18/23 15:06 / trs
Radium 228 precision (±)	0.7	pCi/L				RA-05	07/18/23 15:06 / trs
Radium 228 MDC	1.2	pCi/L				RA-05	07/18/23 15:06 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

Page 5 of 13

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Account #: 2040

Client: Basin Electric Power Cooperative

ENERGY LABORATORIUS	Thist our People. Trust our Data.	Billings, MI 406,252,6325 + Casper, WY 307,235,0515 Gillette, WY 307,686,7175 + Helena, MI 406,442,0711
	LABORATORY ANALYTICAL REPO Prepared by Casper, WY Branch	RT
Client:	Minnesota Valley Testing Laboratories	Report Date: 08/03/23
Project:	19634	Collection Date: 06/26/23 07:50
Lab ID:	C23070174-005	DateReceived: 07/07/23
Client Sample ID:	19634005; LOS LANDFILL MW2016-13	Matrix: Groundwater

				MCU		
Analyses	Result Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL						
Radium 226	0.05 pCi/L	0			E903.0	07/24/23 14:41 / kdk
Radium 226 precision (±)	0.1 pCI/L				E903.0	07/24/23 14:41 / kdk
Radium 226 MDC	0.2 pCI/L				E903.0	07/24/23 14:41 / kdk
Radium 228	0.1 pCi/L	Ú.			RA-05	07/18/23 15:06 / trs
Radium 228 precision (±)	0.8 pCi/L				RA-05	07/18/23 15:06 / trs
Radium 228 MDC	1.3 pCi/L				RA-05	07/18/23 15:06 / trs

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

Page 6 of 13

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Account #: 2040

Client: Basin Electric Power Cooperative

ENE		Irust our People, Jrust our Data,						llings, MT 406.252. illette: WY 307.686.			
					Summary by Casper, W	Y Brand	sh				
Client:	Minnesota Valley Te	esting La	aboratories		Work Order:	C2307	0174	Report	Date:	07/25/23	(<u></u>
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0						1.00			Batch: RA2	26-10961
ab ID:	LCS-RA226-10961	3.1	Laboratory Con	ntrol Samp	le		Run: TENN	ELEC-3_230711	C	07/24	23 14:41
Radium 2	26		9.6	pCi/L		96	70	130			
Radium 2	26 precision (±)		1.9	pCi/L							
Radium 2	26 MDC		0.23	pCi/L							
ab ID:	MB-RA226-10961	3 1	Method Blank				Run: TENN	ELEC-3_2307110	0	07/24	23 14:41
Radium 2	26		0,06	PCIL							U
Radium 2	26 precision (±)		0.1	pCi/L							
Radium 2	26 MDG		0.2	pCi/L							
ab ID:	C23070174-001ADU	P 3 1	Sample Duplic	ate			Run: TENN	ELEC-3_2307110	c.	07/24	23 14.41
Radium 2	26		0.092	pCi/L					0.3	30	U
Radium 2	26 precision (±)		0.15	pCI/L							
Radium 2 - The RE	26 MDC. R result is 0.0.		0,24	PCI/L							

Qualifiers: RL - Analyte Reporting Limit

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Report Date: Thursday, August 10, 2023 4:01:01 PM

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Account #: 2040

Client: Basin Electric Power Cooperative

LABOR		reaction proto	ple. Trust our l					llings, MT 406.252 llette, WY 307.686			
					Summary by Casper, W	Brand	sh				
Client:	Minnesota Valley Te	sting Lab	oratories		Work Order:	C2307	0174	Repo	rt Date:	07/25/23	-
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05						1.5.1			Batch: RA	228-714
Lab ID:	LCS-228-RA226-1096	51 3 Lat	poratory Con	ntrol Sampl	e		Run: TENN	ELEC-4_230711	IA	07/18	23 14:34
Radium 2	228		6.6	pCi/L		96	70	130			
Radium 2	228 precision (±)		1.5	pCi/L							
Radium 2	228 MDC		1.1	pCi/L							
Lab ID:	MB-RA226-10961	3 Me	thod Blank				Run: TENN	ELEC-4_230711	A	07/18	23 14:34
Radium 2	228		-0.7	pCi/L							U
Radium 2	228 precision (±)		0.6	pCi/L							
Radium 2	228 MDC		1	PCIL							
Lab ID:	C23070174-001ADUF	3 Sa	mple Duplic	ate			Run: TENN	ELEC-4_230711	A	07/18	23 14:34
Radium 2	228		-0.23	pCi/L					42	30	UR
Radium 2	228 precision (±)		0.66	pCI/L							
Radium 2	228 MDC		1.1	pCi/L							

Qualifiers:

RL - Analyte Reporting Limit

R - Relative Percent Difference (RPD) exceeds advisory limit

ND - Not detected at the Reporting Limit (RL) U - Not detected at Minimum Detectable Concentration (MDC)

Page 8 of 13

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Account #: 2040

Client: Basin Electric Power Cooperative

Work Order Receipt Checklist

Trust our People, Trust our Data

Minnesota Valley Testing Laboratories

Login completed by:	Dakota R. Januska		Dat	e Received; 7/7/2023	
Reviewed by:	cjohnson		R	eceived by: gah	
Reviewed Date:	7/13/2023		Ca	arrier name: UPS	
Shipping container/cooler in	good condition?	Yes 🗹	No 🖂	Not Present	
Custody seals intact on all s	hipping container(s)/cooler(s)?	Yes 🔲	No 🗌	Not Present 🔽	
Custody seals intact on all s	ample bottles?	Yes	No 🗖	Not Present	
Chain of custody present?		Yes 🗹	No 🗖		
Chain of custody signed wh	en relinquished and received?	Yes 🗹	No 🗌		
Chain of custody agrees wit	h sample labels?	Yes 🔲	No 🔽		
Samples in proper container	/bottle?	Yes 🗹	No 🔲		
Sample containers intact?		Yes 🗹	No 📋		
Sufficient sample volume for	r indicated test?	Yes 🗹	No 🖂		
All samples received within (Exclude analyses that are of such as pH, DO, Res Cl, So	considered field parameters	Yes 🗹	No 🗌		
Temp Blank received in all s	hipping container(s)/cooler(s)?	Yes 🔲	No 🔽	Not Applicable	
Container/Temp Blank temp	erature	14.5°C No los			
Containers requiring zero he bubble that is <6mm (1/4°).	aadspace have no headspace or	Yes 📋	No 🗌	No VOA vials submitted	V
Water - pH acceptable upon	receipt?	Yes 🗹	No 🗌	Not Applicable	

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

An additional cooler was received with a temp of 15.6°C

Sample 19634005-1 were received at pH~6, 2mLs of *added per *mL to preserve to pH <2.

BO#'s also included - 174743 and 173529.

Chain of custody lists as receiving 2 bottles per sample set and we only received one. 7/7/23 DR

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C23070174

Rillings, MT 406.252.6325 + Gasper, WY 307.235.0515 Gillette, WY 307.686.7175 = Helena, MT 406.442.0711



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Account #:	2040	10				C	lier	Basin E	Basin Electric F			Po 	ow 	er (00 	pera	ative			
	H Page 1 of 1	19634	Phone #: 704 259 0720	r faxed	E-mail: ccarroll@mvtl.com For a-mail report shock how	Date Submitted:	Purchase Order #:	Analysis	Analvsis Required	Ra226 & Ra228	Ra226 & Ra228	Ra226 & Ra228	Ra226 & Ra228	Ra226 & Ra228	Ges Ges	1 A) THE	Comments: Individual results as well as combined Ra226 & Ra228 must be reported for all samples.	Date: Tame.	
	ord	19	-	-			-	e	Other				-			1		orte	ŀ	
	Sec	#				~		Bottle Type	Glass Jar	-								Lep		2
	Υ H	rder						ottle	Umpreserved VOC Vials									be	:vq	0
	Chain of Custody Record	Work Order #		te		130		100	1000 ml HNO3	2	2	2	2	2		-		Ist	Received by:	Aconer
		Noi		Claudette		5	ber:	H		-		-	-	-	-	+	++-	Ē	Rece	
	of C			Cla	ampler:	ber	me/Num		Time	1406	1211	1211	0840	0750				3a228		Herr
	Chain		Account #:	Contact:	Name of Sampler:	Quote Number 15430	Project Name/Number:		Date Sampled	26-Jun-23	26-Jun-23	26-Jun-23	26-Jun-23	26-Jun-23				a226 & F	Sample Condition:	
									Sample Type	GW	GW	GW	GW	GW				bined R	Sample C	
	LABORATORIES, Inc. 2616 E Broadway Ave Bismarck. ND 58501	:58-9720 Fax: (701) 258-9724			(e):		2	Sample Information	Client Sample ID	LOS POND MW-2017-10	LOS POND MW-2017-11	Dup	LOS LANDFILL MW2016-12 GW	LOS LANDFILL MW2016-13 GW				well as com	Time:	1700
	RA TOR Broadwa	58-9720 Fax: (701)		2616 E Broadway	from abo	PO Box 249		Sample	Clien	LOS POI	LOS POI		OS LAND	OS LAND				ults as	Date:	30-Jun-23
	Phon	701) 2	1	2616 E B	Billing Address (indicate if different from above):	PO Bo	New Ulm, MN 56073		MVTL Lab Number	19634001	19634002	19634003	19634004 L	19634005 L				Individual rest	Transferred by:	3
	LANA	Toll Free: (800)	Company Name and Address:		Billing Address		l		Lab Number									comments:	Transfe	T. Olson

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count #:	2040	E (Client:	Basin Elect	tric Powe	er Coopera	itive
	HNO ³	Nitria coldi, Tranes Morell Oradia Tones is the research rear Common to the research rear	A constraint of the second sec	4.0. FOR social reacy. Take of time-databay at containmand clothop, fittile story with relativitions for social relations of clothop story and reaches and the fit (PCB). Review much, DO NOT values primiting. Remove usuited lineau. If pretent and stary lo do. Carlinear (metry metry Control Onticit). Review much, DO NOT values primiting. Remove and first Une DOZ, sty diminial, or fram the average metry. Main and first the prevent material clothop and starts Remove and the bio-event material clothop.	ornitated plano con control plano recruises classes responses plano	3. Composition/information on ingredients 3. Composition/information 3. Composition/information 6 month 104 No. 104 No. 1 month 102 No. 102 No. 1 month 102 No. 102 No. 1 month 102 No. 102 No. 1 month 1 month 102 No. 1 month 1 month 102 No. 1 month 1 month 102 No. 102 No. 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month 1 month <	Page 2/3
		SAFETY DATA SHEET Revelan Date 34-Dec-3021 Revelan Date 34-Dec-3021	1. Identificantion Ninric acid, Trace Metal Grade ASD-112, ASD0-500; AS00P500; AS00SK212 ASD-121, ASD0-500; AS00P500; AS00SK212 Astro-aci, Engreyera acid, Asa Ivras Astro-acid, Engreyera acid, Asa Ivras Astro-acid, Engreyera acid, Asa Ivras Astro-acid, Paral Ivras	nter chetartitica, junte ma usia, dobreja apolo chetartitica, junte ma usia, dobreja apolo chetartitica, conta ma usia, con-opa-apolo 2. Hazarde(s) identication transforma bite ziti chetari, transformation transmission de cara ten conta	Contensory 3 Contensory 3 Contensory 4 Contensory 1 A Category 1 A	tende	Figure () age
	8-1 -	ThermoFisher s c I E N T I F I C Creation Date 12/06/2009	Product Name Nitric ac Product Name Nitric ac Cat No. : AS00-21: Cat No. : AS00-21: Cata No. : AS00-21: Symmetry Cata American Dennis at Tis sussilier of the American Americ Dennis Company	The respect to the comparison of the constantical factor of the constantical fluctuation.	5 5	Lahel (Butterthi. Digad Word Digad Word Magnetoria Alay tenchy for collar May tenchy for collar May tenchy an one	
	•	ő			2008 800	Late Step News Manual Construction	Page 11 of



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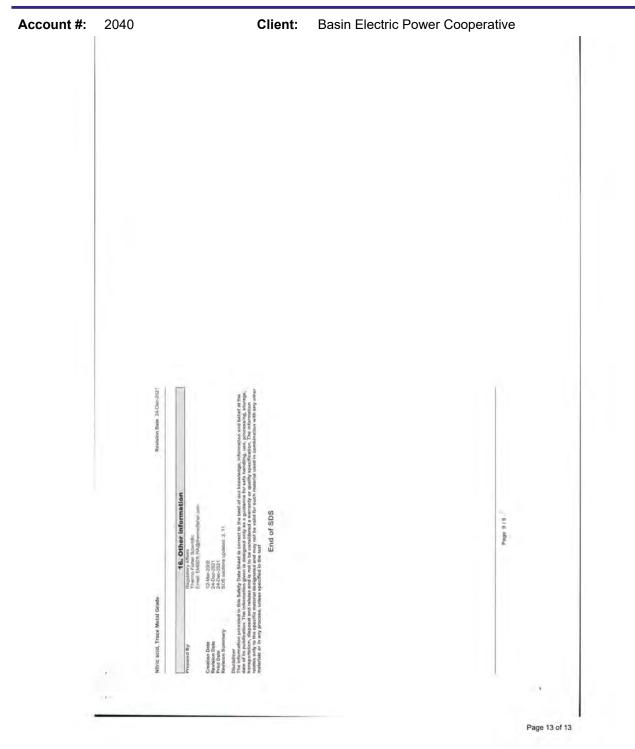


Client: Account #: 2040 **Basin Electric Power Cooperative** Page 6/9 12. Ecol Id. Tra ň acid, Trace Metal Grade CAS No 0-1/2 a Date not met. ATE > 2000 mg/k not met. ATE > 2000 mg/k mat. ATE > 20 mg 11. Toxicological in Page 5/9 10. Stability data, E Based on / acid, Trace Metal Grade Page 12 of 13



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

Toll Free: (80	2616 East Bro Bismarck, NI Phone: (701) 258-9		tories, Inc.		Electric 19634	Po	we	r Coope	1	Chain o Page	of	ody
TON FIGE: (or	10) 2/9-0005	Pax: (701) 258-9724								k Order #	ŧ	
Company Name		ectric Power Coop.		Account #	2040		-	Phone	#	745-7238	701-557-54	488
	3901	nd Olds Station Highway 200A			Mark Dihle	3		And the second sec	@bepc	.com akn	test. Second and a second	oc.com
Billing Address	(indicate if different	ton, ND 58571		Name of S mls	Sampler					man@aeco	m.com	
bining Address	(indicate in different	nom above)		Quote Nui	mber	_		jason.la		ecom.com Submitted		
				autore ma	inder				Date		28/2023	
				Project Na	ame/Numb LOS CCI		ells		Purc	hase Order 67	r # /5266-04	
Lab Use Only Lab	Sa	mple ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A		A	nalysis Re	quired	
001	LOS PONI	0 MW-2017-10	GW	6/26/2023	1406		10	Li, Hg, Mo	Se, T	I, Ra226, R	a228, TDS	Cr, Co,Pb,
002	LOS PONE	MW-2017-11	GW	6/26/2023	1211	3	N	Li, Hg, Mo	, Se, T	I, Ra226, R	a228, TDS	Cr, Co,Pb,
003		Dup	GW	6/26/2023	1211	3	N	B, Ca, Cl, I Li, Hg, Mo				Cr, Co,Pb, S
004	LOS LANDFI	LL MW2016-12	GW	6/27/2023	840	3	N	B, Ca, Cl, I Li, Hg, Mo				Cr, Co,Pb,
005	LOS LANDFI	LL MW-2016-13	GW	6/27/2023	750			B, Ca, Cl, I Li, Hg, Mo	F, SO4	, Sb, As, B	a, Be, Cd,	Cr, Co,Pb,
Comments:									-			
	sferred by	Date	Time	Received	d by	1	Dat	te Tin	ne T	Temp	ROI	Therm. #
MILLENNIUM E	XPRESS		100	AA		28	Ju	23 1620	1	5.6%	YIN	TM 920
2.											Y/N	1

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

Form # 80-910005-1 See above for page number Effective Date: 26 Aug 2022



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Account #: 2040

Client: Basin Electric Power Cooperative

Toll Free: (80	2616 East Broa Bismarck, ND Phone: (701) 258-972	58501	tories, Inc.	Basin WO:	Electric 19634	Po	we	er Coope	2	hain Page _	L	usto	ody
Company Name				Account #		-	-	Phone		a only		-	
		tric Power Coop.			2040	_	_		701-7	45-7238	701-5	57-548	88
		Olds Station ighway 200A		Contact	Mark Dihle				Emails mdihle@bepc.com aknutson@bepc.com				c com
	Stanto	n, ND 58571		Name of S		-	-			nan@ae			0.0011
Billing Address	(indicate if different fr	om above)		mis		_	_	jason.la		ecom.co		_	_
				Quote Nu	mber				Date	Submitte	ed 6/28/20	23	
				Project Na	ame/Numb LOS CCF	er R W	ells	5	Purch	ase Ord			
Lab Use Only Lab	Sam	ple ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A		Ar	nalysis F	Require	d	
001	100 0000	MIN 0017 10				1.1	11	B, Ca, Cl, F	, SO4,	Sb, As,	Ba, Be	, Cd, C	
	LOS POND	MW-2017-10	GW	6/26/2023	1406	3	N	Li, Hg, Mo, B, Ca, Cl, F	Se, TI	, Ra226, Sb. As.	Ra228 Ba, Be	, TDS	Cr. Co.Pb
002	LOS POND	MW-2017-11	GW	6/26/2023	1211	3	N	Li, Hg, Mo,	Se, TI	, Ra226,	Ra228	TDS	1213
003	D	up	GW	6/26/2023	1211	3	N	B, Ca, Cl, F Li, Hg, Mo,	1				
004	LOS LANDFILI	MW2016-12	GW	6/27/2023	840	3	N	B, Ca, Cl, I Li, Hg, Mo	Se, TI	, Ra226,	Ra228	TDS	
005	LOS LANDFILL	MW-2016-13	GW	6/27/2023	750	3	N	B, Ca, Cl, I Li, Hg, Mo	- V - C - M				
			_			-		-		_			
Comments:				1		-							
	sferred by	Date	Time	Received	l by		Da			Temp	R		Therm.
MILLENNIUM B	XPRESS			agen		125	11.	13 11076	1 1	510%	V	1.50	T407

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

Form # 80-910005-1

2.

samples. We will return the completed original with your results. See above for page number Effective Date: 26 Aug 2022

YIN

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SEPTEMBER 2023



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Account #:2040Client:Basin Electric Power CooperativeWorkorder:LOS Plant Ponds CCR Wells (28070)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 Carlep

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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Account #: 2040

Client: Basin Electric Power Cooperative

Workorder Summary

Sample Comments

28070001 (MW-2017-10) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070002 (MW-2017-11) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070003 (MW-2017-8D) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070004 (Dup) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070005 (MW-2017-8) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070006 (MW-2017-7) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070007 (MW-2017-6) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070008 (MW-2017-5) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070009 (MW-2017-1) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070010 (MW-2017-2) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070011 (MW-2017-3) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070012 (MW-2017-4) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

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Account #: 2040

Client: Basin Electric Power Cooperative

Analytical Results



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Account #: 2040

Client: Basin Electric Power Cooperative

C Result	ts Summary						WO #:	280	70
iulfate IC Type	Original Sample ID	Blank Result	Spike Amount	Units: mg/L SpRe %	Spike Duplicate	Lower Control	Lipper Control Limit (%)	APD (%)	APD Limit (%)
FB			100	Recovery 93.9	36 Recovery	Limit (%) RS	Limit (%) 115		
-B			100	96.5		85	115		
6			100	87.3		85	115		
ă.			100	91.6		85	115		
-			100	911		85	115		
Ð			100	96.1		85	215		
ù.			100	:100.0		85	115		
rn -			100	-100.0		85	115		
9			100	99.0		85	115		
0		15							
iii.		3							
a		15							
6		4							
в		6							
ō		5							
0		0							
0		4							
ð.		4							
S/MSD	27999Dk0		4000	87.4	87.9	85	115	0.2	20
S/M873	22070003		500	R7 7	KE 2	85	-115	0.3	20
s/MS0	28072001		500	92.0	93.8	63	115	0.9	20
IS/MSD	28072011		.500	85.1	92.6	85	115	1.7	20
5/MSD	78215007		100	79.3	79.4	RS	115	1.0	20
5/M5D	28216004		1000	84.8	83.9	RS	115	0.6	20
5/MSD	78433007		500	86.3	86.6	65	115	0.4	2D-
s/MSD	28433003		500	101.5	101.1	85	115	0.7	20
hloride C Type	Original Sample ID	Blank Result	Spike Amount	Units: mg/L Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Eimit (%)

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Account #: 2040

Client: Basin Electric Power Cooperative

Chloride					ng/L				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spile % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Lumit (%)	RPD (%)	RPD Limit (%)
FBI			301	97.4		90	110		
F8			30	96.9		90	110		
10			30	96 â		<i>\$</i> 0	iio		
58			30	96.8		90	110		
10			30	95.5		90	מבנ		
			30	96.5		90	110		
ΗÐ									
(h.			80	96.8		40	110		
AD		-2.0							
AD.		32.0							
All		<2.0							
AB		<2.0							
40		<2.0							
48		<2.0							
46		<2.0							
48		-20							
		20							
AS/MSD	28070002		30	88.9	88,9	80	120	0.0	20
AS/MSD	28072001		30	91.7	94.3	80	120	0.4	50
ls/MSD	28215004		90	86.8	85.9	30	3.20	0.4.	20
45/M5D	28354001		30	97.0	96.4	30	120	0.0	20
Calcium				Units: n	ng/L				
2C Type	Original Sample ID	Blank Result	Spike Amount	Spike W	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
P8-MI			300	Recovery 112.0	% Recovery	Limit (%)	Limit (%) 115		
						~			
FBIANI			100	112.0		65	115		
46		/Ib:							
AB		-x()							
N/P	28052001							÷2	20
μP.	28070005							1.9	20
NIP.	28072012							0.i	20

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Account #: 2040

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Boron	a desta contractor	Letter a	Section	Units:	mg/L	and the second	all concerning	and the second	622.00	August and a second sec
QC Type	Original Sample ID	Blank Result	Spike Amount	Spile % Recovery		Spike Duplicate % Recovery	Lower Control Limit (16)	Lipper Control Limit (%)	RPD (%)	RPD L(mit (%)
05/P050	28580005		3	96.0		95.2	75	125	0.3	20
Calcium				Units:	mg/L	_				
QC TVDH	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control- Lumit (%)	RPD (%)	RPD Limit (%)
05/P050	27649002		100	102.0		102.0	75	125	0.1	-20
05/P050	27844003		100	111 <i>0</i>		110.0	75	125	97	30
05/P050	28070004		100	-102.0		330.0	75	125	1.6	20
05/PD50	28072001		100	105,0)11.0	75	125	33	цп
D5/PDSD	28072013		100	108-0		112.0	75	125	3.0	2D
D5/PD50	28215006		100	:102.0		104.0	15	125	0.0	
05/PD50	28216002		100	101.0		376. R	75	125	3.3	20
Antimanu				Units:	mg/L					
Antimony RC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD LEnut (%)
PK/SPKD	28072001		01	Recovery 97.2	-	36 Recovery 99.1	Limit (%). 75	ümit (%) 125	1.9	20
Arsénic				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	Becovery 91.2	-	% Recovery 92.2	Limit (%) 75	Limit (%) 125	1.0	20
Barium			_	Units:	mg/L	-				
DC Type	Original Sample ID	Blank Result	Splike Amount	Spike M	mbre	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	Recovery 80.5	-	% Recovery 78.2	Limit (%) 75	Limit (%) 175	1.9	30
Beryllium		_		Units:	mg/L	_				
DC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Lumit (%)	8PD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	107.0	-	102.0	75	125	4.0	20
Cadmium		_		Units:	mg/L		_			
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike IF Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	KPD (%)	RPD Limit (%)
PA/SPRD	28072001		0,5	87.7		678	79	125	-0.1	20
Chromium		_		Units:	mg/L				-	
2C Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	99.2		97.3	75	125	1.7	20
Cobalt		1.0.2		Units:	mg/L					
QC Түре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spille Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	97.1		94.7	75	125	2.4	20
					_					
Lead QC Type	Original Sample (D	Blank Result	Spike Amount	Units: 5pike %	mg/L	Spike Ouplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)

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Account #: 2040

Client: Basin Electric Power Cooperative

Molybdenum				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (16)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
ibk/SPKD	28072001		0.1	94.9		96.3	75	125	17	20
Selenium				Units:	mg/L					
QC Type	Original Sample ID	Elank Result	Spike Amount	Spike % Recovery		Spike Duplicate S Recovery	Lower Control Limit (%)	Upper Control Lumit (%)	RPD (%)	RPD Limit (96)
PK/SPK0	28072001		0.1	89.0		86.0	75	125	3,4	20
Thallium			_	Units:	mg/L				_	
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate % Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	86.7		86.0	75	125	0.8	26
Boron				Units:	mg/L					
QC Туре	Original Sample ID	Blank Result	Spike Amount	Spille % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	HPD (%)	RPD Limit (%)
FRIDE			0.4	107.0			65	115		
10-01			0.4	102.0			<u>6</u>	115		
un		80.4								
40		<0.1								
45/44510	28070001		17.4	96.5		90 3	75	125	1.8	20
vis/Msia	28072001		0,4	84.4		Ball	75	125	a,q	20
ns/mso	28072004		0.4	95.7		969	75.	125	0.2	20
AS/MSD	29072005		0.4	80.3		775	75.	125	0.5	20
AS/AASD	28072011		0.4	101.0		95.2	75	125	1.9	20
Lithium			1.1.1.1	Units:	mg/L	5				
DC TYPE	Original Sample ID	Blank Result	Spike Amount	Špike M Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (90)
FB-QE			0.4	105.0			85	115		
16-OL			0.4	104.0			85	115		
Ab		:0.04								
MB.		<0.04								
45/7450	28070001		0.4	96.0		-98.2	75	125 -	2.2	-20
A5/MSD	28072004		0,4	94.A		92.6	75	125	15¥	20
45/MSD	28072005		0.4	97.0		98.1	75	125	3.2	20
AS/MSD	28072013		0,4	96.8		96.8	75	125	0.0	20
Antimony				Units:	mg/L					
Q⊂ Type	Original Sample ID	Blank Result	Spike Ammunt	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
			0.i	102.0			80	120		
F8I-M5										
F86-M5			01	104.4			60	120		



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Account #: 2040

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Antimony 20 Type	Original Sample ID	Blank Result	Spike Amount	Units: Spile %	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
Al	and a second of the	<0.001		Recovery		% Recovery	Limit (%)	Limit (%)	A DAMA	A - Second
-										
AS/MSD	28070001		0.4	101.0		102.0	75	125	12	20-
AS/MSD	28072004		0.4	1010		100.0	75	125	2.7	20
is/MsD	28072005		0.4	85,8		67.3	75	125	0.9	20
IS/MSD	28072011		0,4	103.0		102.0	75	125	15	20
Arsenic				Units:	mg/L					
1С Туре	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
RI-MS			0.1	Recovery 97.2		% Recovery	Limit (%) (80	Limit (%) 120		
II-M5			1.0	97.4			80	120		
420		<0.007								
19		-10.002								
45/1450	28070001		0.8	95.7		97.4	15	125	15	20
IS/MSD	28072004		0.4	99.4		94.5	75	325	32	-20
IS/MSD	28072005		0.4	95.8		97.6	75	125	0.7	20
IS/MBD	28072013		0.4	101.0		100.0	75	125	10	26
larium			_	Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control- Limit (%)	RPD (%)	RPD Limit.(%)
RI-MS			0.1	92.0			80	120		
HI-MI			0.1	35.1			80	120		
683		<0.002								
10		-0.007								
ATT/AASD:	28070001		0.4	- 808-X			15	125	1.4	:ID-
in marks	anonine -							-		20
IS/MSD	28072004		0.4	19.2		87.8	75	125	14	20
is/MsD	28072005								1.0	20
is/MSD	28072013		0.4	91.1		69.4	75	125	ii.	20
Beryllium				Units:	mg/L					
ас туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPELLIMIT (15)
FB-M5			0.1	106.0			30	120		
rii-M5			0.1	104.0			80	120		
10		>0.0005								
A0		<0.0005								

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Beryllium QC Type	Original Sample ID	Blank Result	Spike Amount	Spile %	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
M5/M5D	28070001		0.4	Recovery 101.0	-	% Recovery	Limit (%) 75	Limit (%) 125	5,6	20
MS/MSD	28072004		0.4	108.0		105.0	75	125	2.6	20
ws/wsb	28072005		0.4	105-0		106.0	75	125	ē6	. 20
ws/wastr	28072013		0.4	111.0		109.0	75	125	21	20
Cadmium				Units:	mg/L	-				
OC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	102.0		a necovery	30 30	120		
FD-MS			0.1	100.0			81	120		
MD		<0.0005								
ма		<0.0005								
45/MSD	28070001		0.4	97.4		97.8	75	125	0.3	20
AS/MSD	28072004		0.4	100.0		97 (75	125	11	20
AS/MSD	28072005		0.4	95.7		951	75	325	àš	.20
45/MSD	28072013		0.4	98.9		97.6	75	125	13.	20
Chromium				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Splike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD [%]	RPD Limit (%)
FB-445-			0.1	1100			30	120		
AD-MS			0.1	309.0			60	120		
(10)		<0.002								
		<0.002								
MB	28070901		0.4	104.0		105.0	75	125	L7	20
MB M5/MSIX	28070001 28072064		0.4	104.0		106.0 105.0	75 75	125	i.7 1.0	-20 -20
MB M5/MSD: M5/MSD:	28072004		0.4	109.6		105.0	75	125	8.0	3D
MB M5/MSD: M5/MSD:										
MB AS/MBD MS/MBD AS/MBD	28072004		0.4	109.6		105.0	75	125	8.0	3D
MB MS/MSD: MS/MSD MS/MSD MS/MSD	28072004 28072005		0.8	109.0 108.0 109.0	mg/L	105.0 107.0	75	125	8.0 Q.4	3D .20
MB MS/MSD MS/MSD MS/MSD Cobalt	28072004 28072005		0.8	100.0 100.0 109.0 Units:	mg/L	105.0 107.0 110.0 Spike Oupleate	75 75 75	125 125 125	8.0 Q.4	30 .20
NS/MSD NS/MSD NS/MSD NS/MSD Cobalt QC Type	28072004 28072005 28072013	-0.002	0.4 0.4	109.0 108.0 109.0 Units:	mg/L	105.0 107.0 110.0	75 75 75	125 125 125	8.0 0.4 0.7	20 20 30
HB HS/NBD HS/NBD HS/NBD HS/NSD Cobalt DC Type FB-MS	28072004 28072005 28072013	-0.002	0.4 0.4 Spike Amount	109.0 108.0 109.0 Units: Spike%, Recovery	rmg/L	105.0 107.0 110.0 Spike Oupleate	75 75 Lower Control Limit (to)	125 125 125 Upper Control Limit (%)	8.0 0.4 0.7	20 20 30
HB AS/ABD AS/ABD AS/ASD AS/ASD CODAIT CODAIT CODAIT FBAGS FBAGS FBAGS	28072004 28072005 28072013	.<0.002 Blank Regult	0.4 0.4 Spike Amount 0.1	109.0 108.0 109.0 Units: Spike % Recovery 109.0	mg/L	105.0 107.0 110.0 Spike Oupleate	75 75 75 Lower Control Limit (IP) 30	125 125 125 Upper Control- Limit (%) 220	8.0 0.4 0.7	20 20 30
HB AS/ABD AS/ABD AS/ASD AS/ASD CODAIT CODAIT CODAIT FBAGS FBAGS FBAGS	28072004 28072005 28072013	-0.002	0.4 0.4 Spike Amount 0.1	109.0 108.0 109.0 Units: Spike % Recovery 109.0	mg/L	105.0 107.0 110.0 Spike Oupleate	75 75 75 Lower Control Limit (IP) 30	125 125 125 Upper Control- Limit (%) 220	8.0 0.4 0.7	20 20 30
MB MB MS/MBD MS/MBD MS/MSD MS/MSD Cobalt Cobalt Cobalt Cobalt Cobalt Cobalt Cobalt MS MS MS MS MS MS MS MS MS MS	28072004 28072005 28072013	.<0.002 Blank Regult	0.4 0.4 Spike Amount 0.1	109.0 108.0 109.0 Units: Spike % Recovery 109.0	mg/L	105.0 107.0 110.0 Spike Oupleate	75 75 75 Lower Control Limit (IP) 30	125 125 125 Upper Control- Limit (%) 220	8.0 0.4 0.7	20 20 30



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Account #: 2040

Client: Basin Electric Power Cooperative

Cobalt QC Type	Original Sample ID	Blank Result	Spike Amount	Spile N	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
M5/M5D	28072004		0.4	Recovery 106.0		% Recovery	Limit (%) 75	Limit (%) 125	8.6	20
M5/MSD	28072005		0.4	102.0		102.0	75	125	0.0	20-
ws/wsu	200720825		0.a	102.0		302.0	14	125	00	20
MS/MSD	28072013		04	107.0		105.0	75	125	14	20
Lead				Units: r	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
J-0-145			0/2	102/0			30	120		
FB-MS			0.5	109.0			31	3.20		
MD		+0.0005								
MD		<0.0005								
dis/Mitio	28070001		0.4	99.5		102.02	-15	175	8.0	dD-
M5/M5D	28072004		0.4	100.0	3	0.00	75	125	4.4	-20
M5/MSD	28072005		0.5	96.1		96.1	75	125	0.0	20-
ws/wsb	26072013		0.4	102.0		101.0	75	125	10	.20
Molybdenum				Units: r	mg/L					
DC Type	Original Sample ID	Blank Result	Splike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-M5			0.1	Recovery 102.0	-	% Recovery	Limit (%) 30	Limit (%) 120		
FB-MS-			.0.4	104.0			30	750		
MB		+0.002								
MD		-10.002								
MS/MSD	28070001		0.4	96.3		97.1	75	125	1.0	-20
The Trans							1.4			140
M5/MSD	28072004		0.4	8.00	1	97 R	75	125	11	20
M5/M5D	28072005		0.4	1.10		115.7	75	125	3.4	ab-
	28072013		0.4	102.0		48-5	75	125	2.8	.20
ws/wsb	26072011									
	28072011				mg/L	_				
NS/NSD Selenium QC Type	Original Sample ID	Blank Result	Spike Amount	Units: r Spike %	mg/L	Spike Dupiloste % Recovery	Lower Control	Upper Control	BPD (%)	RPD Limit (%)
Selenium QC Type		Biank Result		Units: r		Spike Dupiloste % Recovery	Lower Control Limit (%) 30	Upper Control Limit (%) 120	BPD (%)	RPD Limit (%)
Selenium QC Type JFB-MS		Blank Result.	Spike Amount	Units: r Spike % Recovery		Spike DupRate % Recovery	Limit (%)	Limit (%)	8PD (%)	RPD Limit (45)
Selenium QC Type JB-MS JB-MS		Blank Result	Spike Amount	Units: r Spike % Recovery 97.6		Spike Duplicate % Recovery	Limit (%) 30	Limit (%) 120	8PD (%)	RPD Limit (%)
Selenium QC Type JFB-MS JFB-MS MB		-0.035	Spike Amount	Units: r Spike % Recovery 97.6		Spike DupRote % Recovery	Limit (%) 30	Limit (%) 120	BPD (%):	RPD Limit (H)
Selenium QC Type JB-MS JB-MS			Spike Amount	Units: r Spike % Recovery 97.6		Spike Dupliopte % Recovery	Limit (%) 30	Limit (%) 120	RPD (%)	RPD Limit (H)
Selenium QC Type JFB-MS JFB-MS MB		-0.035	Spike Amount	Units: r Spike % Recovery 97.6		Spike DupRote % Recovery ≋ #	Limit (%) 30	Limit (%) 120	BPD (%)	RPD Limit (H)



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Account #: 2040

Client: Basin Electric Power Cooperative

Selenium QC Type	Original Sample 10	Blank Result.	Spike Amount	Spike %	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
W5/M5D	28072005	2.4.4.4	0.4	Recovery 94.2	_	% Recovery 94.7	Limit (%) 75	Lumit (%) 125	0.5	20
MS/MSD	28072013		0.4	98.1		300.0	75	125	2.3	20
Thallium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery	-	Spike Ouplicate	Lower Control	Upper Control Limit (%)	RPD [%)	RPD Limit (16)
FB-M5			0,3	96.3			81	320		
FBLMS			0,3	97.2			30	3.20		
48		-10.0005								
MB		<0.0005								
MS/MSD	29070001		0.4	94,1		94.3	75	125	0.3	30
MS/MSD	78072004		0.4	94.8		94.7	75	1.25	0.5	20
M5/M5D	28072005		0.4	94.2		92.1	75	125	0.8	20
WS/MSD	28072013		0.4	96.1		95.4	75	125	0.5	30
Mercury				Units:	mg/L					
DC TYPE	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control	Upper Control Limit (16)	RPD (%)	RPD Limit (15)
Fb			0.002	94.6			85	115		
6			0.062	99.6			85	115		
R.B.		<0.0002								
HE		<0.0002								
MS/MSD	27912001		-0,002	97.4		301.0	70	130	5.1	20
MS/MSD	27912007		0.002	107.0		104.0	70	130	0.0	.2D
45/445D	28072001		0.007	106.0		108.0	70)30:	4.9	20
M5/M5D	28072013		0.002	96.4		107.0	70	130	10.0	2b
Fluoride				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control Lumit (%)	RPD (%)	RPD Limit (%)
CRAN T			12	Recovery 97.5	-	Wecovery	Limit (%) 85-8	111 111		
FBF			0.5	101.0			90	מבנ		
1-B-1-			0.5	100,0			90	110		
FØF			0.5	98.0			90	0.02		
			0.5	300.0			90	110		
1944			0.5							
216-4 MD-4		±0.7	0.5							



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Account #: 2040

Client: Basin Electric Power Cooperative

Fluoride				Units: mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery	Spike Duplicate % Recovery	Lower Control Lond (%)	Lipper Control Lumit (%)	RPD (%)	RPD Limit (%)
MBHF		<0.1							
MB-I		-0.1							
ws/MSD-4	28070001		٥٥	100.0	0.50 <i>i</i>	ái.	120	0.0	2h
vis/MSD-#	28070011		0.5	104.0	104.0	80	120	00	20
NS/MSD-F	28072001		0.5	106.0	0 BDF	30	120	1.0	20
M5/M5D.F	28072013		0.5	102.0	98.0	30	320	1,8	30
Total Dissolv	ed Solids			Units: mg/L					
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
ORM			735	.100.0		50.35	110,38		
CRM			736	100.0		90.35	110.33		
W6		<10							
ua		k10							
aue.	27632001							0.7	20
NUP.	28072001							1.1	20



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Account #: 2040

Client: Basin Electric Power Cooperative

Toll Free: (800	Minnesota Valley Testing Labo 2616 East Broadway Avenue Bismarck, ND 58501 Phone: (701) 258-9720)) 279-6885 Fax: (701) 258-9724	ratories, Inc.	Basin WO: 2	Electric 28070	Po	we	Chain of Custody Page of Work Order #
Company Name a			Account #			-	Phone #
	Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A		Contact	2040 Mark Dihle	,		T01-745-7238 701-557-5488 Emails mdihle@bepc.com_aknutson@bepc.com
	Stanton, ND 58571		Name of S			-	jermey.hurshman@aecom.com
illing Address (indicate if different from above)		mls			_	jason.lach@aecom.com
			Quote Nur	nber			Date Submitted 9/13/2023
			Project Na LOS P	me/Numb		cc	Purchase Order #
Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	A/N	Analysis Required
001	MW-2017-10	GW	9/12/2023	1030			B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,P Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS
002	MW-2017-11	GW	9/12/2023	840	3	N	B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,P Li, Hg, Mo, Se, Tl, Ra226, Ra228, TDS
003	MW2017-8D	GW	9/11/2023	1050	3	N	B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,P Li, Hg, Mo, Se, Tl, Ra226, Ra228, TDS
004	Dup	GW	9/12/2023	840	3	N	B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,P Li, Hg, Mo, Se, Tl, Ra226, Ra228, TDS
005	MW2017-8	GW	9/11/2023	915	2	-	
006	MW-2017-7	GW	9/11/2023	1211	2	N	TDS, B, Ca, Cl, F, SO ₄
007	MW-2017-6	GW	9/11/2023	1400	2	N	TDS, B, Ca, Cl, F, SO4
008	MW-2017-5	GW	9/12/2023	935	2	N	TDS, B, Ca, Cl, F, SO4
009	MW-2017-1	GW	9/12/2023	1145	2	N	TDS, B, Ca, Cl, F, SO4
Comments:							

All Transferred by	Date	Time	Received by	Date	Time	Temp	ROI	Therm. #
1. Millennim Express	9-13-23		AV.atherast	13Set 23	1044	7.4°C	ØIN	Tm920
2.			C. Marce				Y/N	

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

Form # 80-910005-1

See above for page number

Effective Date: 26 Aug 2022



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Account #: 2040

Client: Basin Electric Power Cooperative

MVIL 2	Winnesota Valley Testing I 2616 East Broadway Aven Bismarck, ND 58501 ne: (701) 258-9720		1	Lab Use	0	nly		Chain o Page	f Cust	ody 2
Toll Free: (800) 279	9-6885 Fax: (701) 258-	9724						Vork Order #		
Company Name and A	Address Basin Electric Power Co	00	Account #	2040			Phone #	701-745-7238 7	01-557-54	88
	Leland Olds Station 3901 Highway 200A		Contact	Mark Dihle			Emails	bepc.com aknu		
Address (Indi	Stanton, ND 58571 cate if different from above)		Name of S	ampler				urshman@aecor h@aecom.com	m.com	
ming Address (maid	ate il anterent nom above)		Quote Nui	mber	_			Date Submitted		_
				ame/Numbe		CCR		Purchase Order	13/2023 # 0708-04	
Lab Use Only		Sample Matrix	Date	Time	of	Filtered	1			
Lab	Sample ID	STI SIGNARI	Sampled	Sampled	#	iii.	-	Analysis Re	quired	
Lab	Sample ID MW-2017-2	GW	Sampled 9/12/2023		**		-	Analysis Re TDS, B, Ca, C		
Contraction of the second seco	and the second second		C. Constant	1240		N			I, F, SO4	_
010	MW-2017-2	GW	9/12/2023	1240 1415	2	NN		TDS, B, Ca, C	I, F, SO4 I, F, SO4	_
010	MW-2017-2 MW-2017-3	GW GW	9/12/2023 9/12/2023	1240 1415	2	NN		TDS, B, Ca, C TDS, B, Ca, C	I, F, SO4 I, F, SO4	
010	MW-2017-2 MW-2017-3	GW GW	9/12/2023 9/12/2023	1240 1415	2	NN		TDS, B, Ca, C TDS, B, Ca, C	I, F, SO4 I, F, SO4	
010	MW-2017-2 MW-2017-3	GW GW	9/12/2023 9/12/2023	1240 1415	2	NN		TDS, B, Ca, C TDS, B, Ca, C	I, F, SO4 I, F, SO4	



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Account #:2040Client:Basin Electric Power CooperativeWorkorder:LOS Plant Ponds CCR Wells (28070)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 Carlep

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.

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Account #: 2040

Client: Basin Electric Power Cooperative

Workorder Summary

Sample Comments

28070001 (MW-2017-10) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070002 (MW-2017-11) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070003 (MW-2017-8D) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070004 (Dup) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070005 (MW-2017-8) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070006 (MW-2017-7) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070007 (MW-2017-6) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070008 (MW-2017-5) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070009 (MW-2017-1) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070010 (MW-2017-2) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070011 (MW-2017-3) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.

28070012 (MW-2017-4) - Sample

Temperature received outside of the 0 - 6 °C range specified by EPA requirements. Client has authorized MVTL to proceed with analysis through direct communication or authorization letter retained on file with customer service.



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Account #:	2040			Client:	Basin	Electr	ic Power Coop	erative		
Analytical	Resul	ts								
Lab ID: Sample ID:	28070 MW-20	001 017-10		Date Collected: Date Received:			3 10:30 3 16:44	Matrix: Collector:	Groundwater Client	
Temp @ Recei	pt (C):	7.4		Received on Ice	: Yes					
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Method: ASTM D	0516-16									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate			298	mg/L	25	5	09/20/2023 09:32	09/20/2023 09:32	AMC	
Method: EPA 24	5.1									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury			<0.0002	mg/L	0.0002	1	09/19/2023 10:05	09/20/2023 15:42	MDE	
Method: EPA 60	10D									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron			0.93	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:39	MDE	
Calcium			90.3	mg/L	1	1	09/14/2023 16:51	09/21/2023 12:57	SLZ	
Lithium			<0.02	mg/L	0.02	1	09/14/2023 16:51	09/28/2023 09:39	MDE	
Method: EPA 60	20B									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony			<0.001	mg/L	0.001	5	09/14/2023 16:51	09/19/2023 11:56	MDE	
Arsenic			0.0032	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 11:56	MDE	
Barium			0.0737	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 11:56	MDE	
Beryllium			<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/20/2023 09:41	MDE	
Cadmium			<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/19/2023 11:56	MDE	
Chromium			<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 11:56	MDE	
Cobalt			<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 11:56	MDE	
Lead			<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/19/2023 11:56	MDE	
Molybdenum			0.0080	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 11:56	MDE	
Selenium			<0.005	mg/L	0.005	5	09/14/2023 16:51	09/19/2023 11:56	MDE	
Thallium			<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/20/2023 09:41	MDE	



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Account #:	2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical	Results								
Lab ID: Sample ID:	28070001 MW-2017-10		Date Collected: Date Received:		/12/2023 /13/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei	pt (C): 7.4		Received on Ice:						
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: SM4500	0-CI-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		11.6	mg/L	2.0	1	09/19/2023 09:22	09/19/2023 09:22	AMC	
Method: SM4500	0-F-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.81	mg/L	0.1	1	09/15/2023 18:03	09/15/2023 18:03	RAA	
Method: USGS I	-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids	667	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #:	2040			Client:	Basin	Electr	ic Power Coop	perative		
Analytical	Resul	ts								
Lab ID: Sample ID:	28070 MW-2	002 017-11		Date Collected: Date Received:		12/202: 13/202:		Matrix: Collector:	Groundwater Client	
Temp @ Recei	pt (C):	7.4	F	Received on Ice	: Yes					
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Method: ASTM [D516-16									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate			199	mg/L	5	1	09/20/2023 09:22	09/20/2023 09:22	AMC	
Method: EPA 24	5.1									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Mercury			<0.0002	mg/L	0.0002	1	09/19/2023 10:05	09/20/2023 15:42	MDE	
Method: EPA 60	10D									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Boron			1.17	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:41	MDE	
Calcium			63.7	mg/L	1	1	09/14/2023 16:51	09/21/2023 12:58	SLZ	
Lithium			0.0294	mg/L	0.02	1	09/14/2023 16:51	09/28/2023 09:41	MDE	
Method: EPA 60	20B									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Antimony			<0.001	mg/L	0.001	5	09/14/2023 16:51	09/19/2023 12:14	MDE	
Arsenic			0.0084	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:14	MDE	
Barium			0.0392	mg/L	0.002	5	09/14/2023	09/19/2023	MDE	
Beryllium			<0.0005	mg/L	0.0005	5	16:51 09/14/2023	12:14 09/20/2023	MDE	
-			< 0.0005	mg/L	0.0005	5	16:51 09/14/2023	09:52 09/19/2023		
Cadmium			0.0000			5	16:51 09/14/2023	12:14 09/19/2023		
Cadmium			<0.002	mc/l	0 000		10 51		IVIDE	
Chromium			<0.002	mg/L	0.002		16:51 09/14/2023	12:14 09/19/2023		
Chromium Cobalt			<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:14	MDE	
Chromium							09/14/2023 16:51 09/14/2023 16:51	09/19/2023 12:14 09/19/2023 12:14	MDE MDE	
Chromium Cobalt			<0.002	mg/L	0.002	5	09/14/2023 16:51 09/14/2023 16:51 09/14/2023 16:51	09/19/2023 12:14 09/19/2023 12:14 09/19/2023 12:14	MDE MDE MDE	
Chromium Cobalt Lead			<0.002 <0.0005	mg/L mg/L	0.002 0.0005	5 5	09/14/2023 16:51 09/14/2023 16:51 09/14/2023	09/19/2023 12:14 09/19/2023 12:14 09/19/2023	MDE MDE MDE MDE	



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Account #:	2040		Client:	Basin	Electr	ic Power Coop	perative			
Analytical	Results									
Lab ID: Sample ID:	28070002 MW-2017-11		Date Collected: Date Received:		/12/2023 /13/2023	3 08:40 3 16:44	Matrix: Collector:	Groundwater Client		
Temp @ Recei	pt (C): 7.4		Received on Ice:	Yes						
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual	
Method: SM4500 Parameter	0-CI-E 2011	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual	
Chloride		11.7	mg/L	2.0	1	09/19/2023 09:23	09/19/2023 09:23	AMC		
Method: SM450	0-F-C-2011									
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual	
Fluoride		0.73	mg/L	0.1	1	09/15/2023 18:20	09/15/2023 18:20	RAA		
Method: USGS I	-1750-85									
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual	
Total Dissolved S	Solids	592	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG		



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Account #:	2040			Client:	Basin	Electr	ic Power Coop	perative		
Analytical	Resul	ts								
Lab ID: Sample ID:	28070 MW-20	003 017-8D		Date Collected: Date Received:			3 10:50 3 16:44	Matrix: Collector:	Groundwater Client	
Temp @ Recei	pt (C):	7.4		Received on Ice	: Yes					
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: ASTM I	D516-16									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate			365	mg/L	25	5	09/20/2023 09:33	09/20/2023 09:33	AMC	
Method: EPA 24	5.1									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury			<0.0002	mg/L	0.0002	1	09/19/2023 10:05	09/20/2023 15:42	MDE	
Method: EPA 60	10D									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron			0.69	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:42	MDE	
Calcium			8.97	mg/L	1	1	09/14/2023 16:51	09/21/2023 12:59	SLZ	
Lithium			0.0636	mg/L	0.02	1	09/14/2023 16:51	09/28/2023 09:41	MDE	
Method: EPA 60	20B									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony			<0.001	mg/L	0.001	5	09/14/2023 16:51	09/19/2023 12:18	MDE	
Arsenic			<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023	MDE	
Barium			0.0449	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:18	MDE	
Beryllium			<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/20/2023 09:55	MDE	
Cadmium			<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/19/2023 12:18	MDE	
Chromium			<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:18	MDE	
Cobalt			<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:18	MDE	
Lead			0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/19/2023 12:18	MDE	
Molybdenum			<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:18	MDE	
Selenium			<0.005	mg/L	0.005	5	09/14/2023 16:51	09/19/2023 12:18	MDE	
Thallium			<0.0005	mg/L	0.0005	5	09/14/2023	09/20/2023	MDE	
nallium			<0.0005	mg/L	0.0005	5			MDE	



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Account #:	2040			Client:	Basin	Electr	ric Power Coop	perative		
Analytical	Result	S								
Lab ID: Sample ID:	280700 MW-20			Date Collected: Date Received:		• • • = • =	3 10:50 3 16:44	Matrix: Collector:	Groundwater Client	
Temp @ Recei	pt (C):	7.4		Received on Ice:	Yes					
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: SM4500 Parameter	0-CI-E 201	1	Results	Units	RDL	DF	Prepared 09/19/2023	Analyzed 09/19/2023	Ву	Qual
Chloride			17.6	mg/L	2.0	1	09:31	09:31	AMC	
Method: SM4500	0-F-C-201	1								
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride			0.59	mg/L	0.1	1	09/15/2023 18:26	09/15/2023 18:26	RAA	
Method: USGS I	-1750-85									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids		1960	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #: 20	40		Client:	Basin	Electr	ic Power Coop	perative		
Analytical Re	sults								
	8070004 up		Date Collected: Date Received:		/12/2023 /13/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receipt (0	C): 7.4		Received on Ice	: Yes					
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: ASTM D516	6-16								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate		202	mg/L	5	1	09/20/2023 09:41	09/20/2023 09:41	AMC	
Method: EPA 245.1									
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury		<0.0002	mg/L	0.0002	1	09/19/2023 10:05	09/20/2023 15:42	MDE	
Method: EPA 6010D									
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qua
Boron		1.20	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:42	MDE	
Calcium		65.6	mg/L	1	1	09/14/2023 16:51	09/21/2023 13:00	SLZ	
Lithium		0.0302	mg/L	0.02	1	09/14/2023 16:51	09/28/2023 09:42	MDE	
Method: EPA 6020B									
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony		<0.001	mg/L	0.001	5	09/14/2023 16:51	09/19/2023 12:23	MDE	
Arsenic		0.0089	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:23	MDE	
Barium		0.0399	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:23	MDE	
Beryllium		<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/20/2023 09:57	MDE	
Cadmium		<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/19/2023 12:23	MDE	
Chromium		<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:23	MDE	
Cobalt		<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:23	MDE	
Lead		<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/19/2023 12:23	MDE	
Molybdenum		0.0090	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 12:23	MDE	
Selenium		<0.005	mg/L	0.005	5	09/14/2023 16:51	09/19/2023 12:23	MDE	
Thallium		<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/20/2023 09:57	MDE	



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Account #:	2040		Client:	Basin	Electr	ic Power Coop	perative		
Analytical	Result	S							
Lab ID: Sample ID:	280700 Dup	04	Date Collected: Date Received:		/12/2023 /13/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei	pt (C):	7.4	Received on Ice	: Yes					
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: SM4500 Parameter	0-CI-E 201	1 Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		11.8	mg/L	2.0	1	09/19/2023 09:32	09/19/2023 09:32	AMC	
Method: SM450	0-F-C-201	1							
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.72	mg/L	0.1	1	09/15/2023 14:05	09/15/2023 14:05	RAA	
Method: USGS I	-1750-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids	581	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #: 2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical Results								
Lab ID: 28070005 Sample ID: MW-2017-8		ate Collected: ate Received:		/11/2023 /13/2023			Groundwater Client	
Temp @ Receipt (C): 7.4	Re	eceived on Ice	: Yes					
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: ASTM D516-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	By	Qual
Sulfate	1720	mg/L	50	10	09/20/2023 09:57	09/20/2023 09:57	AMC	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.40	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:43	MDE	
Calcium	137	mg/L	5	5	09/14/2023 16:51	09/21/2023 13:03	SLZ	
Method: SM4500-CI-E 2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	25.7	mg/L	2.0	1	09/19/2023 09:34	09/19/2023 09:34	AMC	
Method: SM4500-F-C-2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.38	mg/L	0.1	1	09/15/2023 14:11	09/15/2023 14:11	RAA	
Method: USGS I-1750-85								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	3720	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #:	2040			Client:	Basin	Electri	c Power Coop	perative		
Analytical	Resul	ts								
Lab ID: Sample ID:	28070 MW-2			te Collected: te Received:		/11/2023 /13/2023		Matrix: Collector:	Groundwater Client	
Temp @ Recei	ipt (C):	7.4	Re	ceived on Ice	: Yes					
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: ASTM I	D516-16									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate			240	mg/L	5	1	09/20/2023 09:43	09/20/2023 09:43	AMC	
Method: EPA 60)10D									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron			2.07	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:44	MDE	
Calcium			73.1	mg/L	1	1	09/14/2023 16:51	09/21/2023 13:05	SLZ	
Method: SM450	0-CI-E 20	11								
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride			12.4	mg/L	2.0	1	09/19/2023 09:35	09/19/2023 09:35	AMC	
Method: SM450	0-F-C-20 ⁻	11								
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride			1.34	mg/L	0.1	1	09/15/2023 14:17	09/15/2023 14:17	RAA	
Method: USGS I	I-1750-85									
Parameter			Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved S	Solids		693	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #: 2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical Results								
Lab ID: 28070007 Sample ID: MW-2017-6		ate Collected: ate Received:		/11/2023 /13/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receipt (C): 7.4	R	eceived on Ice	: Yes					
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: ASTM D516-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	177	mg/L	5	1	09/20/2023 09:44	09/20/2023 09:44	AMC	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	1.40	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:45	MDE	
Calcium	65.6	mg/L	1	1	09/14/2023 16:51	09/21/2023 13:06	SLZ	
Method: SM4500-CI-E 2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	11.8	mg/L	2.0	1	09/19/2023 09:36	09/19/2023 09:36	AMC	
Method: SM4500-F-C-2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.60	mg/L	0.1	1	09/15/2023 14:23	09/15/2023 14:23	RAA	
Method: USGS I-1750-85								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	589	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #: 2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical Results								
Lab ID: 28070008 Sample ID: MW-2017-5		ate Collected: ate Received:		/12/2023 /13/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receipt (C): 7.4	R	eceived on Ice	: Yes					
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: ASTM D516-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	262	mg/L	5	1	09/20/2023 09:46	09/20/2023 09:46	AMC	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.74	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:46	MDE	
Calcium	85.6	mg/L	1	1	09/14/2023 16:51	09/21/2023 13:08	SLZ	
Method: SM4500-CI-E 2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	12.0	mg/L	2.0	1	09/19/2023 09:37	09/19/2023 09:37	AMC	
Method: SM4500-F-C-2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.91	mg/L	0.1	1	09/15/2023 14:29	09/15/2023 14:29	RAA	
Method: USGS I-1750-85								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	641	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #: 2	040		Client:	Basin	Electri	c Power Coop	perative		
Analytical Re	esults								
	28070009 MW-2017		te Collected: te Received:		/12/2023 /13/2023			Groundwater Client	
Temp @ Receipt ((C): 7	.4 Re	ceived on Ice	: Yes					
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: ASTM D51	6-16								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate		268	mg/L	5	1	09/20/2023 09:47	09/20/2023 09:47	AMC	
Method: EPA 6010	D								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron		0.47	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:46	MDE	
Calcium		208	mg/L	1	1	09/14/2023 16:51	09/21/2023 13:09	SLZ	
Method: SM4500-C	I-E 2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		13.9	mg/L	2.0	1	09/19/2023 09:38	09/19/2023 09:38	AMC	
Method: SM4500-F-	-C-2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.34	mg/L	0.1	1	09/15/2023 19:44	09/15/2023 19:44	RAA	
Method: USGS I-17	50-85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solid	ds	1180	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #: 2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical Results								
Lab ID: 28070010 Sample ID: MW-2017		nte Collected nte Received		/12/2023 /13/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receipt (C): 7	7.4 R e	eceived on lo	e: Yes					
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: ASTM D516-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	By	Qual
Sulfate	285	mg/L	5	1	09/20/2023 09:48	09/20/2023 09:48	AMC	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	1.01	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:49	MDE	
Calcium	101	mg/L	1	1	09/14/2023 16:51	09/21/2023 13:10	SLZ	
Method: SM4500-CI-E 2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	12.2	mg/L	2.0	1	09/19/2023 09:39	09/19/2023 09:39	AMC	
Method: SM4500-F-C-2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.38	mg/L	0.1	1	09/15/2023 19:50	09/15/2023 19:50	RAA	
Method: USGS I-1750-85								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	822	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #: 2040)		Client:	Basin	Electri	c Power Coop	perative		
Analytical Resu	ults								
	70011 -2017-3		ate Collected: ate Received:		/12/2023 /13/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receipt (C):	7.4	R	eceived on Ice	: Yes					
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: ASTM D516-1	6								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate		140	mg/L	5	1	09/20/2023 09:49	09/20/2023 09:49	AMC	
Method: EPA 6010D									
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron		1.28	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:49	MDE	
Calcium		113	mg/L	1	1	09/14/2023 16:51	09/21/2023 13:11	SLZ	
Method: SM4500-CI-E	2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride		12.0	mg/L	2.0	1	09/19/2023 09:41	09/19/2023 09:41	AMC	
Method: SM4500-F-C-2	2011								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride		0.48	mg/L	0.1	1	09/15/2023 19:56	09/15/2023 19:56	RAA	
Method: USGS I-1750-8	85								
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids		952	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #: 2040		Client:	Basin	Electri	c Power Coop	perative		
Analytical Results								
Lab ID: 28070012 Sample ID: MW-2017-4		ate Collected: ate Received:		/12/2023 /13/2023		Matrix: Collector:	Groundwater Client	
Temp @ Receipt (C): 7.4	R	eceived on Ice	: Yes					
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: ASTM D516-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	292	mg/L	25	5	09/20/2023 09:56	09/20/2023 09:56	AMC	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	1.10	mg/L	0.1	1	09/14/2023 16:51	09/26/2023 09:50	MDE	
Calcium	144	mg/L	1	1	09/14/2023 16:51	09/21/2023 13:12	SLZ	
Method: SM4500-CI-E 2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	11.8	mg/L	2.0	1	09/19/2023 09:42	09/19/2023 09:42	AMC	
Method: SM4500-F-C-2011								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.77	mg/L	0.1	1	09/15/2023 20:14	09/15/2023 20:14	RAA	
Method: USGS I-1750-85								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	874	mg/L	10	1	09/14/2023 10:43	09/14/2023 10:43	CMG	



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Account #: 2040

Client: Basin Electric Power Cooperative

C Result	ts Summary						WO #:	280	70
Sulfate	Original Sample ID	Blank Result	Spike Amount	Units: mg/L Spike %	Spike Duplicate	Lower Control	Upper Control	APD (%)	RPD Limit (%)
FB			100	Recovery 93.9	36 Recovery	Limit (%) RS	Limit (%) 115		
4			100	96.5		85	115		
đ.			100	87.3		85	115		
ă.			100	91.6		<u>65</u>	115		
a.			100	411		65	115		
Ð			100	96. <u>1</u>		85	115		
ù.			100	:100.0		85	115		
rn -			100	100.0		85	115		
10			100	99.0		85	115		
0		4							
ia.		3							
a		15							
4		4							
ið.		6							
0		5							
10		9							
6		15							
el.		\$							
IS/MSD	27999010		4000	87.4	87.9	85	115	0.2	20
IS/MISED	28070003		500	R7 7.	88.2	85	-115	0.7	20
IS/MSD	28072001		500	92.0	93.8	81	115	0.9	20
S/MSD	28072011		.500	85.1	92.6	85	115	1.7	20
IS/MSD	78215007		100	79.3	79.4	RS	115	1.0	30
IS/MSD	28216004		1000	84.8	83.9	RS	115	0.6	30
IS/MSD	78433007		500	86.3	86.6	65	115	0.4	4D-
IS/MSD	28433003		500	101-5	101.1	85	115	0.7	20
hloride C Type	Original Sample ID	Blank Result	Spike Amount	Units: mg/L Spike % Recovery	Spike Duplicate 'N Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)



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Chloride				Units: mg	/L				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Lovid (IIS)	Lipper Control Lumit (%)	RPD (%)	RPD Limit (%)
FBI			30)	97.4		30	110		
14			30	96.9		90	110		
10			30	96.3		-90	110		
FØ.			30	95.8		90	110		
10			30	95.5		90	330		
FQ			30	96.5		90	2.20		
				96.8					
(h.			30	543.8			110		
AD		-2.0							
db.		*2.0							
an,		<2.0							
An		<2.0							
Au		<2.0							
Ait		<2.0							
Aŭ		<2.0							
		520							
48		20							
AS/MSD	28070002		80	88.9	2.00	80	120	0.0	20
AS/MSD	28072001		30	91.7	94.3	30	120	61	20
ds/MSD	28216004		ŝò	86.8	85.9	30	320	6.5	20
45/M5D			30				3.20		-
KO/MOLU	28354001		40	97.0	96.4	30	140	00	20
Calcium				Units: mg	/L				
ac Type	Original Sample ID	Blank Result	Spike Amount	Splike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
F8-MI			100	113.0		85	115		
FBIANI			100	112.0		65	115		
Alb		/IS:							
AB		(it)							
NIP	28052001							42	20
	account()							ст.	
9UP	28070005							1.9	20
NP.	28072012							0.i	20



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Boron	and and a second second	and the	Sec.	Units:	mg/L	Contraction of the	an and the	and some me	CODY	a constant of
QC Type	Original Sample ID	Blank Result	Spike Amount	Spile % Recovery	_	Spike Duplicate % Recovery	Lower Control Limit (16)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
05/P050	28580005		3	96.0		95.2	75	125	0.3	20
Calcium		_		Units:	mg/L				_	
QC TVDH	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control Lumit (%)	RPD (%)	RPD Limit (m)
05/P050	27649002		100	102.0		102/0	75	125	0.1	-20
DS/PRISO	27844003		100	111ā		110.0	75	125	97	30
DS/POSD	28070004		100	-102.0		110.0	75	125	1.6	20
05/PD50	28072001		100	106.0		1110	75	125	13	20
D5/PD5D	28072012		100	108.0		112.0	75	125	3.0	:2D
D5/PD5D	28215006		100	:102.0		104.0	15	125	0.0	20
D5/PD50	78216007		100	101.0		198. R	75	125	3.3	20
Antimony				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control	Upper Control Limit (%)	RPD (%)	RPD LEvet (%)
PK/SPKD	28072001		01	97.2		99.1	75	125	1.9	20
Arsènic		-		Units:	mg/L					
IC Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	91.2		97,2	75	125	1.0	20
Barium				Units:	mg/L					
Ж. Түре	Original Sample ID	Blank Result	Spike Amount	Spille M Recovery		Spike Duplicate In Recovery	Lower Control Unvit (%)	Lipper Control Limit (%)	KPD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	80.5		78.2	75	175	1.3	-20
Beryllium				Units:	mg/L	_				
UC TYDE	Original Sample ID	Blank Result	Spike Amount	Spike ** Recayery	_	Spike Duplicate Si Recovery	Lower Control Limit (%)	Upper Control Limit (%)	BPD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	107.0		102.0	75	125	4.0	20
Cadmium				Units:	mg/L					02.20
ас Туре	Original Sample ID	Blank Result	Spike Amount	Spike IF Recovery	-	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	KPD (%)	RPD Limit (15)
PA/SPRD	28072001		0.5	-87.7		878	79	125	0.1	20
Chromium	S	C		Units:	mg/L					
8⊂ Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Solke Duplicate % Recovery	Lower Control Limit (N)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	99.2		97.3	75	125	1.7	20-
Cobalt		5.2.2		Units:	mg/L				-	
ас Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (96)
PK/SPKD	28072001		0.1	97.1		94.7	75	125	2.4	20
				Units:	mg/L					
ead C Type	Original Sample ID	Blank Result	Spike Amount	Spike %	tuilly r	Spike Ouplicate	Lower Control	Upper Control	RPD (%)	RPD Linut (%)



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Molybdenum				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Lond (%)	Lipper Control Lumit (%)	RPD (%)	RPD Limit (%)
iPK/SPKD	28072001		0.1	94.9		96.3	75	125	12	20
Selenium		_	_	Units:	mg/L					
QC Тури	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Lunut (96)
PK/SPK0	28072001		0.1	Recovery 89.0	_	% Recovery 85.0	Limit (%) 75	Limit (%) 125	3,4	20
Thallium			_	Units:	mg/L		-			
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate % Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK/SPKD	28072001		0,1	26.7		86.0	75	125	0.8	26
Boron				Units:	mg/L	_				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	HPD (%)	RPD Limit (%)
FRIGE			0.4	107.0			85	115		
10-QE			0.4	102.0			6	115		
ular		20.1								
WD -		<0.1								
MS/MBID	28070001		0.4	96.5		90 9	75	125	1.8	20
45/M5D	28072001		<u>0</u> .4	84.4		Ra a	75	125	a,a	- 20
ns/mso	28072004		0.4	95.7		94.9	76.	125	0.2	20
AS/MSD	29072005		0.4	80.3		775	75.	125	0.5	ZD
AS/MSD	28072011		0.4	101.0		95.2	75	125	1.9	20
_							-		50	
Lithium	and the second	Sec. Se	1000	Units:	mg/L	e bergian i	10. 2014	and the set	- Sugar	Gardent
DC TYPE	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	-	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-OE			0.4	105.0			85	115		
FB-OK			0.4	104.0			85	115		
din.		<0.04								
will		<0.04								
vis/Ms0	28070001		0.4	96.0		.91.2	75	125 -	22	-20-
A5/MSD	28072004		0.4	94.4		92.6	75	125	67	20
WS/WSD	28072005		0.4	97.0		98.2	75	125	3.2	20
ws/msid	26072013		0,4	96.8		96.8	75	125	0.0	30
Antimony				Units:	mg/L					
Q⊂ Type	Original Sample ID	Blank Result	Spike Ammunt	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (N)	Lipper Control Limit (%)	HPD (%)	RPD Limit (%)
FB-M5			0.1	102.0			180	120		
ranna.										
FB-645			01	104.0			60	120		



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Antimony DC Type	Original Sample ID	Blank Result	Spike Amount	Units: Spile %	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
AB.		<0.001		Recovery		≪ Recoverγ	Tiwig (IR)	Limit (%)		
AS/MSD	25070001		0.4	101.0		502.0	75	125	12	20
AS/MSD	28072004		0.4	1010		100.0	75	125	2.7	20
45/MSD	28072005		0.4	85.8		67.5	75	125	0.9	20
ls/MSD	28072011		0,4	103.0		102.0	75	125	15	20
Arsenic			-	Units:	mg/L					-
C Type	Original Sample ID	Blank Result	Spike Amount	Spike %	in bre	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
FB-MS			0.1	Recovery 97.2		% Recovery	Limit (N) BO	Limit (%) 120		
FIEMS			1.0	97.4			80	120		
A.B.		<0.002								
Aii		-0.002								
7		of the second								
AS/MSD	28070001		0.8	95.7		97-4	8	125	15	50
is/MSD	28072004		0.4	99.4		94.5	75	325	95	20
45/MSD	28072005		0.4	95.8		97.6	75	125	07.	20
AS/MSD	28072013		0.4	101.0		100.0	75	125	10	26
inter and				CORR.		int.	14			
Barium			_	Units:	mg/L		_		_	
QC Type	Original Sample ID	Blank Result	Spike Amount:	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control- Limit (N)	RPD (%)	RPD Limit (%)
FB-MS			0.1	92.0			80	120		
IN-MI			0.1	95.1			80	120		
48		< 0.002								
AG.		-0.007								
ATT/AASD:	28070001		0.4	- KH-I		844	15	125	3.4	11D
AS/MSD	28072004		0.4	19.2		87.5	75	125	1.5	20
45/MSD	78072005								10	20
As/MSD	28072013		0.4	91.1		£9.4	75	125	ij.	20
Beryllium				Units:	mg/L					
QC TYPE	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPE Limit (15)
7B-M5			0.1	106.0			30	120		
FIR-MS			0.1	104.0			80	120		
-										
Alla		>0.0005								
ALC:		<0.0005								



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Beryllium QC Type	Original Sample ID	Blank Result	Spike Amount	Spile %	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
M5/M3D	28070001		0.4	Recovery 101.0	-	% Recovery	Limit (%) 75	Lumit (%) 125	5.6	20
and allow	2007002			101.0		addente				
MS/MSD	28072004		0.4	1050		105.0	75	125	2.5	20
AS/MSD	28072005		0.4	105.0		105.0	75	125	ā.	20
vis/wst/	28072005		0.4	105-0		100/0	Y5	125	0.5	- 20
ws/wsp	28072013		0.4	111.0		109.0	75	125	21	20
_										
Cadmium					mg/L					
ac Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	0.0510			80	120		
FID-MS			0.1	100.4			81	120		
AID.		<0.0005								
AB		c0.0005								
45/145D	28070001		0.4	97.4		97.8	75	125	0.3	20
to be approx	28072004			100.0		97 (75	-		
AS/MSD	28072004		0.1	100.0		97.1	10	125	11	30
AS/MSD	28072005		0.4	95.7		95.1	75	325	20	20
45/MSD	28072013		0.4	98.9		97.6	75	125	15.	20
Chromium				Units: 1	ng/L	-				
DC Type	Original Sample ID	Blank Result	Splike Amount	Spike %	61	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-445			.0.1	Recovery	-	% Recovery	Limit (%) 30	Limit (%) 120		
FB-M5			0.1	109.0			60	120		
6h										
		<0.002								
		<0.002								
		<0.002 <0.002								
AB	28020001			101.0		VAL 7		116		70
MB	28070001		0.4	104.0		305.X	75	125	Ĺ7	20
48 45/4480	28070001 28072004		0.4	104.0		106.0 105.0	75 75	125	L.7 8.0	20 30
MB MS/MSD: MS/MSD:	28072004		0.4	109.0		105.0	75	125	6.0	20
MB AS/AASD: AS/AASD:										
ard Asymasia Asymasia Asymasia	28072004		0.4	109.0		105.0	75	125	6.0	20
MB MS/MSD: MS/MSD MS/MSD MS/MSD	28072004 28072005		0.4 0.4	109.0 105.0 109.0		105.0 107.0	75	125	8.0 0.4	30 20
MB MS/MSD: MS/MSD: MS/MSD MS/MSD Cobalt	28072004 28072005 28072013	~0.602	0.4 0.4 0.4	109.0 108.0 109.0 Units: 1	mg/L	105.0 107.0 110.0	75 75 75	125 125 125	8.0 0.4 0.7	20 20 20
AB AS/ASD AS/ASD AS/ASD AS/ASD Cobalt DC Type	28072004 28072005		0.3 0.4 0.4 Spike Amount	109.0 108.0 109.0 Units: 1 Spice % Recovery	mg/L	105.0 107.0	75 75 Lower Control Limit (W)	125 125 125 Upper Control- Limit (%)	8.0 0.4	30 20
NB NS/MSD NS/MSD NS/MSD Cobalt DC Type	28072004 28072005 28072013	~0.602	0.4 0.4 0.4	109.0 109.0 109.0 Units: 1 Spaces	mg/L	105.0 107.0 110.0 Spike Oupleate	75 75 75	125 125 125-	8.0 0.4 0.7	20 20 20
WB ASYABD ASYABD ASYABD ASYABD ASYABD CObalt CObalt CObalt PIPAS: FIPAS:	28072004 28072005 28072013	~0.602	0.3 0.4 0.4 Spike Amount	109.0 108.0 109.0 Units: 1 Spice % Recovery	mg/L	105.0 107.0 110.0 Spike Oupleate	75 75 Lower Control Limit (W)	125 125 125 Upper Control- Limit (%)	8.0 0.4 0.7	20 20 20
WB ASYMBD ASYMBD ASYMBD ASYMBD ASYMBD CObalt CObalt CObalt PBA65 STBM5	28072004 28072005 28072013	:<0.602 Blank Result	0.4 0.4 Spike Amount 0.1	109.0 108.0 109.0 Units: Recovery 109.0	mg/L	105.0 107.0 110.0 Spike Oupleate	75 75 75 Lower Control Limit (%) 30	125 125 125 125 Upper Control- Drift (%) 220	8.0 0.4 0.7	20 20 20
HB AS/ABD AS/ABD AS/ABD AS/ASD Cobalt DC Type FB A/S	28072004 28072005 28072013	~0.602	0.4 0.4 Spike Amount 0.1	109.0 108.0 109.0 Units: Recovery 109.0	mg/L	105.0 107.0 110.0 Spike Oupleate	75 75 75 Lower Control Limit (%) 30	125 125 125 125 Upper Control- Drift (%) 220	8.0 0.4 0.7	20 20 20
WB ASYMBD ASYMBD ASYMBD ASYMBD ASYMBD CObalt CObalt CObalt PBA65 STBM5	28072004 28072005 28072013	:<0.602 Blank Result	0.4 0.4 Spike Amount 0.1	109.0 108.0 109.0 Units: Recovery 109.0	ng/L	105.0 107.0 110.0 Spike Oupleate	75 75 75 Lower Control Limit (%) 30	125 125 125 125 Upper Control- Drift (%) 220	8.0 0.4 0.7	20 20 20

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Account #: 2040

Client: Basin Electric Power Cooperative

Cobalt QC Type	Original Sample ID	Blank Result	Spike Amount	Spile N	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
M5/M5D	28072004		0.4	Recovery 106.0		% Recovery	Limit (%) 75	Limit (%) 125	8.6	20
M5/MSD	28072005		0.4	102.0		102.0	75	125	0.0	20-
ws/wsu	200720825		0.a	102.0		302.0	14	125	00	20
MS/MSD	28072013		04	107.0		105.0	75	125	14	20
Lead				Units: r	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
J-0-145			0/2	102/0			30	120		
FB-MS			0.5	109.0			31	3.20		
MD		+0.0005								
MD		<0.0005								
dis/Mitio	28070001		0.4	99.5		102.02	-15	175	8.0	dD-
M5/M5D	28072004		0.4	100.0	3	0.00	75	125	4.4	-20
M5/MSD	28072005		0.5	96.1		96.1	75	125	0.0	20-
ws/wsb	26072013		0.4	102.0		101.0	75	125	10	.20
Molybdenum				Units: r	mg/L					
DC Type	Original Sample ID	Blank Result	Splike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-M5			0.1	Recovery 102.0	-	% Recovery	Limit (%) 30	Limit (%) 120		
FB-MS-			.0.4	104.0			30	750		
MB		+0.002								
MD		-10.002								
MS/MSD	28070001		0.4	96.3		97.1	75	125	1.0	-20
The Trans							1.4			140
M5/MSD	28072004		0.4	8.00	1	97 R	75	125	11	20
M5/M5D	28072005		0.4	1.10		115.7	75	125	3.4	ab-
	28072013		0.4	102.0		48-5	75	125	2.8	.20
ws/wsb	28072011									
	28072011				mg/L	_				
NS/NSD Selenium QC Type	Original Sample ID	Blank Result	Spike Amount	Units: r Spike %	mg/L	Spike Dupiloste % Recovery	Lower Control	Upper Control	BPD (%)	RPD Limit (%)
Selenium QC Type		Biank Result		Units: r		Spike Dupiloste % Recovery	Lower Control Limit (%) 30	Upper Control Limit (%) 120	BPD (%)	RPD Limit (%)
Selenium QC Type JFB-MS		Blank Result.	Spike Amount	Units: r Spike % Recovery		Spike DupRate % Recovery	Limit (%)	Limit (%)	8PD (%)	RPD Limit (45)
Selenium QC Type JB-MS JB-MS		Blank Result	Spike Amount	Units: r Spike % Recovery 97.6		Spike Duplicate % Recovery	Limit (%) 30	Limit (%) 120	8PD (%)	RPD Limit (%)
Selenium QC Type JFB-MS JFB-MS MB		-0.035	Spike Amount	Units: r Spike % Recovery 97.6		Spike DupRote % Recovery	Limit (%) 30	Limit (%) 120	BPD (%):	RPD Limit (H)
Selenium QC Type JB-MS JB-MS			Spike Amount	Units: r Spike % Recovery 97.6		Spike Duplingte % Recovery	Limit (%) 30	Limit (%) 120	RPD (%)	RPD Limit (H)
Selenium QC Type JFB-MS JFB-MS MB		-0.035	Spike Amount	Units: r Spike % Recovery 97.6		Spike DupRote % Recovery ≋ #	Limit (%) 30	Limit (%) 120	BPD (%)	RPD Limit (H)



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Selenium QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %	spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
M5/M3D	28072005		0.4	Recovery 94.2	% Recovery 94.7	Limit (16) 75	Limit (%) 125	0.5	20
MS/MSD	28072013		0.4	98.1	100.0	75	125	23	20
	CH. Y. CO.		4.0		12.4				20
Thallium			1.1	Units: m	g/L				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD [%)	RPD Limit (16)
JB-M5			0,1	96.3		80	750		
JELMS			0.1	97.2		30	3.30		
48		<0.0005							
		<0.0005							
MB		<0.0005							
MS/MSD	29070001		0.4	94.1	94.3	75	125	0.3	30
M5/M5D	78072004		0.4	94.8	94.7	75	125	0.5	20
M5/MSD	28072005		0.4	91.7	92.1	75	125	0.8	20
M5/MSD	28072014		6.4	96.1	95.4	75	125	0.5	20
Mercury		-	2000		ig/L			100.00	
DC TYPE	Original Sample ID	Blank Result	Spike Anount	Spike % Recovery	Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
Fb			0.002	94.6		85	115		
15			0.062	992.6		85	115		
ne.		<0.0002							
HH.		<0.0002							
MS/MSD	27912001		0,002	97.4	101.0	70	130	.9.1	20
MS/MSD	27912007		0,002	107.0	104.0	70	130	0.0	-2D
M5/MBD	28072001		-0.002	106.0	100.0	70	130:	4.0	-20
M5/M5D	28072013		0.002	94.4	107.0	70	130	10.0	3D
Fluoride				Units: m	ig/L				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Lumit (%)	RPD (%)	RPD Limit (%)
			17	97.5		65.8	111		
CRMIT									
			0.5	101.0		90	ücc		
ам.т 78.f 18.f			0.5	102.0		90	מבנ מבנ		
18.F			0.5	100.0		90	210		
FB.F									
78.F 19.F			0.5	100.0		90	210		
18.F		101	0.5 0.5	100,6 98-0		90 90	22.0		



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Account #: 2040

Client: Basin Electric Power Cooperative

Fluoride				Units: mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery	Spike Duplicate % Recovery	Lower Control Lond (%)	Lipper Control Lumit (%)	RPD (%)	RPD Limit (%)
MBHF		<0.1							
MB-I		-0.1							
ws/MSD-4	28070001		٥٥	100.0	0.50 <i>i</i>	ái.	120	0.0	2h
vis/MSD-#	28070011		0.5	104.0	104.0	80	120	00	20
NS/MSD-F	28072001		0.5	106.0	0 BDF	30	120	1.0	20
M5/M5D.F	28072013		0.5	102.0	98.0	30	320	1,8	30
Total Dissolv	ed Solids			Units: mg/L	-				
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
ORM			735	.100.0		50.35	110,38		
CRM			736	100.0		90.35	110.33		
W6		<10							
ua		k10							
aue.	27632001							0.7	20
NUP.	28072001							1.1	20



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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 Dompany Name and Address Basin Electric Power Coop.					we	Chain of Custody Page of Work Order #
ompany Name a			Account #			-	Phone #
	Leland Olds Station 3901 Highway 200A		Contact	2040 Mark Dihle	,		701-745-7238 701-557-5488 Emails mdihle@bepc.com_aknutson@bepc.com
	Stanton, ND 58571		Name of S	ampler	-	-	jermey.hurshman@aecom.com
alling Address (indicate if different from above)		mls		_	_	jason.lach@aecom.com
			Quote Nur	nber			Date Submitted 9/13/2023
				me/Numb LANT PON		cc	Purchase Order #
Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	VIN	Analysis Required
001	MW-2017-10	GW	9/12/2023	1030	1.0		B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,P Li, Hg, Mo, Se, Tl, Ra226, Ra228, TDS
002	MW-2017-11	GW	9/12/2023	840	3	N	B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,P Li, Hg, Mo, Se, Tl, Ra226, Ra228, TDS
003	MW2017-8D	GW	9/11/2023	1050	3	N	B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,P Li, Hg, Mo, Se, Tl, Ra226, Ra228, TDS
004	Dup	GW	9/12/2023	840	2	N	B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,P Li, Hg, Mo, Se, Tl, Ra226, Ra228, TDS
005	MW2017-8	GW	9/11/2023	915	-	N	
006	MW-2017-7	GW	9/11/2023	1211	2	-	
007	MW-2017-6	GW	9/11/2023	1400	2		
008	MW-2017-5	GW	9/12/2023	935	2	N	
009	MW-2017-1	GW	9/12/2023	1145	2	N	TDS, B, Ca, Cl, F, SO4
Comments:			1				

All Transferred by	Date	Time	Received by	Date	Time	Temp	ROI	Therm. #
1. Millennim Express	9-13-23		Alatherast	13set 23	1044	7.4°C	(D/N	TM920
2.			C				Y/N	

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

Form # 80-910005-1

See above for page number

Effective Date: 26 Aug 2022



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Account #: 2040

Client: Basin Electric Power Cooperative

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Toll Free: (800) 27	9-6885 Fax	: (701) 258-9724							Work Order	ŧ	
Company Name and		c Power Coop.		Account #	2040		-	Phone #	# 701-745-7238	701-557-54	188
	Leland Ol	Ids Station hway 200A		Contact Emails Mark Dihle mdihle@bepc.com_aknutson@bepc.com							
Silling Address (indi	Stanton, cate if different from	ND 58571		Name of S	ampler				hurshman@aeco ich@aecom.com		
anny Address (mu	vale il undrent il oli	abovej		Quote Nur	nber				Date Submitted		_
					me/Numbe		CCR		Purchase Orde		
Lab Use Only Lab	Sample	D	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	# of	Filtered		Analysis Re	quired	
010	MW-201	17-2	GW	9/12/2023	1240	2	N		TDS, B, Ca, CI, F, SO4		
011	MW-201	17-3	GW	9/12/2023	1415	2	N		TDS, B, Ca, CI, F, SO4		
012	MW-201	17-4	GW	9/12/2023	1530	2	N		TDS, B, Ca, C	CI, F, SO4	
						-	H				
						-	-				
Comments:				-							
Transfer	red by	Date	Time	Received	by		Date			ROI	Therm.
1.			- De	utrell 10	A	12	real	3 1644	7.42	Y/N Y/N	-tm9a

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Account #:2040Client:Basin Electric Power CooperativeWorkorder:LOS Plant Ponds CCR Wells (28071)PO:790708-04 LOS

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 Carlep

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 SD SDWA

Subcontracted Analyses

Analyzed By	Company	Address	Phone	Certification
SUBv	Energy Labs Casper	2393 Salt Creek Highway, Casper. WY 82601	307-235-0515	CERT

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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Account #:	2040	Clie	nt: Basin	Electric F	ower (Cooperative		
Analytical	Results							
Lab ID: Sample ID:	28071001 MW-2017-10	Date Colle Date Rece		12/2023 10 13/2023 16		Matrix: Collector:	Groundwater Client	
Temp @ Rece	eipt (C): 7.4	Received of	on Ice: Yes					
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: Contr	acted Result							
Radium 226		See Attached			1	10/30/2023 13:31	10/30/2023 13:31	
Radium 228		See Attached	l		1	10/30/2023 13:31	10/30/2023 13:31	



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Account #:	2040	Clier	nt: Basin	Electric F	ower (Cooperative		
Analytical	Results							
Lab ID: Sample ID:	28071002 MW-2017-11	Date Collec Date Recei		12/2023 08 13/2023 16		Matrix: Collector:	Groundwater Client	
Temp @ Rece	eipt (C): 7.4	Received o	on Ice: Yes					
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: Contr	acted Result							
Radium 226		See Attached			1	10/30/2023 13:31	10/30/2023 13:31	
Radium 228		See Attached			1	10/30/2023 13:31	10/30/2023 13:31	



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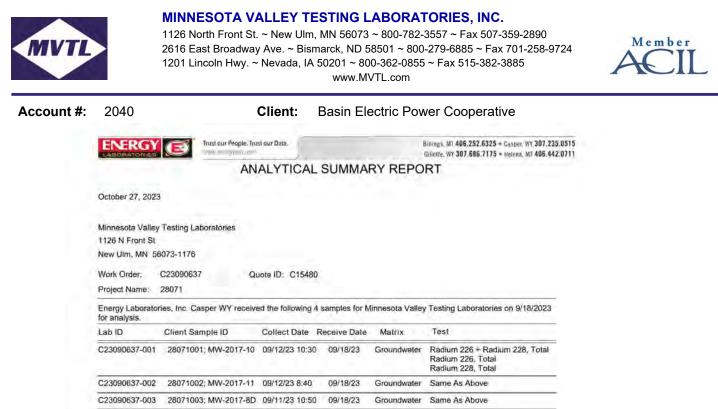
Account #:	2040	Clier	nt: Basin	Electric F	ower (Cooperative		
Analytical	Results							
Lab ID: Sample ID:	28071003 MW-2017-8D	Date Collec Date Recei		11/2023 10 13/2023 16		Matrix: Collector:	Groundwater Client	
Temp @ Rece	eipt (C): 7.4	Received o	on Ice: Yes					
Parameter		Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: Contr	acted Result							
Radium 226		See Attached			1	10/30/2023 13:31	10/30/2023 13:31	
Radium 228		See Attached			1	10/30/2023 13:31	10/30/2023 13:31	



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Account #: 2040	Client:	Basin Electric Power	Cooperative		
Analytical Results					
Lab ID: 28071004 Sample ID: Dup	Date Collected: Date Received:	09/12/2023 08:40 09/13/2023 16:44	Matrix: Collector:	Groundwater Client	
Temp @ Receipt (C): 7.4	Received on Ice:	Yes			
Parameter	Results Ur	nits RDL DF	Prepared	Analyzed	Qual
Method: Contracted Result					
Radium 226	See Attached	1	10/30/2023 13:31	10/30/2023 13:31	
Radium 228	See Attached	1	10/30/2023 13:31	10/30/2023 13:31	



The analyses presented in this report were performed by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

09/18/23

Groundwater Same As Above

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager .

09/12/23 8:40

Report Approved By:

C23090637-004

28071004; Dup

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Account #: 2040

Client: Basin Electric Power Cooperative

ENERC	Trust our People. Trust our Data.	Billings. M1 406.252,6325 + Casper. WY 307.235.051 Gillette. WY 307.686.7175 + Helena, M1 406.442.071
	LABORATORY ANALYTIC Prepared by Casper, WY	
Client:	Minnesota Valley Testing Laboratories	Report Date: 10/27/23
Project:	28071	Collection Date: 09/12/23 10:30
Lab ID:	C23090637-001	DateReceived: 09/18/23
Client Samol	e ID: 28071001; MW-2017-10	Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.1	pCi/L	£J.			E903.0	10/10/23 10:04 / kdk
Radium 226 precision (±)	0.1	pCi/L				E903.0	10/10/23 10:04 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	10/10/23 10:04 / kdk
Radium 228	-0.02	pCi/L	U			RA-05	10/04/23 14:28 / trs
Radium 228 precision (±)	0.7	pCi/L				RA-05	10/04/23 14:28 / trs
Radium 228 MDC	1.2	pCI/L				RA-05	10/04/23 14:28 / trs
Radium 226 + Radium 228	0.7	pCi/L	U			A7500-RA	10/11/23 10:29 / dmf
Radium 226 + Radium 228 precision (±)	0.7	pCi/L				A7500-RA	10/11/23 10:29 / dmf
Radium 226 + Radium 228 MDC	1.2	pCi/L				A7500-RA	10/11/23 10:29 / dml

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

ENERGY LABORATORIES	Trust our People. Trust our Data.	Billings. M1 406:252;6325 + Casper, WY 307:235:051 Gillette, WY 307:686:7175 + Helena, M1 406:442:071		
	LABORATORY ANALYTIC Prepared by Casper, WY			
Client:	Minnesota Valley Testing Laboratories	Report Date: 10/27/23		
Project:	28071	Collection Date: 09/12/23 08:40		
Lab ID:	C23090637-002	DateReceived: 09/18/23		
Client Sample ID:	28071002; MW-2017-11	Matrix: Groundwater		

Analyses	Result	Units	Qualifiers	RL.	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.2	pCi/L	U.			E903.0	10/10/23 10:04 / kdk
Radium 226 precision (±)	0.2	pCi/L				E903.0	10/10/23 10:04 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	10/10/23 10:04 / kdk
Radium 228	0.4	pCi/L	U			RA-05	10/04/23 14:28 / trs
Radium 228 precision (±)	0.9	pCi/L				RA-05	10/04/23 14:28 / trs
Radium 228 MDC	1.4	pCI/L				RA-05	10/04/23 14:28 / trs
Radium 226 + Radium 228	0.8	pCi/L	U			A7500-RA	10/11/23 10:29 / dmf
Radium 226 + Radium 228 precision (±)	0.9	pCi/L				A7500-RA	10/11/23 10:29 / dm/
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	10/11/23 10:29 / dm/

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

ENERGY LABORATORIES	Trust our People, Trust our Data.	Billings, M1 406,252,6325 + Casper, WY 307,235,0515 Gillette, WY 307,686,7175 + Helena, M1 406,442,0711			
	LABORATORY ANALYTICAL R Prepared by Casper, WY Bran				
Client:	Minnesota Valley Testing Laboratories	Report Date: 10/27/23			
Project:	28071	Collection Date: 09/11/23 10:50			
Lab ID:	C23090637-003	DateReceived: 09/18/23			
Client Sample ID:	28071003; MW-2017-8D	Matrix: Groundwater			

Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.2	pCi/L	£J.			E903.0	10/10/23 14:26 / kdk
Radium 226 precision (±)	0.1	PCVL				E903.0	10/10/23 14:26 / kdk
Radium 226 MDC	0.2	pCi/L				E903.0	10/10/23 14:26 / kdk
Radium 228	0.7	pCi/L	U			RA-05	10/04/23 14:28 / trs
Radium 228 precision (±)	0.7	pCi/L				RA-05	10/04/23 14:28 / trs
Radium 228 MDC	1.1	pCI/L				RA-05	10/04/23 14/28 / trs
Radium 226 + Radium 228	0.7	pCi/L	U			A7500-RA	10/11/23 10:29 / dmf
Radium 226 + Radium 228 precision (±)	0.7	pCi/L				A7500-RA	10/11/23 10:29 / dm/
Radium 226 + Radium 228 MDC	1.1	pCi/L				A7500-RA	10/11/23 10:29 / dm/

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

Page 4 of 9

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Account #: 2040

Client: Basin Electric Power Cooperative

Analyses			Result	Units	Qualifiers	RL	MCL/ QCL	Method	Anal	ysis Date / By
Client Sample ID:	28071004;	Dup							Matrix:	Groundwater
.ab ID:	C2309063	-004						DateRe	ceived:	09/18/23
Project:	28071							Collectio	n Date:	09/12/23 08:40
Client:	Minnesota	Valley Tr	esting Labora	tories				Repo	rt Date:	10/27/23
				0.000	ANALYTICA Casper, WY B		ORT			
			Vallasid		nina.		-			
ENERGY	E	www.enuroph	ple. Trust our Dat	e,					10.00 al este de la sec	25 + Casper, WY 307.235.0 5 + Helena, MT 406.442.0

RADIONUCLIDES, TOTAL				
Radium 226	0.07 pCi/L	E.	E903.0	10/10/23 14:26 / kdk
Radium 226 precision (±)	0.1 pCi/L		E903.0	10/10/23 14:26 / kdk
Radium 226 MDC	0.2 pCi/L		E903.0	10/10/23 14:26 / kdk
Radium 228	0.7 pCi/L	U	RA-05	10/04/23 14:28 / trs
Radium 228 precision (±)	0.8 pCi/L		RA-05	10/04/23 14:28 / trs
Radium 228 MDC	1.3 pCI/L		RA-05	10/04/23 14/28 / trs
Radium 226 + Radium 228	0.7 pCi/L	U	A7500-RA	10/11/23 10:29 / dmf
Radium 226 + Radium 228 precision (±)	0.8 pCi/L		A7500-RA	10/11/23 10:29 / dm/
Radium 226 + Radium 228 MDC	1.3 pCi/L		A7500-RA	10/11/23 10:29 / dmf

Report Definitions: RL - Analyte Reporting Limit QCL - Quality Control Limit U - Not detected at Minimum Detectable Concentration (MDC) MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

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Account #: 2040

Client: Basin Electric Power Cooperative

LABORA	ORIES	ID II NOV	optiticano.				G	illette WY 307.686		telena, MT 406	.442.071
			Q		Summary						
Client:	Minnesota Valley Te	sting L	aboratories	Prepared	by Casper, W Work Order:			Repor	t Date:	10/24/23	
Analyte		Coun	t Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	E903.0		_							Batch: RA2	26-1106
Lab ID:	LCS-RA226-11063	3	Laboratory Co	ntrol Sample	8		Run: TENN	ELEC-3_230926	iC	10/10	23 10:04
Radium 22	6		9.9	pCi/L		99	70	130			
Radium 22	6 precision (±)		1.9	pCi/L							
Radium 22	6 MDC		0.23	PCI/L							
Lab ID:	MB-RA226-11063	3	Method Blank				Run: TENN	ELEG-3_230926	C	10/10	23 10:04
Radium 22	26		0,06	PCIL							U
Radium 22	6 precision (±)		0.1	pCi/L							
Radium 22	6 MDC		0.2	PCUL							
Lab ID:	C23090637-001ADU	3	Sample Duplic	ate			Run: TENN	ELEC-3_230926	C	10/10	23 10:04
Radium 22	26		0.30	pCi/L					70	30	R
Radium 23	6 precision (±)		0.15	pC//L							
Radium 22	6 MDC		0.20	DCVL							

Qualifiers:

RL - Analyte Reporting Limit

R - Relative Percent Difference (RPD) exceeds advisory limit

ND - Not detected at the Reporting Limit (RL) U - Not detected at Minimum Detectable Concentration (MDC)

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Account #: 2040

Client: Basin Electric Power Cooperative

LABORA	TORIES	o m store (t)	ntin m					Tillette WY 307.68		Helena, MT 406	.492.0/11
			Q		Summary						
Client:	Minnacota Valley Tax	ting L	harstadaa	Prepared	by Casper, W Work Order:			Dama	d Data	10/24/23	
chent:	Minnesota Valley Tes	sung La	aboratories		WORK Order.	02305	10037	керо	n Date.	10/24/23	_
Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05								-	Batch: RA	228-7217
ab ID:	LCS-228-RA226-1106	3 3 1	aboratory Con	trol Samp	le		Run: TENN	NELEC-3_23092	5A	10/04	23 14:28
Radium 2	28		6.1	pCi/L		91	70	130			
Radium 2	28 precision (±)		1.5	pCi/L							
Radium 2	28 MDC		1.2	PCI/L							
ab ID:	MB-RA226-11063	3 1	Method Blank				Run: TENN	ELEC-3_23092	бA	10/04	23 14:28
Radium 2	28		0.3	PCIL							U
Radium 2	28 precision (±)		0.7	pCi/L							
Radium 2	28 MDC		1	pCi/L							
ab ID:	C23090637-001ADUP	3 5	Sample Duplic	ate			Run: TENN	ELEC-3_230920	5A	10/04	23 14:28
Radium 2	28		0.51	pCi/L					220	30	UR
Radium 2	28 precision (±)		0.77	pC//L							
Radium 2	28 MDC		1.3	pCi/L							

Qualifiers:

RL - Analyte Reporting Limit

R - Relative Percent Difference (RPD) exceeds advisory limit

ND - Not detected at the Reporting Limit (RL) U - Not detected at Minimum Detectable Concentration (MDC)

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Account #: 2040

ENERGY

Client: Basin Electric Power Cooperative

Work Order Receipt Checklist

Trust our People. Trust our Data.

Minnesota Valley Testing Laboratories

Rec	Received: 9/18/2023 seived by: slr ier name: UPS Not Present Not Pr
Carr V No () V No () No ()	ier name: UPS Not Present 🗌 Not Present 📄
Ø № Ø № 	Not Present
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No 🗌	No VOA vials submitted
No 🗌	Not Applicable
	Ø No

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

For methods that require zero headspace or require preservation check at the time of analysis due to potential interference, the pH is verified at analysis. Nonconforming sample pH is documented as part of the analysis and included in the sample analysis comments.

Contact and Corrective Action Comments:

This was received with C23090597 without a COC, Claudette Carroll emailed me the COC on 9/19/2023. Temperature Blank temperature for Cooler 1 was 19.0°C, Cooler 2 was 19.5°C, Cooler 3 was 18.8°C, Cooler 4 was 19.0°C, and Cooler 5 was 19.0°C, 9/19/2023 HJ

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C23090637

Ultimgs, MT 406.252.6325 + Casper, WY 307.235.0515

Gillette, WY 307.686.7175 = Helens, MT 406.442.0711



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Account #:	2040						С	lier	t:	Basin E	Ele	ctr	ic	Power	Coope	rative		
		Page 1 of 1 .	28071	Phone #: 701-258-9720	Fax #: For faxed report check box	E-mail: ccarroll@mvtl.com	Date Submitted: 14-Sep-23	Purchase Order #: BL6754	Analysis	Analysis Required	Ra226 & Ra228	Ra226 & Ra228	Ra226 & Ra228	Ra226 & Ra228		Comments: Individual results as well as combined Ra226 & Ra228 must be reported for all samples.	College of the famp:	24210 10.01 CL-11-1
	ord		28	-	-		-	-	e	Other						orte	T	2002
	ec		#						Bottle Type	Glass Jar Glass Jar	-	_		_		Lep	N	00
	R		Work Order #						ottle	VOC Vials						pe	A P	and a
	po	1.1	lo X				0		8	Untreated Callon HNO3		-	٣	-		Ist	Received b	00
	Ist		Vorl		Claudette		C15480 v3	er:	+			-	-			Ξ	Rec	1 a
Ċ	of Ct	5			Clat	mpler:		ne/Numt		Time Sampled	1030	0840	1050	0840		3a228	110	100
	Chain of Custody Record	2000	200	Account #:	Contact:	Name of Sampler:	Quote Number	Project Name/Number:		Date Sampled	12-Sep-23	12-Sep-23	11-Sep-23	12-Sep-23		a226 & I	Sample Condition:	(1000 6100)
		2-0	100		10		10			Sample Type	GW	GW	GW	GW		bined R	Sample C	101
	and a	Ave AN	A June	1 1 2310-0					formation	, Client Sample ID	MW-2017-10	MW-2017-11	MW-2017-8D	Dup		vell as com	Time:	1/ :< 11
	ABODATODIES Inc	2616 E Broadway Ave Bismarck. ND 58501	258-9720	44. (101) AD	MVTL 2616 E Broadwav	Bismarck, ND 58501	PO Box 249	New Ulm, MN 56073	Sample Information	Client	-WW	-WW	-MW			sults as v	Date:	14-Sep-23
		2616 E B	(101)		2616 E B	Bismarck, ND 58501	maicate il unierent. PO R	New Ulm.		Lab Number MVTL Lab Number	28071001	28071002	28071003	28071004		Individual res	Transferred by:	
			T-11 5-22 1000	Company Name and Address:			ssaund Address		-	Lab Number						Comments:	Transf	T. Olson

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

Toll Free: (80	Minnesota Valley Testing Labora 2616 East Broadway Avenue Bismarck, ND 58501 Phone: (701) 258-9720 10) 279-6885 Fax: (701) 258-9724	atories, Inc.	Basin WO: 2	Electric 28071	Po	we	er Coope Chain of Custody Page of Work Order # Lab Use Only
Company Name			Account #			-	Phone #
	Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A		Contact	2040 Mark Dihle	,	-	T01-745-7238 701-557-5488 Emails mdihle@bepc.com_aknutson@bepc.com
	Stanton, ND 58571 (indicate if different from above)		Name of S	ampler			jermey.hurshman@aecom.com
Dining Address	(moleate if different from above)		mis Quote Nur	nber			jason.lach@aecom.com Date Submitted 9/13/2023
				me/Numb		cc	CR Wells 790708-04
Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A	Analysis Required
							D Co CI E CO Ch' Ad Do' Do' Cd Cr Co Dh
001	MW-2017-10	GW	9/12/2023	1030	3	N	B, Ca, Cl, F, SO4, Sb, As, Ba, Be, Cd, Cr, Co, Pt Li, Hg, Mo, Se, Tl, Ra226, Ra228, TDS
001	MW-2017-10 MW-2017-11	GW GW	9/12/2023 9/12/2023	1030 840			Li, Hg, Mo, Se, Ti, Ra226, Ra228, TDS B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,Pb Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS
002					3	N	Li, Hg, Mo, Se, ŤI, Ra226, Ra228, TĎS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS
1	MW-2017-11	GW	9/12/2023	840	3	N N	Li, Hg, Mó, Se, Ťi, Ra226, Ra228, TĎS B, Ca, Ci, F, SO4, Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, Ti, Ra226, Ra228, TDS B, Ca, Ci, F, SO4, Sb, As, Ba, Be, Cd, Cr, Co,PE
002	MW-2017-11 MW2017-8D	GW GW	9/12/2023 9/11/2023	840 1050	3	NNN	Li, Hg, Mo, Se, ŤI, Ra226, Ra228, TĎS B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS
002	MW-2017-11 MW2017-8D Dup	GW GW GW	9/12/2023 9/11/2023 9/12/2023	840 1050 840	3 3 3	NNN	Li, Hg, Mo, Se, ŤI, Ra226, Ra228, TĎS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS TDS, B, Ca, CI, F, SO ₄
002	MW-2017-11 MW2017-8D Dup MW2017-8	GW GW GW GW	9/12/2023 9/11/2023 9/12/2023 9/11/2023	840 1050 840 915	3 3 3 2	NNNN	Li, Hg, Mo, Se, ŤI, Ra226, Ra228, TĎS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS TDS, B, Ca, CI, F, SO ₄ TDS, B, Ca, CI, F, SO ₄
002	MW-2017-11 MW2017-8D Dup MW2017-8 MW-2017-7	GW GW GW GW GW	9/12/2023 9/11/2023 9/12/2023 9/11/2023 9/11/2023	840 1050 840 915 1211	3 3 3 2 2 2	ZZZZZ	Li, Hg, Mo, Se, ŤI, Ra226, Ra228, TĎS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS B, Ca, CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,PE Li, Hg, Mo, Se, TI, Ra226, Ra228, TDS TDS, B, Ca, CI, F, SO ₄ TDS, B, Ca, CI, F, SO ₄ TDS, B, Ca, CI, F, SO ₄

Transferred by	Date	Time	Received by	Date	Time	Temp	ROI	Therm. #
1. Nillennin Express	9-13-23	1.	Alathorast	13 cd B	Ke44	7.4°C	()/N	Tm920
2.			10.000				Y/N	

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

Form # 80-910005-1

See above for page number

Effective Date: 26 Aug 2022



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Account #: 2040

Client: Basin Electric Power Cooperative

Toll Free: (800)	2616 East Bro Bismarck, ND Phone: (701) 258-97		tories, Inc.			Lab Use	- 6	nly			Page		2
ompany Name a			_		Account # Phon						se Only		
ompany Name a		ctric Power Coop.			2040 Pho						745-7238	701-557-5	488
	Leland	d Olds Station			Contact Emai								
	3901								c.com akni		oc.com		
	Stant								man@aeco	m.com			
illing Address (i	ndicate if different f		mls Quote Nur	mhor	_		jason.la		submitted		_		
					Quote Nul	nber			1000	9/13/2023			
					Project Na LOS P	me/Numb		CCR		Purc	hase Order	r# 10708-04	
Lab Use Only Lab	Sam	ple ID	Sample M GW - Ground		Date Sampled	Time Sampled	jo#	Filtered		A	analysis Re	quired	
-	MW-	2017-2	GW		9/12/2023	1240	2	N		TD	S, B, Ca, C	I, F, SO4	
-	MW-	2017-3	GW		9/12/2023	1415	2	N		TD	S, B, Ca, C	I, F, SO4	
-	MW-	2017-4	GW		9/12/2023	1530	2	N		TD	S, B, Ca, C	I, F, SO4	
									_			_	
													_
Comments:						-			_				
Trans	ferred by	Date	Time	110	Received	by	Г	Date	Tim	e	Temp	ROI	Therm. #
h				AR	United	A	12	Sed.	75 1644	1	7.40	(VIN	Tmg2
	N	4.04			7-				Y/N				

Attachment B Input and Output Data Files for Calculation of Upper and Lower Prediction Limits (2018-2020)

Background Monitoring Wells MW-2017-1 and MW-2017-8 LOS Pond 2 and Pond 3 (Multi-Unit) CCR Monitoring Well Network Leland Olds Station – Stanton, North Dakota

WellNo	Date	В	DВ	Ca	D Ca	CI	D CI	F	DF	pН	DрH	SO4	D SO4	TDS	D TDS
MW-2017-1	03/12/2018	2	1	100	1	8.8	1	0.5	0	6.95	1	210	1	710	1
MW-2017-1	04/17/2018	2.1	1	96	1	9.4	1	0.5	0	6.86	1	200	1	680	1
MW-2017-1	06/14/2018	2.2	1	89	1	8.2	1	0.5	0	7.06	1	220	1	690	1
MW-2017-1	07/25/2018	2.36	1	91	1	8.73	1	0.5	0	7.21	1	218	1	710	1
MW-2017-1	08/27/2018	2.37	1	90	1	8.65	1	0.5	0	7.38	1	219	1	707	1
MW-2017-1	03/12/2019	2.15	1	103	1	8.5	1	0.5	0	7.19	1	217	1	735	1
MW-2017-1	03/27/2019	2.02	1	98	1	8.53	1	0.5	0	7.26	1	212	1	718	1
MW-2017-1	04/09/2019	2.02	1	107	1	8.91	1	0.5	0	7.23	1	221	1	761	1
MW-2017-1	11/12/2019	1.11	1	130	1	9	1	0.43	1	7.73	1	233	1	740	1
MW-2017-1	06/08/2020	1.04	1	150	1	7.74	1	0.5	0	6.86	1	260	1	1050	1
MW-2017-1	10/05/2020	0.96	1	158	1	9.87	1	0.5	0	7.01	1	270	1	960	1
MW-2017-8	03/14/2018	0.48	1	150	1	25	1	1	0	7.03	1	2,000	1	3,800	1
MW-2017-8	04/18/2018	0.46	1	150	1	25	1	1	0	7.38	1	2,100	1	4,000	1
MW-2017-8	06/15/2018	0.46	1	140	1	22	1	1	0	7.19	1	2,100	1	4,000	1
MW-2017-8	07/25/2018	0.47	1	145	1	24.3	1	1	0	7.23	1	2,010	1	3,900	1
MW-2017-8	08/28/2018	0.47	1	140	1	24	1	1	0	7.52	1	2,020	1	3,880	1
MW-2017-8	06/08/2020	0.45	1	133	1	20.8	1	4.68	1	7.29	1	1,860	1	3800	1
MW-2017-8	10/06/2020	0.48	1	137	1	24.6	1	4.57	1	7.16	1	1,960	1	2,960	1

D_(Analyte): 0= non-detect and 1 = detect

pH in Standard Units

All other analytes reported in mg/L

WellNo	Date	В	D_B	Ca	D_Ca	CI	D_CI	F	D_F	pН	D_pH	SO4	D_SO4	TDS	D_TDS
MW-2017-1	03/12/2018	2	1	100	1	8.8	1	0.5	0	6.95	1	210	1	710	1
MW-2017-1	04/17/2018	2.1	1	96	1	9.4	1	0.5	0	6.86	1	200	1	680	1
MW-2017-1	06/14/2018	2.2	1	89	1	8.2	1	0.5	0	7.06	1	220	1	690	1
MW-2017-1	07/25/2018	2.36	1	91	1	8.73	1	0.5	0	7.21	1	218	1	710	1
MW-2017-1	08/27/2018	2.37	1	90	1	8.65	1	0.5	0	7.38	1	219	1	707	1
MW-2017-1	03/12/2019	2.15	1	103	1	8.5	1	0.5	0	7.19	1	217	1	735	1
MW-2017-1	03/27/2019	2.02	1	98	1	8.53	1	0.5	0	7.26	1	212	1	718	1
MW-2017-1	04/09/2019	2.02	1	107	1	8.91	1	0.5	0	7.23	1	221	1	761	1
MW-2017-1	11/12/2019	1.11	1	130	1	9	1	0.43	1	7.73	1	233	1	740	1
MW-2017-1	06/08/2020	1.04	1	150	1	7.74	1	0.5	0	6.86	1	260	1	1050	1
MW-2017-1	10/05/2020	0.96	1	158	1	9.87	1	0.5	0	7.01	1	270	1	960	1
MW-2017-8	03/14/2018	0.48	1	150	1	25	1	1	0	7.03	1	2,000	1	3,800	1
MW-2017-8	04/18/2018	0.46	1	150	1	25	1	1	0	7.38	1	2,100	1	4,000	1
MW-2017-8	06/15/2018	0.46	1	140	1	22	1	1	0	7.19	1	2,100	1	4,000	1
MW-2017-8	07/25/2018	0.47	1	145	1	24.3	1	1	0	7.23	1	2,010	1	3,900	1
MW-2017-8	08/28/2018	0.47	1	140	1	24	1	1	0	7.52	1	2,020	1	3,880	1
MW-2017-8	06/08/2020	0.45	1	133	1	20.8	1	4.68	1	7.29	1	1,860	1	3800	1
MW-2017-8	10/06/2020	0.48	1	137	1	24.6	1	4.57	1	7.16	1	1,960	1	2,960	1

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.2 1/19/2024 5:38:36 PM
From File	ProUCL Input LOS Multiunit.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

в

General Statistics

15165			
Total Number of Observations	18	Number of Distinct Observations	14
Minimum	0.45	First Quartile	0.473
Second Largest	2.36	Median	1.075
Maximum	2.37	Third Quartile	2.08
Mean	1.311	SD	0.806
Coefficient of Variation	0.615	Skewness	0.112
Mean of logged Data	0.0494	SD of logged Data	0.717
Critical Values for	or Background Thres	hold Values (BTVs)	
Tolerance Factor K (For UTL)	2.453	d2max (for USL)	2.504
	Normal GOF Test		
Shapiro Wilk Test Statistic	0.797	Shapiro Wilk GOF Test	
1% Shapiro Wilk Critical Value	0.858	Data Not Normal at 1% Significance Level	
Lilliefors Test Statistic	0.248	Lilliefors GOF Test	
1% Lilliefors Critical Value	0.235	Data Not Normal at 1% Significance Level	
Data Not	Normal at 1% Signifi	cance Level	
Background St	otictics Assuming N	ormal Distribution	
95% UTL with 95% Coverage	atistics Assuming No 3.288	90% Percentile (z)	2.344
95% UPL (t)	2.751	90% Percentile (z) 95% Percentile (z)	2.344
95% USL	3.329	99% Percentile (z)	3.186
7570 USL	3.329		3.100
	Gamma GOF Tes	t	
A-D Test Statistic	1.623	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.75	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.264	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.206	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamm	na Distributed at 5%	Significance Level	
	Gamma Statistics		
k hat (MLE)	2.412	k star (bias corrected MLE)	2.047
Theta hat (MLE)	0.544	Theta star (bias corrected MLE)	0.641
nu hat (MLE)	86.82	nu star (bias corrected)	73.68
MLE Mean (bias corrected)	1.311	MLE Sd (bias corrected)	0.916
Background St	atistics Assuming Ga	amma Distribution	
95% Wilson Hilferty (WH) Approx. Gamma UPL	3.225	90% Percentile	2.536
95% Hawkins Wixley (HW) Approx. Gamma UPL	3.331	95% Percentile	3.087
95% WH Approx. Gamma UTL with 95% Coverage	4.402	99% Percentile	4.308
95% HW Approx. Gamma UTL with 95% Coverage	4.686		
95% WH USL	4.503	95% HW USL	4.805

	Lognorm	al GOF Test	
Shapiro Wilk Test Statistic	0.785	Shapiro Wilk Lognormal GOF Test	
10% Shapiro Wilk Critical Value	0.914	Data Not Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.26	Lilliefors Lognormal GOF Test	
10% Lilliefors Critical Value	0.185	Data Not Lognormal at 10% Significance Level	
Data Not Lo	gnormal a	t 10% Significance Level	
Background Sta	tistics ass	uming Lognormal Distribution	
95% UTL with 95% Coverage	6.1	90% Percentile (z)	2.634
95% UPL (t)	3.785	95% Percentile (z)	3.417
95% USL	6.328	99% Percentile (z)	5.571
Nonparametric Distribution Free Background Statistics			
Data do not follow a Discernible Distribution			
		or Background Threshold Values	
Order of Statistic, order	18	95% UTL with 95% Coverage	2.37

Approx, f used to compute achieved CC	0.947	Approximate Actual Confidence Coefficient achieved by UTL	0.603
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	2.37	95% BCA Bootstrap UTL with 95% Coverage	2.37
95% UPL	2.37	90% Percentile	2.248
90% Chebyshev UPL	3.795	95% Percentile	2.362
95% Chebyshev UPL	4.92	99% Percentile	2.368
95% USL	2.37		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data

represents a background data set and when many onsite observations need to be compared with the BTV.

Background Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.2 1/19/2024 5:38:36 PM
From File	ProUCL Input LOS Multiunit.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

Ca

General Statistics

95% 95%

ics			
Total Number of Observations	18	Number of Distinct Observations	15
Minimum	89	First Quartile	98.5
Second Largest	150	Median	131.5
Maximum	158	Third Quartile	143.8
Mean	122.6	SD	25
Coefficient of Variation	0.204	Skewness	-0.122
Mean of logged Data	4.789	SD of logged Data	0.21
Critical Values f	or Backgrou	und Threshold Values (BTVs)	
Tolerance Factor K (For UTL)	2.453	d2max (for USL)	2.504
	Normal	GOF Test	
Shapiro Wilk Test Statistic	0.87	Shapiro Wilk GOF Test	
1% Shapiro Wilk Critical Value	0.858	Data appear Normal at 1% Significance Level	
Lilliefors Test Statistic	0.178	Lilliefors GOF Test	
1% Lilliefors Critical Value	0.235	Data appear Normal at 1% Significance Level	
Data appea	ar Normal a	t 1% Significance Level	
Background S	tatistics Ass	suming Normal Distribution	
95% UTL with 95% Coverage	183.9	90% Percentile (z)	154.6
95% UPL (t)	167.3	95% Percentile (z)	163.7
95% USL	185.2	99% Percentile (z)	180.8
	Gamma	GOF Test	
A-D Test Statistic	1.065	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.739	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.196	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance	Level
Detected data follow Ap	pr. Gamma	Distribution at 5% Significance Level	
	Gamma	Statistics	
k hat (MLE)	24.58	k star (bias corrected MLE)	20.52
Theta hat (MLE)	4.988	Theta star (bias corrected MLE)	5.974
nu hat (MLE)	885	nu star (bias corrected)	738.8
MLE Mean (bias corrected)	122.6	MLE Sd (bias corrected)	27.07
Background St	atistics Ass	suming Gamma Distribution	
95% Wilson Hilferty (WH) Approx. Gamma UPL	171.9	90% Percentile	158.3
95% Hawkins Wixley (HW) Approx. Gamma UPL	172.6	95% Percentile	170.3
5% WH Approx. Gamma UTL with 95% Coverage	194	99% Percentile	194.2
5% HW Approx. Gamma UTL with 95% Coverage	195.6		
95% WH USL	195.8	95% HW USL	197.5

Shapiro Wilk Test Statistic	0.863	Shapiro Wilk Lognormal GOF Test
10% Shapiro Wilk Critical Value	0.914	Data Not Lognormal at 10% Significance Level
Lilliefors Test Statistic	0.202	Lilliefors Lognormal GOF Test
10% Lilliefors Critical Value	0.185	Data Not Lognormal at 10% Significance Level
Data Not Lognormal at 10% Significance Level		

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	201.2
	95% UPL (t)	174.9
	05% 1151	202 4

95% USL 203.4

90% Percentile (z) 157.3 95% Percentile (z) 169.8 99% Percentile (z) 195.9

Nonparametric Distribution Free Background Statistics

Data appear Normal at 1% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, order	18	95% UTL with 95% Coverage	158
Approx, f used to compute achieved CC	0.947	Approximate Actual Confidence Coefficient achieved by UTL	0.603
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	158	95% BCA Bootstrap UTL with 95% Coverage	158
95% UPL	158	90% Percentile	150
90% Chebyshev UPL	199.7	95% Percentile	151.2
95% Chebyshev UPL	234.6	99% Percentile	156.6
95% USL	158		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data

represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.2 1/19/2024 5:38:36 PM
From File	ProUCL Input LOS Multiunit.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

СІ

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Minimum	7.74	First Quartile	8.67
Second Largest	25	Median	9.2
Maximum	25	Third Quartile	23.5
Mean	14.56	SD	7.556
Coefficient of Variation	0.519	Skewness	0.539
Mean of logged Data	2.555	SD of logged Data	0.503
55			
Critical Values for	or Background Thre	shold Values (BTVs)	
Tolerance Factor K (For UTL)	2.453	d2max (for USL)	2.504
	Normal GOF Tes	st	
Shapiro Wilk Test Statistic	0.712	Shapiro Wilk GOF Test	
1% Shapiro Wilk Critical Value	0.858	Data Not Normal at 1% Significance Level	
Lilliefors Test Statistic	0.344	Lilliefors GOF Test	
1% Lilliefors Critical Value	0.235	Data Not Normal at 1% Significance Level	
	Normal at 1% Signi	č	
Background St	tatistics Assuming N	Iormal Distribution	
95% UTL with 95% Coverage	33.09	90% Percentile (z)	24.24
95% UPL (t)	28.06	95% Percentile (z)	26.99
95% USL	33.48	99% Percentile (z)	32.14
	Gamma GOF Te	st	
A-D Test Statistic	2.437	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.743	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.33	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.204	Data Not Gamma Distributed at 5% Significance Level	
	na Distributed at 5%	-	
	Gamma Statistic	<u>_</u>	
k hat (MLE)	4.209	k star (bias corrected MLE)	3.544
Theta hat (MLE)	3.459	Theta star (bias corrected MLE)	4.107
nu hat (MLE)	151.5	nu star (bias corrected)	127.6
MLE Mean (bias corrected)	14.56	MLE Sd (bias corrected)	7.732
WILL Wear (blas con ected)	14.50	WEE SU (bias corrected)	1.132
Background St	atistics Assuming G	amma Distribution	
95% Wilson Hilferty (WH) Approx. Gamma UPL	30	90% Percentile	24.93
95% Hawkins Wixley (HW) Approx. Gamma UPL	30.34	95% Percentile	29.15
95% WH Approx. Gamma UTL with 95% Coverage	38.6	99% Percentile	38.24
95% HW Approx. Gamma UTL with 95% Coverage	39.72		
95% WH USL	39.32	95% HW USL	40.51

	Lognorma	I GOF Test	
Shapiro Wilk Test Statistic	0.728	Shapiro Wilk Lognormal GOF Test	
10% Shapiro Wilk Critical Value	0.914	Data Not Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.312	Lilliefors Lognormal GOF Test	
10% Lilliefors Critical Value	0.185	Data Not Lognormal at 10% Significance Level	
Data Not Lo	gnormal at	10% Significance Level	
Deckground Sta		ming Legnermal Distribution	
6		ming Lognormal Distribution	
95% UTL with 95% Coverage	44.18	90% Percentile (z)	24.51
95% UPL (t)	31.61	95% Percentile (z)	29.43
95% USL	45.33	99% Percentile (z)	41.45
Nonparametric	Distribution	Free Background Statistics	
Data do no	ot follow a D	Discernible Distribution	
Nonnarametric Linn	er l imits fo	r Background Threshold Values	
Order of Statistic, order		0	25
	18	95% UTL with 95% Coverage	
Approx, f used to compute achieved CC	0.947	Approximate Actual Confidence Coefficient achieved by UTL	0.603
		Approximate Sample Size needed to achieve specified CC	59

		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	25	95% BCA Bootstrap UTL with 95% Coverage	25
95% UPL	25	90% Percentile	24.72
90% Chebyshev UPL	37.85	95% Percentile	25
95% Chebyshev UPL	48.4	99% Percentile	25
95% USL	25		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.2 1/19/2024 5:38:36 PM
From File	ProUCL Input LOS Multiunit.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

F

General Statistics

Total Number of Observations	18	Number of Missing Observations	0
Number of Distinct Observations	5		
Number of Detects	3	Number of Non-Detects	15
Number of Distinct Detects	3	Number of Distinct Non-Detects	2
Minimum Detect	0.43	Minimum Non-Detect	0.5
Maximum Detect	4.68	Maximum Non-Detect	1
Variance Detected	5.869	Percent Non-Detects	83.33%
Mean Detected	3.227	SD Detected	2.423
Mean of Detected Logged Data	0.74	SD of Detected Logged Data	1.371

Warning: Data set has only 3 Detected Values.

This is not enough to compute meaningful or reliable statistics and estimates.

Tolerance Factor K (For UTL)	2.453
	2.100

d2max (for USL) 2.504

Norma	al GOF Test on	Detects Only	
Shapiro Wilk Test Statistic	0.769	Shapiro Wilk GOF Test	
1% Shapiro Wilk Critical Value	0.753	Detected Data appear Normal at 1% Significance Level	
Lilliefors Test Statistic	0.377	Lilliefors GOF Test	
1% Lilliefors Critical Value	0.429	Detected Data appear Normal at 1% Significance Level	
Detected Data a	ppear Normal a	it 1% Significance Level	
Kaplan Meier (KM) Back	ground Statistic	s Assuming Normal Distribution	
KM Mean	0.896	KM SD	1.318
95% UTL95% Coverage	4.13	95% KM UPL (t)	3.253
90% KM Percentile (z)	2.586	95% KM Percentile (z)	3.065
99% KM Percentile (z)	3.963	95% KM USL	4.198

DL/2 Substitution Background Statistics Assuming Normal Distribution

0.816	SD	1.391
4.227	95% UPL (t)	3.301
2.598	95% Percentile (z)	3.103
4.051	95% USL	4.298
	4.227 2.598	4.227 95% UPL (t) 2.598 95% Percentile (z)

DL/2 is not a recommended method. DL/2 provided for comparisons and historical reasons

G	amma GOF	Tests on Det	ected Observations Only		
A-D T	est Statistic	0.611	Anderson-Darling GOF Test		
5% A-D Ci	5% A-D Critical Value 0.64 Detected data appear Gamma Distributed at 5% Significan		gnificance l	Level	
K-S T	est Statistic	0.427	Kolmogorov-Smirnov GOF		
5% K-S Ci	ritical Value	0.439	Detected data appear Gamma Distributed at 5% Sig	gnificance l	Level
Dat	a Not Gamr	na Distribute	d at 5% Significance Level		
	Gamma	Statistics on	Detected Data Only		
	k hat (MLE)	1.299	k star (bias correct	ted MLE)	N/A
Thet	a hat (MLE)	2.484	Theta star (bias correct	ted MLE)	N/A
n	u hat (MLE)	7.795	nu star (bias co	corrected)	N/A
MLE Mean (bias	s corrected)	N/A			
MLE Sd (bias	s corrected)	N/A	95% Percentile of Chisquare	e (2kstar)	N/A
G	amma ROS	Statistics usi	ing Imputed Non-Detects		
			NDs with many tied observations at multiple DLs		
			<1.0, especially when the sample size is small (e.g., <15-	-20)	
-			vield incorrect values of UCLs and BTVs		
			the sample size is small.		
		-	be computed using gamma distribution on KM estimates		
3	Minimum	0.01	1 33	Mean	1.192
Maximum		4.68		Median	
	SD	1.447		CV	
	k hat (MLE)	0.513	k star (bias correct	k star (bias corrected MLE)	
Theta hat (MLE)		2.326	Theta star (bias correct	Theta star (bias corrected MLE)	
nu hat (MLE) 18.46		nu star (bias co		16.71	
MLE Mean (bias corrected) 1.192 MLE Sd (bias corrected)		corrected)	1.75		
95% Percentile of Chisqu	are (2kstar)	3.662	90% P	90% Percentile	
	6 Percentile	4.703	99% P6	99% Percentile	
The following stati	stics are co	mputed using	Gamma ROS Statistics on Imputed Data		
Upper Limits u	using Wilsor	n Hilferty (WH) and Hawkins Wixley (HW) Methods		
	WH	HW	V	WH	НW
95% Approx. Gamma UTL with 95% Coverage	8.286	10.54	95% Approx. Gamma UPL	4.981	5.739
95% Gamma USL	8.586	11.01			
Est	imates of G	amma Param	neters using KM Estimates		
	Mean (KM)	0.896	-	SD (KM)	1.318
Va	riance (KM)	1.738	SE of Me	SE of Mean (KM)	
	k hat (KM)	0.462	ks	star (KM)	0.422
	nu hat (KM)	16.63	nu s	star (KM)	15.19
	eta hat (KM)	1.94	theta s	star (KM)	2.124
80% gamma perc	centile (KM)	1.455	90% gamma percen	ntile (KM)	2.507
95% gamma per	centile (KM)	3.655	99% gamma percen	ntile (KM)	6.526
The following sta	tistics are c	omputed usin	ng gamma distribution and KM estimates		
			i) and Hawkins Wixley (HW) Methods		
• •	WH	HW	-	WH	НW

	WH	HW		WH	HW
95% Approx. Gamma UTL with 95% Coverage	3.786	3.722	95% Approx. Gamma UPL	2.56	2.454
95% KM Gamma Percentile	2.337	2.231	95% Gamma USL	3.894	3.836

Lognormal GO	F Test on De	etected Observations Only	
Shapiro Wilk Test Statistic	0.757	Shapiro Wilk GOF Test	
10% Shapiro Wilk Critical Value	0.789	Data Not Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.382	Lilliefors GOF Test	
10% Lilliefors Critical Value	0.389	Detected Data appear Lognormal at 10% Significance Leve	el
Detected Data appear Ap	oproximate L	ognormal at 10% Significance Level	
Background Lognormal ROS Statistics	Assuming Lo	ognormal Distribution Using Imputed Non-Detects	
Mean in Original Scale	1.034	Mean in Log Scale	-0.586
SD in Original Scale	1.377	SD in Log Scale	1.116
95% UTL95% Coverage	8.6	95% BCA UTL95% Coverage	4.68
95% Bootstrap (%) UTL95% Coverage	4.68	95% UPL (t)	4.091
90% Percentile (z)	2.326	95% Percentile (z)	3.489
99% Percentile (z)	7.467	95% USL	9.104
Statistics using KM estimates	on Logged D	ata and Assuming Lognormal Distribution	
KM Mean of Logged Data	-0.58	95% KM UTL (Lognormal)95% Coverage	3.494
KM SD of Logged Data	0.747	95% KM UPL (Lognormal)	2.126
95% KM Percentile Lognormal (z)	1.911	95% KM USL (Lognormal)	3.63
Background DL/2 S	Statistics Ass	uming Lognormal Distribution	
Mean in Original Scale	0.816	Mean in Log Scale	-0.839
SD in Original Scale	1.391	SD in Log Scale	0.918
95% UTL95% Coverage	4.11	95% UPL (t)	2.23
90% Percentile (z)	1.402	95% Percentile (z)	1.957
99% Percentile (z)	3.659	95% USL	4.307
DL/2 is not a Recommended Meth	od. DL/2 prov	vided for comparisons and historical reasons.	
Nonparametric	Distribution F	Free Background Statistics	
•		Discernible Distribution	
Nonparametric Upper Limits for B	TVs(no distin	ction made between detects and nondetects)	
Order of Statistic, r	18	95% UTL with95% Coverage	4.68
Approx fused to compute achieved CC	0 947	Approximate Actual Confidence Coefficient achieved by UTI	0.603

Approx, f used to compute achieved CC	0.947	Approximate Actual Confidence Coefficient achieved by UTL	0.603
Approximate Sample Size needed to achieve specified CC	59	95% UPL	4.68
95% USL	4.68	95% KM Chebyshev UPL	6.801

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20. Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.

The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.2 1/19/2024 5:38:36 PM
From File	ProUCL Input LOS Multiunit.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

рΗ

General	Statistics	

tistics			
Total Number of Observations	18	Number of Distinct Observations	14
Minimum	6.86	First Quartile	7.038
Second Largest	7.52	Median	7.2
Maximum	7.73	Third Quartile	7.283
Mean	7.197	SD	0.222
Coefficient of Variation	0.0309	Skewness	0.564
Mean of logged Data	1.973	SD of logged Data	0.0307
Critical Values t	or Backgrou	nd Threshold Values (BTVs)	
Tolerance Factor K (For UTL)	2.453	d2max (for USL)	2.504
	Normal G	GOF Test	
Shapiro Wilk Test Statistic	0.958	Shapiro Wilk GOF Test	
1% Shapiro Wilk Critical Value	0.858	Data appear Normal at 1% Significance Level	
Lilliefors Test Statistic	0.115	Lilliefors GOF Test	
1% Lilliefors Critical Value	0.235	Data appear Normal at 1% Significance Level	
Data appe	ar Normal at	1% Significance Level	
Background S	itatistics Ass	uming Normal Distribution	
95% UTL with 95% Coverage	7.742	90% Percentile (z)	7.482
95% UPL (t)	7.594	95% Percentile (z)	7.563
95% USL	7.754	99% Percentile (z)	7.714
	Gamma (GOF Test	
A-D Test Statistic	0.277	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.737	Detected data appear Gamma Distributed at 5% Significance	Level
K-S Test Statistic	0.107	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.203	Detected data appear Gamma Distributed at 5% Significance	Level
Detected data appear	r Gamma Dis	stributed at 5% Significance Level	
	Gamma	Statistics	
k hat (MLE)	1118	k star (bias corrected MLE)	931.6
Theta hat (MLE)	0.00644	Theta star (bias corrected MLE)	0.00773
nu hat (MLE)	40243	nu star (bias corrected)	33538
MLE Mean (bias corrected)	7.197	MLE Sd (bias corrected)	0.236
Background S	tatistics Assu	uming Gamma Distribution	
95% Wilson Hilferty (WH) Approx. Gamma UPL	7.598	90% Percentile	7.5
95% Hawkins Wixley (HW) Approx. Gamma UPL	7.598	95% Percentile	7.589
95% WH Approx. Gamma UTL with 95% Coverage	7.752	99% Percentile	7.757
95% HW Approx. Gamma UTL with 95% Coverage	7.753		
95% WH USL	7.763	95% HW USL	7.765

	Lognorma	I GOF Test	
Shapiro Wilk Test Statistic	0.962	Shapiro Wilk Lognormal GOF Test	
10% Shapiro Wilk Critical Value	0.914	Data appear Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.11	Lilliefors Lognormal GOF Test	
10% Lilliefors Critical Value	0.185	Data appear Lognormal at 10% Significance Level	
Data appear L	.ognormal a	at 10% Significance Level	
Background Stat 95% UTL with 95% Coverage 95% UPL (t) 95% USL	istics assu 7.756 7.599 7.768	ming Lognormal Distribution 90% Percentile (z) 95% Percentile (z) 99% Percentile (z)	7.482 7.566 7.726
Nonparametric I	Distribution	Free Background Statistics	
Data appea	r Normal a	t 1% Significance Level	

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, order	18	95% UTL with 95% Coverage	7.73
Approx, f used to compute achieved CC	0.947	Approximate Actual Confidence Coefficient achieved by UTL	0.603
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	7.73	95% BCA Bootstrap UTL with 95% Coverage	7.73
95% UPL	7.73	90% Percentile	7.422
90% Chebyshev UPL	7.882	95% Percentile	7.552
95% Chebyshev UPL	8.193	99% Percentile	7.694
95% USL	7.73		

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The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

LPL	Calculat	tions	pH LPL	
pН	F	Rank	n	18
	6.86	1	n-1	17
	6.86	2	alpha LPL	0.05
	6.95	3	alpha UPL	0.95
	7.01	4	t(alpha,n-1)	-1.73961
	7.03	5	t(alpha,n-1)	1.739607
	7.06	6	mean	7.196667
	7.16	7	st.dev.s	0.222499
	7.19	8	sqrt(1+1/n)	1.027402
	7.19	9		
	7.21	10	LPL	6.798999
	7.23	11	UPL	7.594334
	7.23	12		
	7.26	13		
	7.29	14		
	7.38	15		
	7.38	16		
	7.52	17		

7.73

18

User Selected Options

Date/Time of Computation	ProUCL 5.2 1/19/2024 5:38:36 PM
From File	ProUCL Input LOS Multiunit.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

SO4

General Statistics

Total Number of Observations	18	Number of Distinct Observations	17
Minimum	200	First Quartile	218.3
Second Largest	2100	Median	246.5
Maximum	2100	Third Quartile	1990
Mean	918.3	SD	895.3
Coefficient of Variation	0.975	Skewness	0.507
Mean of logged Data	6.266	SD of logged Data	1.101
Critical Values	for Packer	ound Threshold Values (BTVs)	
Tolerance Factor K (For UTL)	2.453	d2max (for USL)	2.504
	2.433		2.504
	Norma	I GOF Test	
Shapiro Wilk Test Statistic	0.66	Shapiro Wilk GOF Test	
1% Shapiro Wilk Critical Value	0.858	Data Not Normal at 1% Significance Level	
Lilliefors Test Statistic	0.377	Lilliefors GOF Test	
1% Lilliefors Critical Value	0.235	Data Not Normal at 1% Significance Level	
Data Not	t Normal a	t 1% Significance Level	
Background S	tatistics A	ssuming Normal Distribution	
95% UTL with 95% Coverage		90% Percentile (z)	2066
95% UPL (t)		95% Percentile (z)	
95% USL		99% Percentile (z)	
7370 USE	5100		3001
	Gamm	a GOF Test	
A-D Test Statistic	2.945	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.766	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.363	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.209	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gam	ma Distrib	uted at 5% Significance Level	
	Gamm	a Statistics	
k hat (MLE)	1.033	k star (bias corrected MLE)	0.898
Theta hat (MLE)	889.2	Theta star (bias corrected MLE)	1023
nu hat (MLE)	37.18	nu star (bias corrected)	32.32
MLE Mean (bias corrected)	918.3	MLE Sd (bias corrected)	969.3
Background S	tatistics A	ssuming Gamma Distribution	
95% Wilson Hilferty (WH) Approx. Gamma UPL		90% Percentile	2171
95% Hawkins Wixley (HW) Approx. Gamma UPL		95% Percentile	
95% WH Approx. Gamma UTL with 95% Coverage		99% Percentile	
95% HW Approx. Gamma UTL with 95% Coverage		55% Feicennie	-+07
95% WH USL		95% HW USL	5262
7370 WIT USE	7112	7570 TW USL	5202

	Lognormal GC	F Test
Shapiro Wilk Test Statistic	0.675	Shapiro Wilk Lognormal GOF Test
10% Shapiro Wilk Critical Value	0.914	Data Not Lognormal at 10% Significance Level
Lilliefors Test Statistic	0.339	Lilliefors Lognormal GOF Test
10% Lilliefors Critical Value	0.185	Data Not Lognormal at 10% Significance Level
Data Not Lo	gnormal at 10%	Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with	95% Coverage	7831
	95% UPL (t)	3763
	95% USL	8283

95% Percentile (z) 3217 99% Percentile (z) 6812

90% Percentile (z) 2157

Nonparametric Distribution Free Background Statistics

Data do not follow a Discernible Distribution

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, order	18	95% UTL with 95% Coverage	2100
Approx, f used to compute achieved CC	0.947	Approximate Actual Confidence Coefficient achieved by UTL	0.603
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	2100	95% BCA Bootstrap UTL with 95% Coverage	2100
95% UPL	2100	90% Percentile	2044
90% Chebyshev UPL	3678	95% Percentile	2100
95% Chebyshev UPL	4928	99% Percentile	2100
95% USL	2100		

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The use of USL tends to provide a balance between false positives and false negatives provided the data

represents a background data set and when many onsite observations need to be compared with the BTV.

User Selected Options

Date/Time of Computation	ProUCL 5.2 1/19/2024 5:38:36 PM
From File	ProUCL Input LOS Multiunit.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
Different or Future K Observations	1
Number of Bootstrap Operations	2000

TDS

General Statistics

10100				
	Total Number of Observations	18	Number of Distinct Observations	15
	Minimum	680	First Quartile	712
	Second Largest	4000	Median	860.5
	Maximum	4000	Third Quartile	3800
	Mean	1933	SD	1520
	Coefficient of Variation	0.786	Skewness	0.544
	Mean of logged Data	7.255	SD of logged Data	0.809
	Critical Values	for Backgr	ound Threshold Values (BTVs)	
	Tolerance Factor K (For UTL)	2.453	d2max (for USL)	2.504
		Norma	al GOF Test	
	Shapiro Wilk Test Statistic	0.694	Shapiro Wilk GOF Test	
	1% Shapiro Wilk Critical Value	0.858	Data Not Normal at 1% Significance Level	
	Lilliefors Test Statistic	0.331	Lilliefors GOF Test	
	1% Lilliefors Critical Value	0.235	Data Not Normal at 1% Significance Level	
	Data Not	t Normal a	t 1% Significance Level	
	.			
	-		Assuming Normal Distribution	0004
	95% UTL with 95% Coverage		90% Percentile (z)	
	95% UPL (t)	4650	95% Percentile (z)	
	95% USL	5739	99% Percentile (z)	5469
		Gamm	a GOF Test	
	A-D Test Statistic	2.486	Anderson-Darling Gamma GOF Test	
	5% A-D Critical Value	0.754	Data Not Gamma Distributed at 5% Significance Level	
	K-S Test Statistic	0.291	Kolmogorov-Smirnov Gamma GOF Test	
	5% K-S Critical Value	0.207	Data Not Gamma Distributed at 5% Significance Level	
	Data Not Gam	ma Distrib	uted at 5% Significance Level	
		Gamm	a Statistics	
	k hat (MLE)	1.751	k star (bias corrected MLE)	1.496
	Theta hat (MLE)	1104	Theta star (bias corrected MLE)	1292
	nu hat (MLE)	63.02	nu star (bias corrected)	53.85
	MLE Mean (bias corrected)	1933	MLE Sd (bias corrected)	1581
			ssuming Gamma Distribution	
95% Wilson Hil	lferty (WH) Approx. Gamma UPL	5290	90% Percentile	4031
95% Hawkins W	'ixley (HW) Approx. Gamma UPL	5429	95% Percentile	5041
95% WH Approx. G	amma UTL with 95% Coverage	7510	99% Percentile	7321
95% HW Approx. G	amma UTL with 95% Coverage	7978		
	95% WH USL	7702	95% HW USL	8204

	Lognorm	al GOF Test			
Shapiro Wilk Test Statistic	0.716	Shapiro Wilk Lognormal GOF Test			
10% Shapiro Wilk Critical Value	0.914	Data Not Lognormal at 10% Significance Level			
Lilliefors Test Statistic	0.278	Lilliefors Lognormal GOF Test			
10% Lilliefors Critical Value	0.185	Data Not Lognormal at 10% Significance Level			
Data Not Lo	ognormal a	t 10% Significance Level			
Background Statistics assuming Lognormal Distribution					
95% UTL with 95% Coverage	10291	90% Percentile (z) 3990			
95% UPL (t)	6006	95% Percentile (z) 5353			
95% USL	10724	99% Percentile (z) 9289			
Nonparametric Distribution Free Background Statistics					
Data do not follow a Discernible Distribution					

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, order	18	95% UTL with 95% Coverage	4000
Approx, f used to compute achieved CC	0.947	Approximate Actual Confidence Coefficient achieved by UTL	0.603
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	4000	95% BCA Bootstrap UTL with 95% Coverage	4000
95% UPL	4000	90% Percentile	3930
90% Chebyshev UPL	6618	95% Percentile	4000
95% Chebyshev UPL	8740	99% Percentile	4000
95% USL	4000		

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