

2023 Annual Groundwater Monitoring and Corrective Action Report LOS CCR Landfill

Leland Olds Station Stanton, North Dakota

Basin Electric Power Cooperative

January 31, 2024 Project #60634996

Basin Electric Power Cooperative Bismarck, North Dakota

Quality information

Prepared by	Check	ked by	Verified by		Approved by
Fara Hoppes, P.G	- 4	Conkling, P.E.	Dennis P. Conf	nair, C.PG.	Jeremy Hurshman, P.G.
Revision His	story				
Revision	Revision date	Details	Authorized	Name	Position
Distribution	List				
# Hard Copies	PDF Required	Association /	Company Name		
Two	One	Mark Dihle, Ba	asin Electric Power Coop	erative	
					_
				·	

Prepared for:

Basin Electric Power Cooperative Bismarck, North Dakota

Prepared by:

AECOM 1601 Prospect Parkway Suite 120 Fort Collins, CO 80525 aecom.com

Copyright © 2024 by AECOM

All rights reserved. No part of this copyrighted work may be reproduced, distributed, or transmitted in any form or by any means without the prior written permission of AECOM.

Table of Contents

Execu	ıtive Sum	nmary	ES-1
1.0	Introd	duction	1-1
	1.1	Regulatory Background	1-1
	1.2	Facility Location and Operational History	1-1
	1.3	CCR Unit Description	1-1
	1.4	Physical Setting	1-1
2.0	CCR	Groundwater Monitoring Activity Prior to 2023	2-1
3.0	CCR	Groundwater Monitoring and Corrective Action Activities in 2023	3-1
	3.1	Detection Monitoring Activities	3-1
		3.1.1 Monitoring System Evaluation	3-1
		3.1.2 Groundwater Sampling and Analysis	3-2
	3.2	Statistical Procedures and Analysis	3-2
4.0	Gene	eral Information	4-1
	4.1	Program Transitions 2023	4-1
	4.2	Problems Encountered	4-1
	4.3	Actions Planned for 2024	4-1
5.0	Sumn	nary and Conclusions	5-1
6.0	Refer	rences	6-1

Figures

Figure 1 Site Vicinity Map

Figure 2 LOS CCR Monitoring Well Network
Figure 3 Boron Control Chart for October 2023

Tables

Table 1 Background Upper Prediction Limits (UPLs) or Control Limits, CCR Landfill

Table 2 Statistical Method Analytical Results, CCR Landfill

Attachments

Attachment A Sampling and Analysis Report, 2023, CCR Monitoring Program

Attachment B Data Input and Output Files for Calculation of Upper and Lower Prediction Limits

List of Acronyms

AECOM Technical Services, Inc.

Basin Basin Electric Power Cooperative

CCR Coal Combustion Residuals
CFR Code of Federal Regulations

FGD flue gas desulfurization

ft amsl feet above mean sea level

GWPS groundwater protection standard

LCL lower control limit

LOS Leland Olds Station

LPL lower prediction limit

mg/L milligrams per liter

RCRA Resource Conservation and Recovery Act

RL reporting limit

SSI statistically significant increase

TDS total dissolved solids
UCL upper control limit
UPL upper prediction limit

USEPA United States Environmental Protection Agency

AECOM ii

Executive Summary

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

Detection monitoring of the CCR Landfill was initiated in 2018. Detection monitoring through October 2023 identified no statistically significant increases (SSIs) of Appendix III constituents boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids in the downgradient monitoring wells MW-2016-2, MW-2016-9, MW-2016-10, and MW-2016-11. Accordingly, the unit remains in Detection monitoring into the next year.

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

- Semiannual Detection monitoring events were conducted in June and September/October. Monitoring
 involved sampling of three background monitoring wells and four downgradient monitoring wells in June and
 September/October.
- Nine baseline monitoring events were conducted in 2023 for the new landfill expansion well MW-2016-12 and four events for MW-2016-13 as outlined below:
 - May (5/4/223): MW-2016-12 and MW-2016-13
 - June (6/7/2023 and 6/26/2023): MW-2016-12 and MW-2016-13
 - July (7/12/2023 and 7/26/2023): MW_2016-12
 - August (8/23/2023): MW-2016-12
 - September (9/14/2023): MW-2016-12 and MW-2016-13
 - October (10/11/2023 and 10/24/2023): MW-2016-12

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 constituents.
- Evaluation of baseline monitoring results for new landfill expansion wells (MW-2016-12 and MW-2016-13) which were installed downgradient of the proposed Landfill Expansion Area in October 2022.

AECOM ES-1

1.0 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 Glenharold Coal Combustion Residuals (CCR) Landfill at Basin's Leland Olds Station (LOS).

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 the current reporting year. Section 3 summarizes the groundwater monitoring and corrective action activities completed in the current reporting year, and references attachments to this report that contain detailed documentation of those activities. Section 4 reports on general information including program transitions, problems encountered, and anticipated activities for the coming year. Section 5 summarizes the report content. Section 6 lists references cited in this report.

1.1 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 of the year following the monitoring period. The annual report is intended to document the status of the groundwater monitoring and corrective action program for each CCR unit, summarize key actions completed in the previous year, and project key activities for the upcoming year. This report is the seventh annual report, and includes activities performed in calendar year 2023.

1.2 Facility Location and Operational History

LOS is a coal-based generating station located southeast of Stanton, North Dakota (**Figure 1**). The plant, which began operating in 1966, 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 (FGD) waste.

1.3 CCR Unit Description

CCR is disposed at LOS in the following CCR unit:

CCR Landfill

The CCR Landfill is located approximately 3 miles southwest of the generating units and office complex, in an area of mine spoils (**Figure 1**). Basin reported that in 2023 the LOS CCR Landfill received 296,568 cubic yards of solid waste, including fly ash, FGD waste, and a minor contribution of solid debris.

1.4 Physical Setting

The geology underlying the site includes mine spoils underlain by the Sentinel Butte Formation. This formation is comprised of continental deposits in excess of 1,000-feet thick, consisting of dense clay, weakly cemented sandstone, mudstone, and lignite beds.

The topography of the surrounding areas consists of alluvial terraces and historic mine spoil deposits. Much of the surrounding mined areas have historically been developed such that precipitation outside of the landfill footprint is generally redirected as surface water runoff toward drainage ditches and culverts that drain to Alderin Creek and ultimately to the Missouri River. Groundwater is recharged primarily through regional infiltration of melt water in the spring.

AECOM 1-1

The base of the LOS CCR Landfill is underlain by approximately 50 feet of clay-rich mine spoil that overlies the Lower Sentinel Butte Formation. At the site, the Sentinel Butte is comprised primarily of dense clay with a trace of very fine sand and sparse beds of lignite typically ranging from 6- to 9-feet thick.

The uppermost aquifer in which the CCR network wells are screened is found within a 6- to 9-foot unmined lignite bed within the bedrock, located at depths ranging from roughly 86 to 125 feet below ground surface. The elevation of the lignite bed varies across the site by approximately 32 feet, ranging from 1,811 feet above mean sea level (ft amsl) at MW-2016-4 to 1,843 ft amsl at MW-2016-1. The groundwater surface within the water-bearing zone generally slopes from the south-southwest to the north-northeast across the Landfill footprint. Aquifer testing completed at monitoring wells MW-2016-4, MW-2016-8, and MW-2016-10 in 2016 indicates an average hydraulic conductivity of 1.21 x 10⁻⁵ centimeters per second for the saturated materials.

AECOM 1-2

2.0 CCR Groundwater Monitoring Activity Prior to 2023

The regulatory process for CCR groundwater monitoring and corrective action is established by 40 Code of Federal Regulations (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 brief summary of CCR groundwater monitoring activities performed prior to 2023. CCR groundwater monitoring activities performed between January and December 2023 are discussed in Section 3.

Groundwater monitoring at the CCR Landfill is performed using a network of monitoring wells that includes 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 positions of the CCR monitoring wells selected for sampling background and downgradient groundwater quality for the LOS CCR Landfill are summarized below:

CCR unit	Background wells	Downgradient wells
Active Landfill	MW-2016-3*, MW-2016-4**, MW- 2016-5**, MW-2016-6, MW-2016-8	MW-2016-2, MW-2016-9, MW-2016-10, MW-2016-11,

^{* =} MW-2016-3 evaluated as background well in 2023. Will be evaluated as downgradient well 2024 due to landfill expansion and ash placement.

Two monitoring wells have historically been excluded from the groundwater monitoring network due to deficiencies. Monitoring well MW-2016-1 was excluded due to insufficient water production. Monitoring well MW-2016-7 was excluded due to screen interval placement that is not representative of the uppermost aquifer monitored at the site. Monitoring wells MW-2016-1 and MW-2016-7 were abandoned in Fall of 2022 along with background wells MW-2016-4 and MW-2016-5, which were in the footprint of the landfill expansion.

Baseline monitoring, initiated in August 2016, involved sampling groundwater for Appendix III and Appendix IV constituents over eight Baseline Detection monitoring events. Baseline Detection monitoring events were performed in general accordance with procedures established in the site-specific Sampling and Analysis Plan (AECOM 2018a), which is included in the facility's Operating Record. The Sampling and Analysis Plan 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 the baseline monitoring and 2018 Detection monitoring at the LOS CCR Landfill were presented and discussed in the First and Second Annual Groundwater Monitoring and Corrective Action Reports (AECOM 2018b, 2019). The LOS CCR Landfill was placed in Detection monitoring in the winter of 2018 with the first Detection monitoring groundwater sampling event completed in April 2018, then twice annually thereafter. The results of Detection monitoring at the LOS CCR Landfill in 2018, 2019, 2020, 2021, and 2022 were presented and discussed in the Second, Third, Fourth, Fifth, and Sixth Annual Groundwater Monitoring and Corrective Action Reports issued on January 31, 2019 (AECOM 2019); January 31, 2020 (AECOM 2020); January 31, 2021 (AECOM 2021); January 31, 2022 (AECOM 2022a); and January 31, 2023 (AECOM 2023), respectively.

In October 2022, two additional monitoring wells (MW-2016-12 and MW-2016-13) were installed for future monitoring purposes. These two wells were placed in advance of westward landfill expansion and are planned to be used to monitor groundwater in the downgradient direction of the expansion. Boring logs were presented in 2022 Annual Groundwater Monitoring and Corrective Actions report (AECOM 2023). Baseline data collection began after installation

AECOM 2-1

^{**=} abandoned Fall 2022 in preparation of landfill expansion

of the wells. CCR waste will be placed in completed cells to the west, adjacent to the existing landfill footprint. As future expansion is needed, additional cells will be constructed in the expansion area moving in a westerly direction. CCR Waste will not be placed in the entire expansion area footprint at one time.

AECOM 2-2

3.0 CCR Groundwater Monitoring and Corrective Action Activities in 2023

This section summarizes the groundwater monitoring and corrective action conducted at the LOS CCR Landfill in 2023 to comply with the groundwater requirements of the CCR rule:

- Groundwater Detection monitoring activities:
 - monitoring system evaluation completed in June and September/October 2023
 - groundwater sampling completed in June and September/October 2023
 - laboratory analysis of groundwater samples in June and September/October 2023
 - statistical analysis of the monitoring results of the groundwater samples in June and September/October 2023
- Groundwater Corrective Action Not applicable
- Baseline monitoring of the two expansion monitoring wells (MW-2016-12 and MW-2016-13) installed in October 2022. Nine baseline sampling events were completed for MW-2016-12 expansion well between May and October 2023 and four events were completed for MW-2016-13 during this reporting period as outlined below. Results of this monitoring will be evaluated in 2024 prior to inclusion of the wells in the expanded monitoring well network.
 - May (5/4/223): MW-2016-12 and MW-2016-13
 - June (6/7/2023 and 6/26/2023): MW-2016-12 and MW-2016-13
 - July (7/12/2023 and 7/26/2023): MW 2016-12
 - August (8/23/2023): MW-2016-12
 - September (9/14/2023): MW-2016-12 and MW-2016-13
 - October (10/11/2023 and 10/24/2023): MW-2016-12

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

3.1 Detection Monitoring Activities

3.1.1 Monitoring System Evaluation

As described in the CCR Groundwater Monitoring System Report (AECOM 2017), monitoring wells were installed around the CCR unit at LOS 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 LOS CCR Landfill monitoring system were found to be in good condition during the Detection monitoring events conducted in 2023.

Potentiometric surface maps constructed using the depth-to-groundwater measurements obtained at the beginning of each Detection monitoring event are presented in **Attachment A**. The direction of groundwater flow observed in June and September/October 2023 was generally north-northeast, which is consistent with the direction observed in previous years. The flow direction supports the designation of the wells noted in Section 2 above to represent background groundwater quality and the quality of groundwater downgradient of the unit. Prior to landfill expansion, MW-2016-3 was designated as a background well for the landfill. Expansion of the Landfill footprint and additional fluid level data collected during the 2023 reporting period from MW-2016-12 and MW-2016-13 (provided in **Attachment A**) suggest that MW-2016-3 may no longer qualify as a background well upon receipt of CCR material at the expansion area. In 2024 moving forward, MW-2016-3 will be evaluated to be changed from a background well to a downgradient well.

AECOM 3-1

Data collected in 2023 and prior will still be used as a background data set, but data collected in 2024 moving forward will then be compared to calculated UPLs for the site.

3.1.2 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 activities in 2023 were performed in general accordance with procedures established in the Sampling and Analysis Plan, Revision 1 (AECOM 2022b).

Two monitoring wells (MW-2016-12 and MW-2016-13) were installed between October 2 and 6, 2022 to evaluate the uppermost aquifer northwest of the existing landfill in preparation for a planned expansion of the landfill into this area. Baseline groundwater monitoring events with analysis for the constituents listed in Part 257 Appendix III and Appendix IV occurred in May, June (two events), July (two events), August, September, and October (two events) 2023. Results will be presented in the 2024 Annual Groundwater Monitoring and Corrective Action Report after analysis of the data.

3.2 Statistical Procedures and Analysis

The cumulative groundwater data collected for Appendix III indicator parameters at the LOS CCR Landfill were evaluated in accordance with the statistical procedures certified on October 17, 2017 (AECOM 2017). The Appendix III groundwater quality data were evaluated to determine whether any constituents showed a statistically significant increase (SSI) over background 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 collected between September 2016 and October 2020. The input file and output file used for development of the UPLs is provided as **Attachment B**. A lower prediction limit (LPL) was also developed for pH which is a two-sided parameter. The concentrations of detected Appendix III constituents were entered as reported by the laboratory [non-detections set to Reporting Limit (RL)] and evaluated using ProUCL to determine if the population exhibited a normal, lognormal, or nonparametric distribution.

Data from the downgradient monitoring wells during the 2023 reporting period were compared to the UPL or LPL to identify statistically significant increases (SSIs) over background. Statistical analysis for the current reporting period compares compliance well data to UPLs, where non-detect values are represented as one-half the method detection limit. The results of the analyses, including the UPLs and LPL for pH, are provided in **Table 1**. The statistical analysis results presented in **Table 2** indicate that calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS) do not currently exhibit SSIs over background. Additionally, pH does not exhibit an SSI below background.

Boron was evaluated using a control chart and upper and lower control limits were developed using the mean \pm 4.5 standard deviations. Starks (1988); USEPA (2009), and ASTM (2017) suggest using 4.5 standard deviations to develop control limits for groundwater Detection monitoring. **Figure 3** presents the control chart that shows the background mean (0.256 milligrams per liter [mg/L]), upper and lower control limits (UCL and LCL), 0.341 and 0.171 mg/L, respectively, and the baseline and Detection monitoring results for downgradient compliance wells through October 2023. The results indicate that boron does not exceed the UCL at monitoring wells for any sampling event and does not currently exhibit an SSI over background at any of the downgradient compliance wells.

Based on these results, no SSIs were identified at the LOS Landfill and Assessment monitoring is not required. Detection monitoring should continue at the LOS Landfill in 2024.

AECOM 3-2

4.0 General Information

The following subsections summarize any problems encountered in the LOS CCR Landfill program through 2023, any resolutions to those problems, if needed, and upcoming actions planned for 2023.

4.1 Program Transitions 2023

There were no groundwater monitoring program transitions for the LOS CCR Landfill monitoring system during the January to December 2023 reporting period.

4.2 Problems Encountered

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

4.3 Actions Planned for 2024

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

Basin plans to evaluate the Baseline monitoring results of new landfill expansion wells MW-2016-12 and MW-2016-13. This evaluation will include statistical evaluations of each sampling event to obtain information about background water quality prior to acceptance of CCR material into the landfill expansion area.

Basin also plans to re-evaluate the designation of MW-2016-3 as a background well versus compliance well for the 2024 Detection monitoring events. Prior to landfill expansion, MW-2016-3 was designated as a background well. Expansion of the Landfill footprint and additional fluid level data collected during the 2023 reporting period (provided in **Attachment A**) suggest that MW-2016-3 may no longer qualify as a background well upon receipt of CCR material at the expansion area.

AECOM 4-1

5.0 Summary and Conclusions

Basin conducted two rounds of CCR groundwater Detection monitoring at the LOS CCR Landfill between January and December 2023. The results were used to establish background groundwater quality for Appendix III constituents in the uppermost aquifer, identify appropriate UPLs and LPLs, and determine whether any Appendix III constituents experienced SSIs downgradient of the CCR unit.

The statistical analysis results indicate that none of the Appendix III constituents had SSIs over background or statistically significant increasing trends in constituent concentrations. Based on these results, Assessment monitoring is not required at the LOS CCR Landfill and Detection monitoring will continue at the site in 2024.

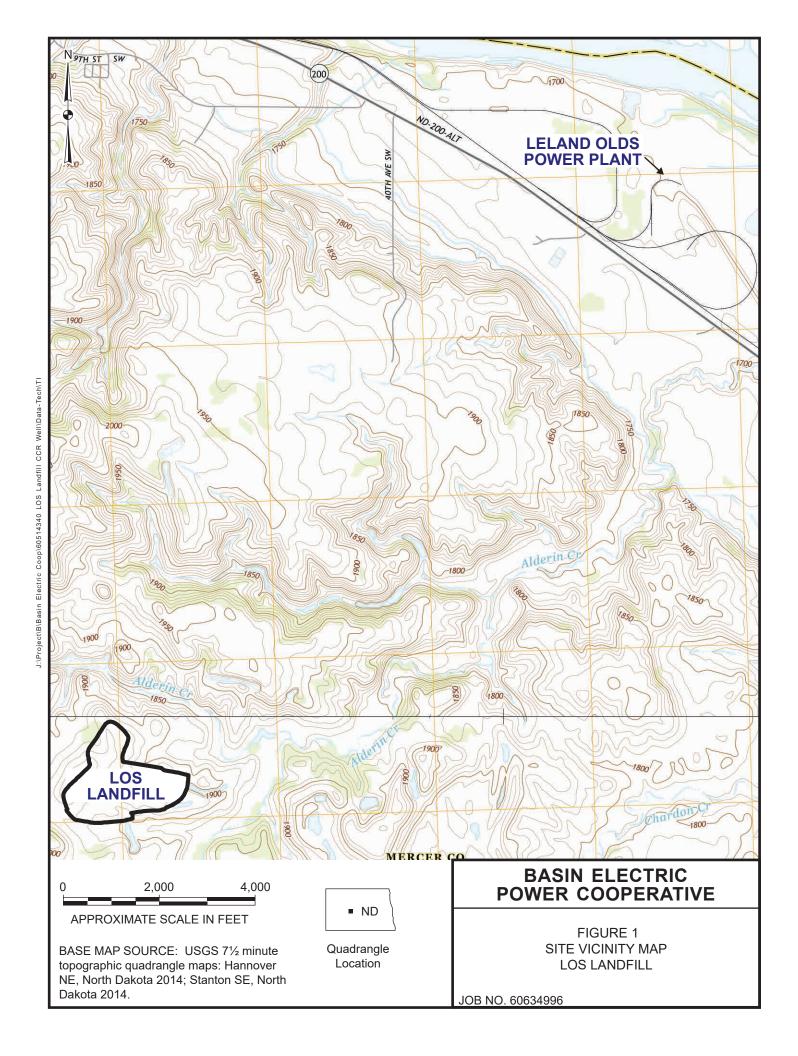
AECOM 5-1

6.0 References

- AECOM Technical Services, Inc. (AECOM). 2017. CCR Groundwater Monitoring System Report, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. October 2017.
- AECOM. 2018a. Sampling and Analysis Plan, CCR Monitoring Program, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. January 2018.
- AECOM. 2018b. First Annual Groundwater Monitoring and Corrective Action Report, 2016-2017, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. January 2018.
- AECOM. 2019. Second Annual Groundwater Monitoring and Corrective Action Report, 2018, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. January 2019.
- AECOM. 2020. Third Annual Groundwater Monitoring and Corrective Action Report, 2019, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. January 2020.
- AECOM. 2021. Fourth Annual Groundwater Monitoring and Corrective Action Report, 2019, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. January 2021.
- AECOM. 2022a. Fifth Annual Groundwater Monitoring and Corrective Action Report, 2019, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. January 2021.
- AECOM. 2022b. Sampling and Analysis Plan, Revision 1, CCR Monitoring Program, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. June 2022.
- AECOM. 2023. Sixth Annual Groundwater Monitoring and Corrective Action Report, 2023, Leland Olds Station, Stanton, North Dakota. Basin Electric Power Cooperative. January 2023.
- American Society of Testing and Materials. 2017. Designation D6312-17 Standard Guide for Developing Appropriate Statistical Approaches for Groundwater Detection Monitoring Programs at Waste Disposal Facilities, 15 pp.
- Starks, T. H. 1988, Evaluation of Control Chart Methodologies for RCRA Waste Sites, U.S. Environmental Protection Agency EPA/600/4-88/040, December, 40 pp.
- U.S. Environmental Protection Agency. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities. Unified Guidance. EPA 530-R-09-007. March 2009. 884 pp.

AECOM 6-1

Figures



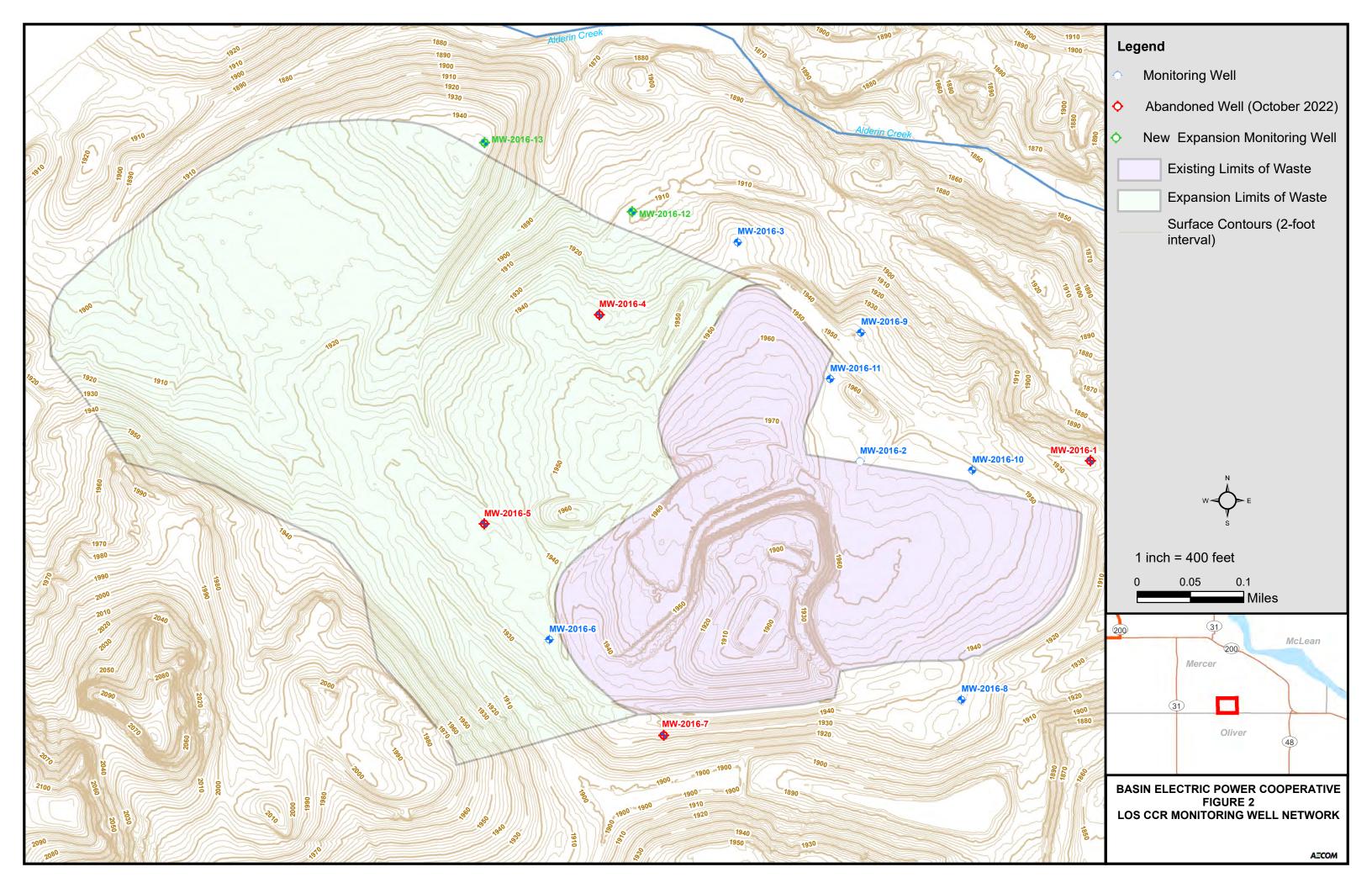
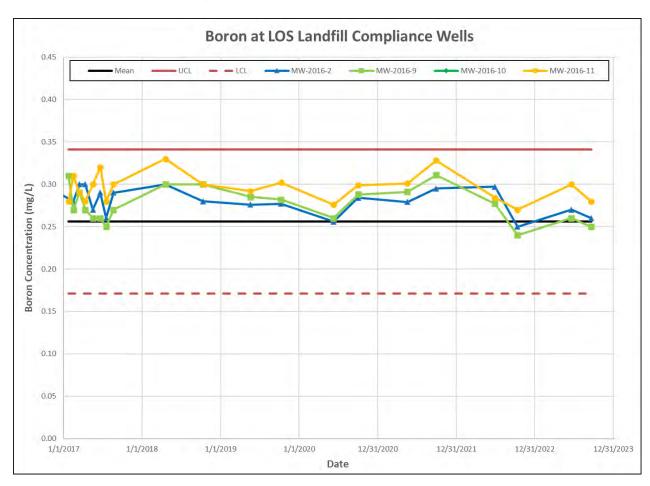


Figure 3. Boron Control Chart for October 2023 2023 Annual Groundwater Monitoring and Corrective Action Report Leland Olds Station CCR Landfill, North Dakota



Tables

Table 1. Background Upper Prediction Limits (UPLs) or Control Limits 2023 Annual Groundwater Monitoring and Corrective Action Report Leland Olds Station CCR Landfill, North Dakota

Parameter (Units)	Number of Samples	Percent Nondetects	Normal or Lognormal Distribution?	Statistical Method	Background Prediction or Control Limit
Boron (mg/L)	71	0	Yes/Yes	Control Chart 99.9% UCL	0.331
Calcium (mg/L)	70	0	No/Yes	No/Yes Parametric 95% UPL	
Chloride (mg/L)	71	6	No/No	Nonparametric 95% UPL	38.16
Fluoride (mg/L)	70	41	No/No	Nonparametric 95% UPL	2.5
pH (std units)	83	0	No/No	Nonparametric 95% LPL/UPL	7.25/8.24
Sulfate (mg/L)	71	0	No/No	Nonparametric 95% UPL	741
TDS (mg/L)	71	0	No/No	Nonparametric 95% UPL	2,200

Notes:

Background Prediction limits calculated using data from May 2016 through October 2020 pH has both an LPL and UPL; all other constituents only have an UPL or UCL. mg/L= milligrams per liter
TDS = total dissolved solids

UCL = Upper Control Limit

LPL = Lower Control Limit

Table 2. Statistical Method Analytical Results 2023 Annual Groundwater Monitoring and Corrective Action Report Leland Olds Station CCR Landfill, North Dakota

Well	Location	В	Ca	CI	F	p (LPL/	H 'UPL)	SO ₄	TDS
MW-2016-2	Downgradient								
MW-2016-9	Downgradient								
MW-2016-10	Downgradient								
MW-2016-11	Downgradient								

Notes:

SSIs determined using interwell upper prediction limits (UPLs) at background monitoring wells MW-2016-3, MW-2016-6, and MW-2016-8. Background monitoring wells MW-2016-4 and MW-2016-5 were abandoned in October 2022.

Less than or equal to background upper prediction limit (UPL) or greater than lower prediction limit (LPL) for pH
Unverified statistically significant increase (SSI) over background UPL or below background LPL for pH
Verified SSI over background UPL or below background LPL for pH

Attachment A Sampling and Analysis Report, 2023



2023 Groundwater Sampling and Analysis Report LOS CCR Landfill Monitoring Program

Leland Olds Station Stanton, North Dakota

Basin Electric Power Cooperative

January 31, 2024

Prepared for:

Basin Electric Power Cooperative Bismarck, North Dakota

Prepared by:

AECOM 525 Vine Street Suite 1800 Cincinnati, OH 45202 aecom.com

Project #60634996

Table of Contents

List of A	Acronyms	ii.
	Introduction	
	Groundwater Flow	
3.	Groundwater Quality	3

Figures

Figure 1	LOS Landfill Potentiometric Surface Map June 19, 2023	
E. 0	1001 1511 D 1 11 11 0 1 14 0 1 1 40	\sim 1 I

Figure 2 LOS Landfill Potentiometric Surface Map September 19 – October 9, 2023

Tables

Table 1A	June 2023 Groundwater Monitoring Water Levels and Elevations
Table 1B	September/October 2023 Groundwater Monitoring Water Levels and Elevations
Table 2	Estimated Groundwater Gradient and Seepage Velocity
Table 3	2023 Analytical Results Summary
Table 4	2023 Baseline Analytical Results Summary (MW-2016-12 and MW-2016-13)

Appendix

Appendix I Laboratory Reports

i

List of Acronyms

AECOM Technical Services, Inc.

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 Basin Leland Olds Station (LOS) CCR Landfill.

This 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 two groundwater Detection monitoring events and nine groundwater Baseline monitoring events conducted in 2023.

2. Groundwater Flow

As required by 40 CFR Section 257.93I, groundwater elevations were measured in 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. The resulting potentiometric surface maps were used to evaluate the direction and rate of groundwater flow across the subject CCR unit. **Figure 1** and **Figure 2** represent potentiometric surface maps constructed using measurements taken on June 19, 2023, and between September 19 and October 9, 2023, respectively. The maps show the inferred groundwater flow directions for the CCR unit, which are generally consistent with the patterns observed during previous monitoring events. Calculated groundwater flow velocities are summarized in **Table 2**.

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

CCR unit Background wells		Downgradient wells		
Active Landfill	MW-2016-3*, MW-2016-4**, MW- 2016-5**, MW-2016-6, MW-2016-8	MW-2016-2, MW-2016-9, MW-2016-10, MW-2016-11		
Landfill Expansion Area	See Above	MW-2016-12, MW-2016-13		

^{* =} MW-2016-3 evaluated as background well in 2023. Will be evaluated as downgradient well 2024 due to landfill expansion and ash placement.

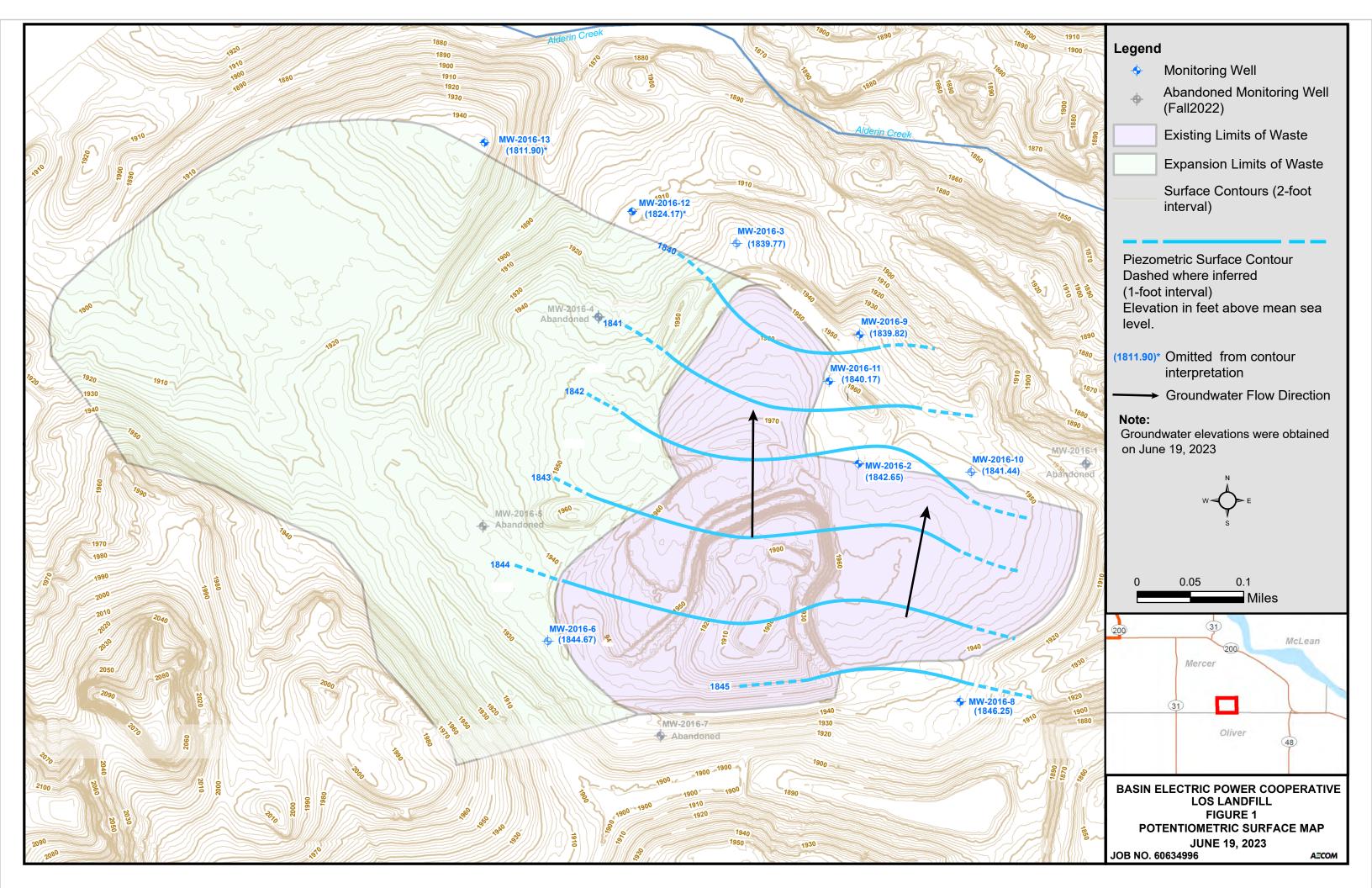
Four monitoring wells were decommissioned in late September to early October 2022 in preparation for landfill expansion: MW-2016-1, MW-2016-4, MW-2016-5, and MW-2016-7. Monitoring wells MW-2016-1 and MW-2016-7 were removed from the monitoring program prior to 2022 but we abandoned during same field mobilization that MW-2016-4 and MW-2016-5 were abandoned.

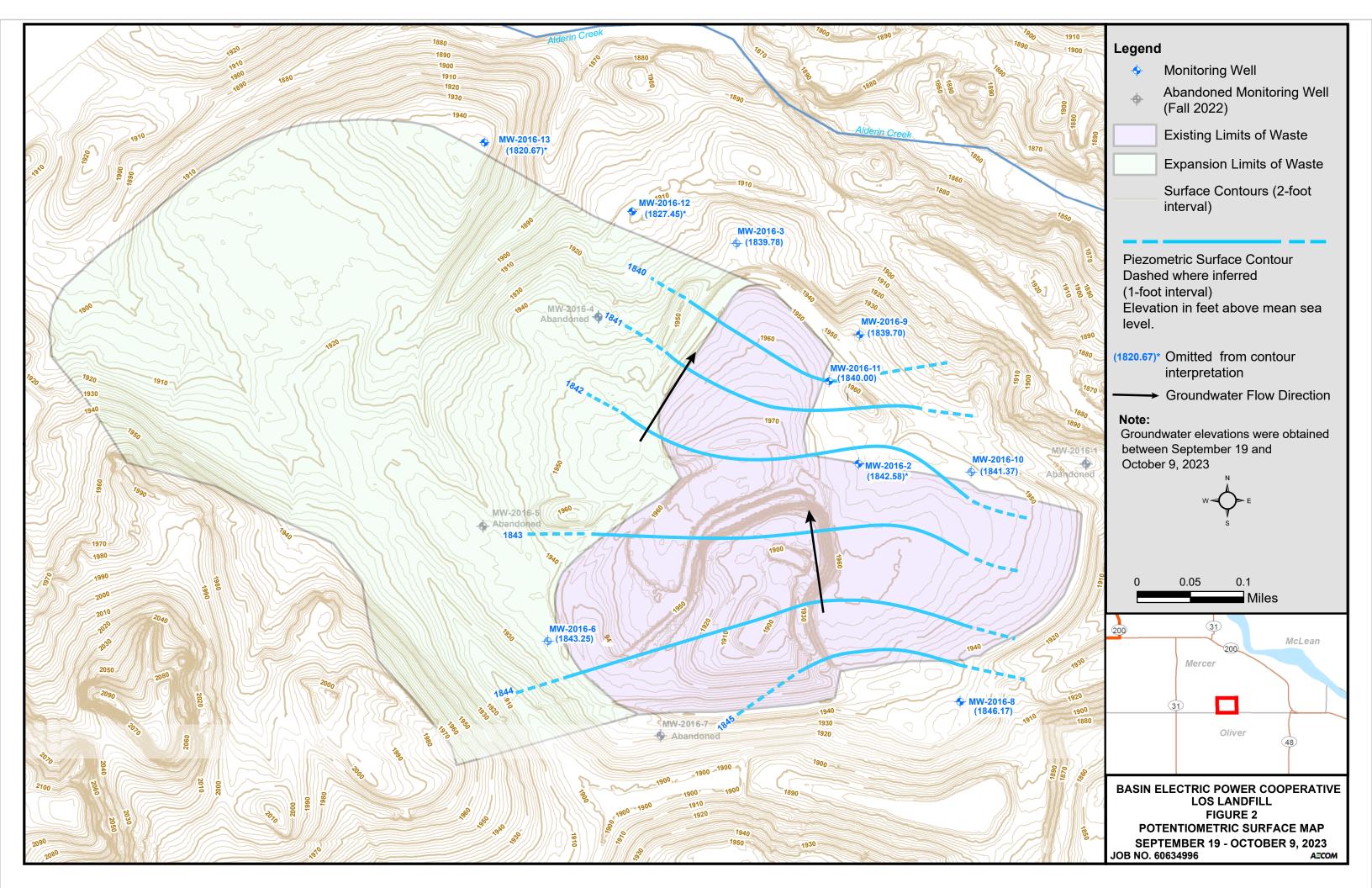
^{**=} Abandoned Fall 2022 in preparation of landfill expansion

3. Groundwater Quality

The analytical testing laboratory reports for the 2023 monitoring events as presented in **Appendix I** were reviewed for completeness against the project-required methods and the chain-of-custody forms. Laboratory reports were also reviewed for holding times, and that the data was appropriately flagged based on the quality assurance/quality control testing results provided by the laboratory. The Detection monitoring results were compiled into a summary form as presented in **Table 3**. Baseline monitoring analytical results for the two landfill expansion wells (MW-2016-12 and MW-2016-13) are presented in **Table 4**.

Figures





Tables

Table 1A
June 2023 Groundwater Monitoring Water Levels and Elevations
CCR Monitoring Well Network
Leland Olds Station CCR Landfill - Stanton, North Dakota

	Reference Elevation	June 19, 2023	Groundwater
	Top of Casing	Depth to Water	Elevation
Well ID	(ft amsl, NAVD 88)	(ft btoc)	(ft amsl, NAVD 88)
MW-2016-2	1957.98	115.33	1842.65
MW-2016-3	1939.88	100.11	1839.77
MW-2016-4	1939.97	Abandoned	Not Applicable
MW-2016-5	1937.54	Abandoned	Not Applicable
MW-2016-6	1939.31	94.64	1844.67
MW-2016-7	1936.11	Abandoned	Not Applicable
MW-2016-8	1939.36	93.11	1846.25
MW-2016-9	1947.39	107.57	1839.82
MW-2016-10	1953.32	111.88	1841.44
MW-2016-11	1956.73	116.56	1840.17
MW-2016-12	1912.26	88.09	1824.17
MW-2016-13	1948.75	136.85	1811.90

Notes:

CCR = coal combustion residuals ft amsl = feet above mean sea level ft btoc = feet below top of casing

NAVD 88 = North American Vertical Datum 1988

Table 1B September/October 2023 Groundwater Monitoring Water Levels and Elevations **CCR Monitoring Well Network** Leland Olds Station CCR Landfill - Stanton, North Dakota

		Reference Elevation		Groundwater
		Top of Casing	Depth to Water	Elevation
Well ID	Date	(ft amsl, NAVD 88)	(ft btoc)	(ft amsl, NAVD 88)
MW-2016-1		1931.73	Not Measured	Not Measured
MW-2016-2	9/19/2023	1957.98	115.40	1842.58
MW-2016-3	9/19/2023	1939.88	100.10	1839.78
MW-2016-4		1939.97	Abandoned	Not Applicable
MW-2016-5		1937.54	Abandoned	Not Applicable
MW-2016-6	9/19/2023	1939.31	96.06	1843.25
MW-2016-7		1936.11	Abandoned	Not Applicable
MW-2016-8	9/20/2023	1939.36	93.19	1846.17
MW-2016-9	9/19/2023	1947.39	107.69	1839.70
MW-2016-10	9/19/2023	1953.32	111.95	1841.37
MW-2016-11	9/19/2023	1956.73	116.73	1840.00
MW-2016-12	10/9/2023	1912.26	84.81	1827.45
MW-2016-13	9/19/2023	1948.75	128.08	1820.67

Notes:

CCR = coal combustion residuals ft amsl = feet above mean sea leve ft btoc = feet below top of casing NAVD 88 = North American Vertical Datum 1988

TABLE 2

ESTIMATED GROUNDWATER GRADIENT AND SEEPAGE VELOCITY CCR MONITORING WELL NETWORK

LELAND OLDS STATION CCR LANDFILL - STANTON, NORTH DAKOTA

Date of event	d _i (ft)	d _h (ft)	i (ft/ft)	n _e	K (ft/day)	v _s (ft/day)
9/27/2016	680	4	5.88E-03	0.185	0.0344	1.09E-03
2/13/2017	680	3	4.41E-03	0.185	0.0344	8.20E-04
3/16/2017	600	4	6.67E-03	0.185	0.0344	1.24E-03
4/11/2017	600	3	5.00E-03	0.185	0.0344	9.30E-04
5/17/2017	920	4	4.35E-03	0.185	0.0344	8.08E-04
6/20/2017	880	4	4.55E-03	0.185	0.0344	8.45E-04
7/18/2017	960	6	6.25E-03	0.185	0.0344	1.16E-03
8/21/2017	960	5	5.21E-03	0.185	0.0344	9.68E-04
4/18/2018	800	4	5.00E-03	0.185	0.0344	9.30E-04
10/11/2018	960	3	3.13E-03	0.185	0.0344	5.81E-04
5/20/2019	800	2	2.50E-03	0.185	0.0344	4.65E-04
10/8/2019	1080	4	3.70E-03	0.185	0.0344	6.89E-04
6/9/2020	800	2	2.50E-03	0.185	0.0344	4.65E-04
9/30/2020	640	2	3.13E-03	0.185	0.0344	5.81E-04
5/17/2021	740	2	2.70E-03	0.185	0.0344	5.03E-04
9/27/2021	1290	2	1.55E-03	0.185	0.0344	2.88E-04
6/28/2022	1700	5	2.92E-03	0.185	0.0344	5.43E-04
10/11/2022	1700	5	2.99E-03	0.185	0.0344	5.57E-04
6/19/2023*	1700	5	2.83E-03	0.185	0.0344	5.26E-04
9/19-20/2023*	1700	5	2.82E-03	0.185	0.0344	5.25E-04

^{* =} gradient and velocity calculated between MW-2016-10 and MW-2016-8

CCR = coal combustion residuals

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

dh = Change in hydraulic head between upgradient and downgradient locations

ft = foot or feet

ft/day = feet per day

ft/ft = feet per foot

i = Hydraulic gradient (change in elevation over distance)

 n_e = Site average porosity of 18.5%

K = Site average hydraulic conductivity of 3.44 E-02 ft/day from slug and pumping tests at site

 v_s = Seepage Velocity (ft/day)

Hydraulic Gradient Governing Equation¹ – $i = -\frac{dh}{dl}$

Seepage Velocity Governing Equation 2 — $v_{\scriptscriptstyle S} = {}^{-K}*i/n_e$

- 1. In textbook form, d_h is a negative number as hydraulic head is reported as the higher value subtracted from the lower value.
- 2. Negative operation performed as in textbook form, hydraulic gradient is negative.

Table 3
2023 Analytical Results Summary
CCR Monitoring Well Network
Leland Olds Station CCR Landfill - Stanton, North Dakota

				Appendix III Constituents										
Well ID	Location	Event	Date	Boron		Calcium	1	Chloride	Fluoride	pН		Sulfate	TDS	
				mg/L		mg/L		mg/L	mg/L	SU		mg/L	mg/L	
MW-2016-2	Downgradient	June 2023	6/19/2023	0.27		7.15		16.0	0.50	8.00		277	1760	
MW-2016-3	Background	June 2023	6/20/2023	0.24		4.70		35.2	0.63	8.02		32.1	1460	
MW-2016-4	NA	June 2023	6/19/2023						Abandone	ed .				
MW-2016-5	NA	June 2023	6/19/2023						Abandone	:d				
MW-2016-6	Background	June 2023	6/20/2023	0.26		8.29		9.7	0.44	7.89		603	2070	
MW-2016-8	Background	June 2023	6/19/2023	0.26		13.1		11.8	0.32	7.92		679	2320	
MW-2016-8 (Dup)	Background	June 2023	6/19/2023	0.25		12.3		11.7	0.35	7.92		676	2310	
MW-2016-9	Downgradient	June 2023	6/19/2023	0.26		6.15		20.6	0.52	7.92		200	1710	
MW-2016-10	Downgradient	June 2023	6/20/2023	0.23		5.79		16.1	0.56	8.08		364	1700	
MW-2016-11	Downgradient	June 2023	6/19/2023	0.3		5.72		22.0	0.57	7.96		244	1640	
MW-2016-2	Downgradient	September 2023	9/19/2023	0.26		8.94		15.4	0.54	7.95		279	1730	
MW-2016-3	Background	September 2023	9/20/2023	0.24		5.05		35.0	0.71	8.02		57.4	1440	
MW-2016-4	NA	September 2023	9/20/2023						Abandone	:d				
MW-2016-5	NA	September 2023	9/20/2023						Abandone	:d				
MW-2016-6	Background	September 2023	9/20/2023	0.24		7.83		9.5	0.48	7.85		688	2040	
MW-2016-8	Background	September 2023	9/20/2023	0.24		13.1		11.2	0.36	7.85		742	2290	
MW-2016-9	Downgradient	September 2023	9/19/2023	0.25		6.67		19.7	0.58	7.92		196	1660	
MW-2016-10	Downgradient	September 2023	9/19/2023	0.23		5.77		15.7	0.59	8.09		362	1660	
MW-2016-10 (Dup)	Downgradient	September 2023	9/19/2023	0.23		5.72		15.6	0.59	8.09		340	1680	
MW-2016-11	Downgradient	September 2023	9/19/2023	0.28		6.82		22.1	0.59	7.94		237	1610	

Notes:

CCR = coal combustion residuals

Dup = duplicate sample

LOS = Leland Olds Station

mg/L = milligrams per liter

NS = not sampled

SU = standard units

TDS = total dissolved solids

NA = not applicable

Table 4
2023 Baseline Analytical Results Summary (MW-2016-12 and MW-2016-13)
CCR Monitoring Well Network
Leland Olds Station CCR Landfill - Stanton, North Dakota

				Append	dix III Const	tituents									Appe	ndix IV Con	stituents					
Well ID	Date	Boron	Calcium	Chloride	Fluoride	рН	Sulfate	TDS	Antimony	Arsenic I	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226/228	Selenium	Thallium
		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
	5/4/2023	0.23	36.7	37.5	0.55	7.56	53.9	1240	< 0.001	< 0.002	0.0628	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0150	0.95	< 0.005	< 0.0005
	6/7/2023	0.23	29.0	39.8	0.60	7.90	35.2	1380	< 0.001	< 0.002	0.0538	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0122	0.75	< 0.005	< 0.0005
	6/26/2023	0.23	23.6	38.9	0.60	7.72	41.4	1360	< 0.001	< 0.002	0.0476	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0105	0.7	< 0.005	< 0.0005
	7/12/2023	0.24	20.5	39.1	0.61	7.91	30.4	NS		< 0.002		< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0091	0.7	< 0.005	< 0.0005
MW-2016-12	7/26/2023	0.22	17.4	42.6	0.62	7.96	24.8	1460	< 0.001	< 0.002	0.0467	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0088	1.9	< 0.005	< 0.0005
	8/23/2023	0.25	15.8	41.5	0.66	7.98	26.1	1510	< 0.001	< 0.002	0.0507	< 0.0005	< 0.0005	0.0029	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0101	1.3	< 0.005	< 0.0005
	9/14/2023	0.25	15.1	43.2	0.66	7.92	20.0	1480	< 0.001	< 0.002	0.0537	< 0.0005	< 0.0005	0.0025	< 0.002	0.0010	0.0223	< 0.0002	0.0087	0.8	< 0.005	< 0.0005
	10/11/2023	0.24	20.5	39.1	0.61	7.92	30.4	NS	< 0.001	< 0.002	0.0481	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0091	2.4	< 0.005	< 0.0005
	10/24/2023	0.24	11.7	42.6	0.66	7.88	26.9	1530	< 0.001	< 0.002	0.0405	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	0.0213	< 0.0002	0.0084	0.5	< 0.005	< 0.0005
	5/4/2023	0.34	29.7	56.0	0.48	7.48	58.1	1460	< 0.001	< 0.002	0.0928	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0651	0.75	< 0.005	< 0.0005
	6/7/2023	0.32	22.2	60.4	0.52	7.77	42.2	1540	< 0.001	< 0.002	0.0713	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0490	0.65	< 0.005	< 0.0005
	6/26/2023	0.33	23.6	59.6	0.50	7.73	45.7	1500	< 0.001	0.0021	0.0588	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0545	0.75	< 0.005	< 0.0005
	7/12/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2016-13	7/26/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/23/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/20/2023	0.31	17.4	60.8	0.58	7.74	37.0	1490	< 0.001	< 0.002	0.0603	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.02	< 0.0002	0.0456	0.6	< 0.005	< 0.0005
	10/11/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/24/2023	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

± - plus or minus

< = less than reporting limit, non-detect

CCR - coal combustion residuals

mg/L - milligrams per liter

NS - not sampled

pCi/L - picoCuries per liter

SU - standard units

TDS - total dissolved solids

Appendix I

Laboratory Reports



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

Workorder: LOS Landfill SP143 (18961) **PO**: 675266-04

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:



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

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.

Report Date: Thursday, July 6, 2023 9:24:51 AM





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.



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

Analytical Results

Date Collected: Lab ID: 18961001 06/20/2023 09:10 Matrix: Groundwater Sample ID: MW2016-3 Date Received: 06/21/2023 15:25 Collector: Client

Temp @ Receipt (C):

Mathadi ACTM DE4C 4C

Method: ASTM D516-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	32.1	mg/L	5	1	06/23/2023 15:55	06/23/2023 15:55	EJV	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.24	mg/L	0.1	1	06/21/2023 17:00	06/22/2023 16:17	SLZ	
Calcium	4.70	mg/L	1	1	06/21/2023	06/28/2023	SLZ	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	35.2	mg/L	2.0	1	06/22/2023 12:31	06/22/2023 12:31	AMC	

17:00

12:25

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.63	mg/L	0.1	1	06/21/2023 22:09	06/21/2023 22:09	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1460	mg/L	10	1	06/22/2023 14:36	06/22/2023 14:36	RAA	

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.

Report Date: Thursday, July 6, 2023 9:24:51 AM

Page 3 of 16



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**

Analytical Results

Date Collected: Lab ID: 18961002 06/19/2023 11:45 Matrix: Groundwater Sample ID: MW2016-2 Date Received: 06/21/2023 15:25 Collector: Client

Temp @ Receipt (C):

Method: ASTM D516-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	277	mg/L	25	5	06/23/2023 15:42	06/23/2023 15:42	EJV	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.27	mg/L	0.1	1	06/21/2023 17:00	06/22/2023 16:17	SLZ	
Calcium	7.15	mg/L	1	1	06/21/2023 17:00	06/28/2023 12:26	SLZ	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	16.0	mg/L	2.0	1	06/22/2023 12·32	06/22/2023 12:32	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.50	mg/L	0.1	1	06/21/2023 22:14	06/21/2023 22:14	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1760	mg/L	10	1	06/22/2023 14:36	06/22/2023 14:36	RAA	

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.

Report Date: Thursday, July 6, 2023 9:24:51 AM

Page 4 of 16





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 18961003
 Date Collected:
 06/20/2023 09:40
 Matrix:
 Groundwater

 Sample ID:
 MW2016-6
 Date Received:
 06/21/2023 15:25
 Collector:
 Client

Temp @ Receipt (C): 2.1

Method: ASTM D516-16

Method. Activi Doto-10								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	603	mg/L	25	5	06/23/2023 15:43	06/23/2023 15:43	EJV	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.26	mg/L	0.1	1	06/21/2023 17:00	06/22/2023 16:18	SLZ	
Calcium	8.29	mg/L	1	1	06/21/2023 17:00	06/28/2023 12:28	SLZ	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	9.7	mg/L	2.0	1	06/22/2023	06/22/2023	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.44	mg/L	0.1	1	06/21/2023 22:20	06/21/2023 22:20	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	2070	mg/L	10	1	06/22/2023 14:36	06/22/2023 14 [.] 36	RAA	

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.

Report Date: Thursday, July 6, 2023 9:24:51 AM

Page 5 of 16





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 18961004
 Date Collected:
 06/19/2023 14:00
 Matrix:
 Groundwater

 Sample ID:
 MW2016-8
 Date Received:
 06/21/2023 15:25
 Collector:
 Client

Temp @ Receipt (C): 2.1

Method: ASTM D516-16

Method: ASTM D516-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	679	mg/L	25	5	06/23/2023 15:44	06/23/2023 15:44	EJV	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.26	mg/L	0.1	1	06/21/2023 17:00	06/22/2023 16:19	SLZ	
Calcium	13.1	mg/L	1	1	06/21/2023 17:00	06/28/2023 12:30	SLZ	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	11.8	mg/L	2.0	1	06/22/2023 12:35	06/22/2023 12:35	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.32	mg/L	0.1	1	06/21/2023 22·26	06/21/2023 22·26	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	2320	mg/L	10	1	06/22/2023 14:36	06/22/2023 14:36	RAA	

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.

Report Date: Thursday, July 6, 2023 9:24:51 AM

Page 6 of 16



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**

Analytical Results

Lab ID: 18961005 **Date Collected:** 06/19/2023 10:38 Matrix: Groundwater Sample ID: MW2016-9 Date Received: 06/21/2023 15:25 Collector: Client

Temp @ Receipt (C):

Method: ASTM D516-16

Method. ASTM DS10-10								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	200	mg/L	25	5	06/23/2023 15:45	06/23/2023 15:45	EJV	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.26	mg/L	0.1	1	06/21/2023 17:00	06/22/2023 16:22	SLZ	
Calcium	6.15	mg/L	1	1	06/21/2023 17:00	06/28/2023 12:34	SLZ	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	20.6	mg/L	2.0	1	06/22/2023 12:36	06/22/2023 12:36	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.52	mg/L	0.1	1	06/21/2023 22·32	06/21/2023 22·32	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1710	mg/L	10	1	06/22/2023 14:36	06/22/2023 14·36	RAA	

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.

Report Date: Thursday, July 6, 2023 9:24:51 AM

Page 7 of 16





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 18961006
 Date Collected:
 06/20/2023 08:36
 Matrix:
 Groundwater

 Sample ID:
 MW2016-10
 Date Received:
 06/21/2023 15:25
 Collector:
 Client

Temp @ Receipt (C): 2.1

Method: ASTM D516-16

Welliou. ASTW DS16-16								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	364	mg/L	25	5	06/23/2023 15:47	06/23/2023 15:47	EJV	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.23	mg/L	0.1	1	06/21/2023 17:00	06/22/2023 16:23	SLZ	
Calcium	5.79	mg/L	1	1	06/21/2023 17:00	06/28/2023 12:37	SLZ	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	16.1	mg/L	2.0	1	06/22/2023 12:37	06/22/2023 12:37	AMC	_

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.56	mg/L	0.1	1	06/22/2023 14:46	06/22/2023 14:46	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1700	mg/L	10	1	06/22/2023 14:36	06/22/2023 14:36	RAA	

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.

Report Date: Thursday, July 6, 2023 9:24:51 AM

Page 8 of 16





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 18961007
 Date Collected:
 06/19/2023 10:58
 Matrix:
 Groundwater

 Sample ID:
 MW2016-11
 Date Received:
 06/21/2023 15:25
 Collector:
 Client

Temp @ Receipt (C): 2.1

Method: ASTM D516-16

Welliou. ASTW DS10-10								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	244	mg/L	25	5	06/23/2023 15:48	06/23/2023 15:48	EJV	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.30	mg/L	0.1	1	06/21/2023 17:00	06/22/2023 16:25	SLZ	
Calcium	5.72	mg/L	1	1	06/21/2023 17:00	06/28/2023 12:39	SLZ	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	22.0	mg/L	2.0	1	06/22/2023 13:25	06/22/2023 13:25	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.57	mg/L	0.1	1	06/22/2023 15:04	06/22/2023 15:04	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1640	mg/L	10	1	06/22/2023 14:36	06/22/2023 14:36	RAA	

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.

Report Date: Thursday, July 6, 2023 9:24:51 AM

Page 9 of 16





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 18961008
 Date Collected:
 06/19/2023 14:00
 Matrix:
 Groundwater

 Sample ID:
 Dup
 Date Received:
 06/21/2023 15:25
 Collector:
 Client

Temp @ Receipt (C): 2.1

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	676	mg/L	25	5	06/23/2023 15:49	06/23/2023 15:49	EJV	
Method: EPA 6010D								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.25	mg/L	0.1	1	06/21/2023 17:00	06/22/2023 16:26	SLZ	
Calcium	12.3	mg/L	1	1	06/21/2023 17:00	06/28/2023 12:40	SLZ	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	11.7	mg/L	2.0	1	06/22/2023	06/22/2023	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.35	mg/L	0.1	1	06/22/2023 15:10	06/22/2023 15:10	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	2310	mg/L	10	1	06/22/2023 14:36	06/22/2023 14:36	RAA	

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.

Report Date: Thursday, July 6, 2023 9:24:51 AM

Page 10 of 16



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

C Resul	ts Summary							WO #:	189	61
Sulfate AC Type	Original Sample 10	Blank Result	Spike Amount	Units: Spike % Recovery	mg/L	Spike Duplicate % Recovery	Lower Control	Upper Control Limit (%)	APD (%)	RPD Limit (%)
FB			100	96.3			85	115		
10			100	90.3			85	115		
en e			100	95.2			85	115		
ů.			100	95.6			85	115		
in.			100	95.5			85	115		
Ð			100	93.1			85	215		
st.			100	91.2			85	115		
9			100	98.2			85	115		
el .			100	93.4			85	115		
PBI 1			100	99.6			85	115		
6			100	94.9			85	115		
В			100	99.2			85	115		
6			100	101 0			85	215		
Đ.			100	101 0			85	115		
10		d								
ø		G								
an and an		d								
ø		4								
В		.5								
15		es								
0		15								
0		18								
а		15								
9		3								
a		is.								
il)		S								
le .		9								
in .		sh								





Account #: 2040

Client: Basin Electric Power Cooperative

Sulfate				Units: mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery	Spike Duplicate % Recovery	Lower Control	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
MS/MSD	18097007		500	101.2	302.0	89	115	0.5	20
MS/MSD	18718003		100	91.7	91.4	65	115	10	20
AS/MSD	18230005		500	84.5	82.9	85	115	hi	20
HS/MSD	18304005		500	92.4	93.3	85	115	0.5	20
ts/MSD	18304018		500	883	80.1	85	115	1.8	20
IS/MSD	18346001		500	74.9	73-1	85	115	1,0	20
NS/MSD	18375005		1000	98.5	110.0	89	.115	10.2	:2b
MS/MSD	18526006		100	88.2	82.8	85	115	03	20
rs/Msio	18633001		100	96.6	97.7	es	115	0.0	(20)
IS/MSD	18688001		1000	88.7	84.5	gs.	115	0.0	20
IS/MSD	18822004		1000	91.0	95.0	RS	115	1.1	20
15/M5D	18835001		500	90.1	III.5	BS .	115	4.1	20
IS/MSD	19015002		1000	NO 8	70.7	65	115	0.0	20-
hloride				Units: mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike %	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
H)			30	Recovery 96.1	% Recovery	Jimit (%)	120 120		
FB.			30	16.2		90	130		
ų.			30	96.1		90	110.		
in .			30	96.1		10	110		
rii			30	95,4		90	110		
rn -			30	96.6		90	110		
9			30	96.4		10	310		
B			30	96 Z		90	110		
FB			30	95.8		110	110		
Fil			30	95.6		.00	110		
						30	110		
F6			80	g 0e		30			
		<2.0	80	19.00		30			
48		<20 <20	\$0	90.0					
AB AB			šū.	26.62		30			





Account #: 2040 Client: Basin Electric Power Cooperative

Chloride				Units: mg/l					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spile M Recovery	Spike Duplicate Recovery	Lower Control Lond (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
MB)		<2.0							
AB		<2.0							
dij.		<2.0							
us .		<2.0							
8		<i>4</i> .0							
is.		<2.0							
90		92.0							
n/wsb	19375001		30	85.0	883	100	jan	00	20
DEMVE	18526007		90	364	80	40.	120	0.0	:20
IS/MSD	18687006		30	90.9	90.2	100	120	0.3	.20
IS/MSD	18688001		30	106.4	107.1	(80)	120	0.5	20
IS/MSD	18961007		30	1129	113.0	160	120	0.2	20
loron				Units: mg/l	i.	_			
СТуре	Original Sample ID	Blank Result	Spile Amount	Spike % Recovery	Spille Duplicate % Recovery	Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
ED-LOFE			0,4	1010	Jejiostery	85	115		
B-OF			0,4	106.0		85	115		
10		+0.3							
MS		-0.1							
ni/Maio	18822001		0.4	104.0	104.0	70	1.00	0.1	(ZD)
SYMSD	18826007		0.4	97,9	58.4	70	ja0.	0.2	20
5/M5D	18961006		0.4	101.6	101.0	70	130	0.0	20
alcium				Units: mg/l	0				
СТуре	Original Sample ID	Blank Result.	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (16)
6-MI			100	107.0		85	115		
B-MI			100	110.0		85	115		
ė		ea.							
		- 6.1 -							
		- 0.1.1							
В	1685,1001							σe	alti
ia un	18821001							in é A,a	20





Account #: 2040

Client: Basin Electric Power Cooperative

Calcium QC Type	Original Sample ID	Blank Result	Spike Amount	Units: mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
		BOTHE RESULT		Recovery	% Recovery	Limit (%)	Limit (%)		
PD5/PDSD	17346001		100	103.0	\$05.0	75	125	1.4	.20
PDS/PDSD	18576001		100	98.3	99.9	75	125	12	20
PDS/PDSO	18526003		100	100.0	100.0	75	125	òš	.20
PDS/PDS0	18634002		100	101.0	102.0	75	125	0.6	20
PDS/PDSD	18688001		500	104.0	203.0	75	125	0.9	20
P05/P050	18831001		100	96.7	97.6	75	125	9.1	20
FDS/PDSD	18835001		100	101.0	99.2	72	425	1.0	:ZD
FD5/PDSD	19099001		100	99 5.	99.1	79	125	03.	20
POS/POSD	19099005		100	102.0	101.0	75.	125	0.8	(20)
PDS/PDSD	19111003		100	06.5	100.5	75	125	0.0	.20
PDS/PDSD	19111017		100	103.0	103.0	75	125	0.4	20
Fluoride				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 (%)
CRM-F			3.39	105.0		53.8	111		
CRM-F			3,39	100.0		83.8	111		
UB4			0.5	100.0		90	in		
Unic			0.5	100.0		60.	130		
1964			65	98.0		90	110.		
ine			0.5	106.0		00.	110		
1000			0.5	:102:0		80	110		
MAE		60.1							
Mili-P		>0.1							
MBE		c0.1							
MBF		<0.1							
MB-F		×0.1							
MS/MSD-I	18821001		0.5	1060	208-0	80	120	10	20
MS/MSD-F	1882/001		0.5	1040	504.0	80	120	0.0	20
MS/MSD-F	18961006		0.5	1120	108.0	80.	120	is	20
Total Dissolve	ed Solids			Units: mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W	Spike Duplicate	Lower Control	Upper Control	KPD (%)	RPD Limit (%)
				Recovery	% Recovery	Limit (%)	Limit (%)		





Account #: 2040 Client: Basin Electric Power Cooperative







Effective Date: 15 Jan 2018

Account #: 2040 Client: Basin Electric Power Cooperative

Toll Fre	Phone: (701) 258- ee: (800) 279-6885	9720 Fax: (701) 258-97	24		Wo Lab				#							Ш				
	CONTRACTOR AND A LOCAL PARTY.	6 A - A - A - A			Acc	_	-						ı	Pno	ne i	7:	238		55	7-548
В	ASIN ELECTRIC POV Leland Olds Star 3901 HIGHWAY 2 STANTON, ND 58	ion OOA			Con For Nan	OA	KA	ut s	oler:	6	lark	e		Ema	ail:	no	itson a b lible of ort check bo	bega	com	m
					Quo	ote I	Vun	nbe	r	me						Date	e Submitt	ed:	-21-	23
					Proj	ject 5 /	Na	J.C	111			SP	14	13		Pur	chase Ord	der#:	526	, 1
	Sample Informat	ion	Filtered	YON					Вс	ottle	Ty	pe						An	alysis	S
ab Use Only Lab umber	Sample ID	Sample Matrix PW-Potable Water GW - Groundwater WW - Wastewater SW - Surface Water S - Soil/Studge O- Other	Date Sampled	Time Sampled	Untreated	Sterile	500 ml HNO3	1000 ml H2SO4	250 ml H2SO4	1000 ml Mens	Amber HCI	Amber Unpres.	VOC Vials HCI	Amber H2SO4	40 ml Vials H2SO4	Other:	A	nalysi	s Req	uired
100	MW 2016-3	GW	6-20-23	0910			Ĭ									Ŭ	B.Ca	. (1.	F
500	MW 2016-2		6-19-23	1145													504	4	T	DS
203	MW 2016-6		6-20-23	0940																
204	MW 2016-8		6-19-23	1400																
305	MW 2016-9		6-19-23	1038																
306	MW 2016-10		6-20-23	0836	Ц															
007	MW 2016-11		6-19.23	1058	Ш															
800	Dup.	V	619.23	1400	Н	-	V			V		4		_	_			1	/	
mment	ts:				H									-		-				
	Transferred by:	Date:	Time:	Sample (ond.	itio	n.			Re	ceiv	red I	huz	2.0			Date:	Ti	me:	Temp:
Miller	nnium Express	6-21-23	Time.	Jampie	·							M		P			Jun 23	19		2.16
																				TM92

See above for page number

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.

Report Date: Thursday, July 6, 2023 9:24:51 AM

Form # 80-90003-1



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

Workorder: LOS-SP-143 Landfill CCR Wells PO: 790708-04

(28929)

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:



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.





Account #: 2040 Client: Basin Electric Power Cooperative

Workorder Summary



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

Analytical Results

 Lab ID:
 28929001
 Date Collected:
 09/20/2023 08:40
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-3
 Date Received:
 09/20/2023 16:00
 Collector:
 Client

Temp @ Receipt (C): 4.0 Received on Ice: Yes

Parameter Results Units RDL DF Prepared Analyzed By Qual

Method: ASTM D516-16

Parameter Results Units RDL DF Prepared Analyzed Βy Qual 09/28/2023 09/28/2023 Sulfate 5 1 **AMC** 57.4 mg/L 14:50 14:50

Method: EPA 6010D

Units **RDL** DF **Parameter** Results Prepared Analyzed Ву Qual 09/26/2023 09/21/2023 0.24 1 MDE Boron mg/L 0.1 17:15 10:23 09/21/2023 09/25/2023 MDE Calcium 5.05 mg/L 1 17:15 14:32

Method: SM4500-CI-E 2011

Parameter Results Units **RDL** DF **Prepared** Analyzed Ву Qual 09/26/2023 09/26/2023 Chloride 35.0 2.0 **AMC** mg/L 1 10:12 10:12

Method: SM4500-F-C-2011

Units **RDL** DF **Parameter** Results Prepared Analyzed Ву Qual 09/22/2023 09/22/2023 CC Fluoride 0.71 mg/L 0.1 1 19:17 19:17

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1440	mg/L	10	1	09/22/2023 09:43	09/22/2023 09:43	CMG	

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.



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

Analytical Results

 Lab ID:
 28929002
 Date Collected:
 09/20/2023 07:50
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-13
 Date Received:
 09/20/2023 16:00
 Collector:
 Client

Temp @ Receipt (C): 4.0 Received on Ice: Yes

Parameter Results Units RDL DF Prepared Analyzed By Qual

Method: ASTM D516-16

Parameter Results Units **RDL** DF Prepared Analyzed Βv Qual 09/28/2023 09/28/2023 Sulfate 37.0 5 1 **AMC** mg/L 14:51 14:51

Method: EPA 245.1

Units **RDL** DF **Prepared Parameter** Results Analyzed Ву Qual 09/27/2023 09/28/2023 <0.0002 0.0002 1 MDE Mercury mg/L 13:46 14:07

Method: EPA 6010D

Parameter Results Units RDL DF Prepared Analyzed Qual By 09/21/2023 09/26/2023 0.31 Boron mg/L 0.1 1 MDE 17:15 10:25 09/21/2023 09/25/2023 Calcium MDE 17.4 mg/L 1 17:15 14:34 09/21/2023 09/28/2023 Lithium < 0.02 mg/L 0.02 1 MDE 17:15 09:57

Method: EPA 6020B

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony	<0.001	mg/L	0.001	5	09/21/2023 17:15	10/02/2023 17:08	MDE	
Arsenic	<0.002	mg/L	0.002	5	09/21/2023 17:15	10/02/2023 17:08	MDE	
Barium	0.0603	mg/L	0.002	5	09/21/2023 17:15	10/02/2023 17:08	MDE	
Beryllium	<0.0005	mg/L	0.0005	5	09/21/2023 17:15	10/02/2023 17:08	MDE	
Cadmium	<0.0005	mg/L	0.0005	5	09/21/2023 17:15	10/02/2023 17:08	MDE	
Chromium	<0.002	mg/L	0.002	5	09/21/2023 17:15	10/02/2023 17:08	MDE	
Cobalt	<0.002	mg/L	0.002	5	09/21/2023 17:15	10/02/2023 17:08	MDE	
Lead	<0.0005	mg/L	0.0005	5	09/21/2023 17:15	10/02/2023 17:08	MDE	
Molybdenum	0.0456	mg/L	0.002	5	09/21/2023 17:15	10/02/2023 17:08	MDE	
Selenium	<0.005	mg/L	0.005	5	09/21/2023 17:15	10/02/2023 17:08	MDE	
Thallium	<0.0005	mg/L	0.0005	5	09/21/2023 17:15	10/02/2023 17:08	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.

Report Date: Monday, October 23, 2023 10:22:11 AM

Page 4 of 18



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

Analytical Results

 Lab ID:
 28929002
 Date Collected:
 09/20/2023 07:50
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-13
 Date Received:
 09/20/2023 16:00
 Collector:
 Client

Temp @ Receipt (C): 4.0 Received on Ice: Yes

Parameter Results Units RDL DF Prepared Analyzed By Qual

Method: SM4500-CI-E 2011

Parameter Results Units **RDL** DF Prepared Analyzed Βv Qual 09/26/2023 09/26/2023 Chloride 60.8 2.0 1 **AMC** mg/L 10:18 10:18

Method: SM4500-F-C-2011

Units **RDL** DF **Prepared Parameter** Results Analyzed Ву Qual 09/22/2023 09/22/2023 CC 0.58 1 Fluoride mg/L 0.1 19:23 19:23

Method: USGS I-1750-85

Parameter Units RDL DF Prepared Analyzed Qual Results By 09/22/2023 09/22/2023 1490 **Total Dissolved Solids** mg/L 10 1 CMG 09:43 09:43



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

Analytical Results

 Lab ID:
 28929003
 Date Collected:
 09/20/2023 10:00
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-6
 Date Received:
 09/20/2023 16:00
 Collector:
 Client

Temp @ Receipt (C): 4.0 Received on Ice: Yes

Parameter Results Units RDL DF Prepared Analyzed By Qual

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	688	mg/L	25	5	09/28/2023 14:52	09/28/2023 14:52	AMC	

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.24	mg/L	0.1	1	09/21/2023 17:15	09/26/2023 10:26	MDE	
Calcium	7.83	mg/L	1	1	09/21/2023 17:15	09/25/2023 14:35	MDE	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	9.5	mg/L	2.0	1	09/26/2023 10:19	09/26/2023 10:19	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.48	mg/L	0.1	1	09/22/2023 19:29	09/22/2023 19:29	CC	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	2040	mg/L	10	1	09/22/2023 09:43	09/22/2023 09:43	CMG	

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.



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

Analytical Results

 Lab ID:
 28929004
 Date Collected:
 09/19/2023 11:55
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-9
 Date Received:
 09/20/2023 16:00
 Collector:
 Client

Temp @ Receipt (C): 4.0 Received on Ice: Yes

Parameter Results Units RDL DF Prepared Analyzed By Qual

Method: ASTM D516-16

Parameter Results Units RDL DF Prepared Analyzed Βv Qual 09/28/2023 09/28/2023 Sulfate 196 25 5 **AMC** mg/L 14:40 14:40

Method: EPA 6010D

Units **RDL** DF **Parameter** Results Prepared Analyzed Ву Qual 09/26/2023 09/21/2023 0.25 1 MDE Boron mg/L 0.1 17:15 10:27 09/21/2023 09/25/2023 MDE Calcium 6.67 mg/L 1 17:15 14:36

Method: SM4500-CI-E 2011

Parameter Results Units **RDL** DF **Prepared** Analyzed Ву Qual 09/26/2023 09/26/2023 Chloride 19.7 2.0 **AMC** mg/L 1 10:20 10:20

Method: SM4500-F-C-2011

Units **RDL** DF **Parameter** Results Prepared Analyzed Ву Qual 09/22/2023 09/22/2023 CC Fluoride 0.58 mg/L 0.1 1 19:35 19:35

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1660	mg/L	10	1	09/22/2023 09:43	09/22/2023 09:43	CMG	

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.



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

Analytical Results

 Lab ID:
 28929005
 Date Collected:
 09/19/2023 12:11
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-11
 Date Received:
 09/20/2023 16:00
 Collector:
 Client

Temp @ Receipt (C): 4.0 Received on Ice: Yes

Parameter Results Units RDL DF Prepared Analyzed By Qual

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	237	mg/L	25	5	09/28/2023 14:41	09/28/2023 14:41	AMC	

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.28	mg/L	0.1	1	09/21/2023 17:15	09/26/2023 10:28	MDE	
Calcium	6.82	mg/L	1	1	09/21/2023 17:15	09/25/2023 14:37	MDE	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	22.1	mg/L	2.0	1	09/26/2023 10:21	09/26/2023 10:21	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.59	mg/L	0.1	1	09/22/2023 19:41	09/22/2023 19:41	СС	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1610	mg/L	10	1	09/22/2023 09:43	09/22/2023 09:43	CMG	

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.



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

Analytical Results

 Lab ID:
 28929006
 Date Collected:
 09/19/2023 12:38
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-2
 Date Received:
 09/20/2023 16:00
 Collector:
 Client

Temp @ Receipt (C): 4.0 Received on Ice: Yes

Parameter Results Units RDL DF Prepared Analyzed By Qual

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	279	mg/L	25	5	09/28/2023 14:42	09/28/2023 14:42	AMC	

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.26	mg/L	0.1	1	09/21/2023 17:15	09/26/2023 10:28	MDE	
Calcium	8.94	mg/L	1	1	09/21/2023 17:15	09/25/2023 14:38	MDE	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	15.4	mg/L	2.0	1	09/26/2023 10:28	09/26/2023 10:28	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.54	mg/L	0.1	1	09/22/2023 19:47	09/22/2023 19:47	CC	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1730	mg/L	10	1	09/22/2023 09:43	09/22/2023 09:43	CMG	

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.



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

Analytical Results

 Lab ID:
 28929007
 Date Collected:
 09/19/2023 13:55
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-10
 Date Received:
 09/20/2023 16:00
 Collector:
 Client

Temp @ Receipt (C): 4.0 Received on Ice: Yes

Parameter Results Units RDL DF Prepared Analyzed By Qual

Method: ASTM D516-16

Parameter Results Units RDL DF Prepared Analyzed Βv Qual 09/28/2023 09/28/2023 Sulfate 362 25 5 **AMC** mg/L 14:44 14:44

Method: EPA 6010D

Units **RDL** DF Prepared **Parameter** Results Analyzed Ву Qual 09/26/2023 09/21/2023 0.23 1 MDE Boron mg/L 0.1 17:15 10:31 09/21/2023 09/25/2023 MDE Calcium 5.77 mg/L 1 17:15 14:39

Method: SM4500-CI-E 2011

Parameter Results Units **RDL** DF **Prepared** Analyzed Ву Qual 09/26/2023 09/26/2023 Chloride 15.7 2.0 mg/L 1 **AMC** 10:29 10:29

Method: SM4500-F-C-2011

DF Units **RDL Parameter** Results Prepared Analyzed Ву Qual 09/25/2023 09/25/2023 Fluoride 0.59 mg/L 0.1 1 CC 21:15 21:15

Method: USGS I-1750-85

Parameter Results Units **RDL** DF **Prepared** Analyzed Ву Qual 09/22/2023 09/22/2023 **Total Dissolved Solids** 1660 mg/L 10 1 CMG 09:43 09:43

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.

Report Date: Monday, October 23, 2023 10:22:11 AM

Page 10 of 18



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

Analytical Results

 Lab ID:
 28929008
 Date Collected:
 09/19/2023 13:55
 Matrix:
 Groundwater

 Sample ID:
 Dup
 Date Received:
 09/20/2023 16:00
 Collector:
 Client

Temp @ Receipt (C): 4.0 Received on Ice: Yes

Parameter Results Units RDL DF Prepared Analyzed By Qual

Method: ASTM D516-16

Parameter Results Units RDL DF Prepared Analyzed Βv Qual 09/28/2023 09/28/2023 Sulfate 340 25 5 **AMC** mg/L 14:45 14:45

Method: EPA 6010D

Prepared Units **RDL** DF **Parameter** Results Analyzed Ву Qual 09/26/2023 09/21/2023 0.23 1 MDE Boron mg/L 0.1 17:15 10:31 09/21/2023 09/25/2023 MDE Calcium 5.72 mg/L 1 14:40 17:15

Method: SM4500-CI-E 2011

Parameter Results Units **RDL** DF **Prepared** Analyzed Ву Qual 09/26/2023 09/26/2023 Chloride 15.6 2.0 mg/L 1 **AMC** 10:31 10:31

Method: SM4500-F-C-2011

DF Units **RDL Parameter** Results Prepared Analyzed Ву Qual 09/25/2023 09/25/2023 Fluoride 0.59 mg/L 0.1 1 CC 21:21 21:21

Method: USGS I-1750-85

Parameter Results Units **RDL** DF **Prepared** Analyzed Ву Qual 09/22/2023 09/22/2023 **Total Dissolved Solids** 1680 mg/L 10 1 CMG 09:43 09:43

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.

Report Date: Monday, October 23, 2023 10:22:11 AM

Page 11 of 18



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

Analytical Results

 Lab ID:
 28929009
 Date Collected:
 09/20/2023 11:35
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-8
 Date Received:
 09/20/2023 16:00
 Collector:
 Client

Temp @ Receipt (C): 4.0 Received on Ice: Yes

Parameter Results Units RDL DF Prepared Analyzed By Qual

Method: ASTM D516-16

Parameter Results Units RDL DF Prepared Analyzed Βv Qual 09/28/2023 09/28/2023 Sulfate 742 25 5 **AMC** mg/L 14:58 14:58

Method: EPA 6010D

Units **RDL** DF **Parameter** Results Prepared Analyzed Ву Qual 09/26/2023 09/21/2023 0.24 1 MDE Boron mg/L 0.1 17:15 10:34 09/21/2023 09/25/2023 MDE Calcium 13.1 mg/L 1 14:43 17:15

Method: SM4500-CI-E 2011

Parameter Results Units **RDL** DF **Prepared** Analyzed Ву Qual 09/26/2023 09/26/2023 Chloride 11.2 2.0 **AMC** mg/L 1 10:32 10:32

Method: SM4500-F-C-2011

Units **RDL** DF **Parameter** Results Prepared Analyzed Ву Qual 09/25/2023 09/25/2023 CC Fluoride 0.36 mg/L 0.1 1 21:27 21:27

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	2290	mg/L	10	1	09/22/2023 09:43	09/22/2023 09:43	CMG	

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.



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

C Result	s Summary						WO #:	0#: 28929		
Sulfate QC Type	Original Sample ID	Blank Result	Spike Amount	Units: mg/		Lower Control	Linnar Control	RPD (%)	RPD Limit (%)	
FB	Organisangie iu	DIGHE HOLD.	100	Recovery 108.0	Spike Duplicate % Recovery	Limit (%)	Limit (%)	Neo (III)	NPD Come (se)	
14			100	105.0		85	115			
FB			100	108.0		85	115			
14			100	107.0		65	115			
н			100	96.0		RS.	235			
FD.			100	984		45	115			
nii		16								
MB		35								
AG		16								
ма		<5								
via.		is.								
va.		45								
AS/MSD	28782003		500	82.7	82.4	85	115	0.0	20	
AS/MSD	28782013		1000	108.8	108.5	85	115	0.0	20	
AS/MSD	28790001		500	99.4	100.5	85	115	0.7	20	
AS/IASD	28929008		500	107.1	107.8	85	115	0.2	20	
AS/MSD	28953009		100	1145	116.0	85	115	1.7	20	
Chloride				Units: mg/	Ĺ					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery	Spike Duplicate N Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)	
FB			30	91.8		90	110			
řii.			30	93.6		50	110			
FB			30	94.3		90.	110			
H			-30	94.3		90	110			
FB			30	944		50	110			
A			30	94.2		90	110			
*6			30	94.7		90	110			
Fű			30	94.2		96	iio			
14			30	94.5		90	110			





Account #: 2040 Client: Basin Electric Power Cooperative

Chloride	Orleantematics	March Street &	Park and the second	Units:	mg/L	retain and	(manifester)	Union Control	mod (M)	ham the later
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate Recovery	Lower Control Limit (16)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
Ma)		<2.0								
AB		<2.0								
Ally		<2.0								
AR		<2.0								
15		<2.0								
ia.		<2.0								
10		×2.0								
10		V2.0								
10		×2.0								
		52.0								
10		42.0								
NIVANID.	78773001		30	122.0		129.0	100	120	0.0	20-
THE PERSON	2017,000			120-5		1424	-	140	U.O.	20
IS/MBD	28785001		30	99.7		107.0	90	136	1.5	20
IS/MSD	28940001		90	120.7		(22.4	90	129	0.7	20-
						100.0				
IS/MSD	29018004		:30	87.7		87.3	80	120	0.3	.20
IS/MSD	29032001		90	88.8		88.4	80	120	0.8	20
Boron				Units:	mg/L					
ОС Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
DS/PDSD	28580001		3.1	96.0		95.2	75	125	0.3	26
Calcium				Units:	mg/L	_				
IC Type	Original Sample (D	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD [%]	RPD Limit (%)
DS/PDSD	28566001		100	Recovery 105.0		% Recovery 101.0	Limit (%) 75	Limit (%) 125	14	30
DS/PDSD	785H3001		500	111.0		114.0	75	175	0.5	20
DS/POSO	28782008		500	109.0		1100	75	325	ài	-20
	NAME OF TAXABLE PARTY.							240		
DS/PDSD	28785005		100	1010		10a.0	75	125	0.7	30-
DS/PDSD	28929009		100	112.0		1120	75	125	0.6	20
				V. E.						
Antimony IC Type	Original Sample ID	Blank Hesuit	Spike Amount	Units:	mg/L	Spike Dupkcate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
	Original Semple ID	weeker Wildrift		Recovery 100.0	-	% Recovery	Limit (%)	Limit (%)	in a raj	the second that
FB-M5			0.2	3000			ed	115		
10		<0.001								
Arsenic				Units:	mg/L					
IC Type	Original Sample (D	Blank Result	Spike Amount	5pke %	- INBU E	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
				Recovery		% Recovery	Limit (%)	Limit (%)		





Account #: 2040 Client: Basin Electric Power Cooperative

Arsenic	and a	be de la	ALALI CONTRACTOR	Units:	mg/L	AND TO	12.00	No. Commercial	Bridge Control	August 100
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery		Spike Duplicate Recovery	Lenver Control Lenit (%)	Limit (%)	RPD (%)	RPD Limit (%)
la		<0.005								
Barium				Units:	mg/L					
дс тури	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate S Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Layue (%)
r0-M5			0.1	97.5		- secordy	85	115		
		240								
ia.		<0.002								
Beryllium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate W Recovery	Lower Control Limit (N)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FH-M5			0.1	195.1		is necovery	ps.	115		
AB.		50.000F								
121		₹0.0005								
Cadmium				Units:	mg/L					
СТуре	Original Sample (D	Blank Result.	Spike Amount	Spike % Recovery		Spile Duplicate Sin Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
BIAS:			01	102.0		- Siretain	#1	115		
10		<0.0005								
Chromlum				Units:	mg/L					
СТуре	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate N Recovery	Lower Control Limit (%)	Upper Control Limit (%)	(CPD (%)	RPD Limit (IS)
B-MS			0.1	101.0			85	115		
10		<0.002								
Cobalt				Units:	mg/L					
СТуре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spile Duplicate	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	102.0			85	115		
ie.		<0.002								
ead				Units:	mg/L					
IC Type	Original Sample III	Blank Result	Spike Amount	Spike % Recovery		Spike DupScate & Recovery	Lower Control Limit (%)	Upper Control Limit (%)	HARI (40)	RPE LINE (%)
HI-M5			0.1	96.4			85	135		
16		<0.0006								
Molybdenum		de Chiercon	and Victor	Units:	mg/L				diam and	day of the same
1€ Type	Original Sample ID	Blank Result	Spike Amount	Spike til Recovery		N Recovery	Limit (N)	Limit (%)	RPD (%)	RPD Limit (%)
TR-MS			0.1	104.0			es	115		
M)		<0.002								
				Units:	mali					
	Original Sample (D	Blank Result	Spike Amount	Spike N	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
						the state of the s	A Donald widows	Line Bridge h		
CType	Organisample to		0.1	Recovery 95.5		% Recovery	Limit (%)	Limit (%)		





Account #: 2040

Client: Basin Electric Power Cooperative

Thallium	4000	be de la	No. of Contract of	Units:	mg/L	MALE WATER	12.00-0.00	100000000000000000000000000000000000000	Service (mile)	har very
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-M5			0.1	97.6			85	115		
AB		<0.0005								
Boron				Units:	mg/L					
ос туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RED (%)	RPD Limit (KS)
IB-OE			0.4	3014			85	115		
10-QE			0,4	(02.0			85	X15		
10		-0.1								
10		<0.1								
rs/MSU.	28929001		0.4	90.7		88.0	76	125	1.1	20
AS(MSD)	78979009		0.6	89.8		1.06	75	125	0.2	20
Calcium				Units:	mg/L					
QC Type	Original Sample III	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
E-Mi			100	1110		% Recovery	Limit (%)	Dmit (%) 115		
ij.Mi			100	111.0			85	115		
B W			100	112.0			65	113		
is .		-400								
16		-18								
10		0.								
UP	28782002								0.7	20
UP	28782012								0.8	.20
NUP	28785006								0.9	30
Mercury				Units:	mg/L					
IC Type	Original Sample (D	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
F6			0.002	102.0		% Recovery	Limit (%) 85	Umit (%) 115		
FÐ			0.002	106-0			81	115		
18		s0.0002								
19		<0.0002								
	27979003		0.002	003-0		162.0	70	130	0.0	30
ts/MSD	812774974									
IS/MSD	28963004		0,002	111.0		509.0	701	130	0.0	20
			0,002	100.0		309.0 309.0	m m	130	0.0	20 20





Account #: 2040

Client: Basin Electric Power Cooperative

Fluaride				Units: mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike 16 Recovery	Spike Duplicate % Recovery	Lower Control Limit (16)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
RM-F			3.39	105.0		83.8	111		
RM-F			3 39	106-0		63.8	111		
16.7			0.5	106-0		90	iiū		
16.7			0.5	1100		90	110		
ro é			0.5	108.0		90	230		
10.0			0.5	(08.0		90	120		
		30.1							
100		>0.1							
m-c		>0.1							
Ne.		<0.1							
N/MSD-#	78970005		0.5	100.0	100.0	100	120	0.0	40-
AS/MSD-#	78929009		0.5	106.0	108.0	50	120	0.0	20
AS/MSD-F	28953007		0.5	82.0	84.0	90	120	1.1	30
Total Dissolve	ed Solids			Units: mg/L					
ос туре	Original Sample ID	Blank Result	Spike Amount	Spike 9 Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPE LIME (%)
RM			736	97.0		90.35	110.83		
10		300							
On .	28580001							10	20





Account #: 2040 Client: Basin Electric Power Cooperative

Toll Free: (Minnesota Valley Testing Laborato 2616 East Broadway Avenue Bismarck, ND 58501 Phone: (701) 258-9720 (800) 279-6885 Fax: (701) 258-9724	ories, Inc.	Basin E WO: 28	Electric P	ow	er	Page of
					1011		Lab Use Only
Company Nar	me and Address Basin Electric Power Coop.		Account #	2040			Phone # 701-745-7238 701-557-5488
	Leland Olds Station		Contact		_		Emails
	3901 Highway 200A Stanton, ND 58571		Name of S	Mark Dihle)		mdihle@bepc.com aknutson@bepc.com
Billing Addres	ss (indicate if different from above)		mls	ampier			jason.lach@aecom.com
			Quote Nur	mber	ME	ilja	Date Submitted 9/21/2023
				me/Numb		L C	Purchase Order # CCR Wells 790708-04
Cab Use Only	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A	Analysis Required
∞	MW-2016-3	GW	9/20/2023	840	2	133	
002	MW-2016-13	GW	9/20/2023	750	3	N	B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,Pb Li, Hg, Mo, Se, Tl, Ra226, Ra228, TDS
003	MW-2016-6	GW	9/20/2023	1000	2	N	TDS, B, Ca, Cl, F, SO ₄
004	MW-2016-9	GW	9/19/2023	1155	2	N	TDS, B, Ca, Cl, F, SO ₄
005	MW-2016-11	GW	9/19/2023	1211	2	N	TDS, B, Ca, Cl, F, SO ₄
006	MW-2016-2	GW	9/19/2023	1238	2	N	TDS, B, Ca, CI, F, SO ₄
007	MW-2016-10	GW	9/19/2023	1355	2	N	TDS, B, Ca, CI, F, SO ₄
008	Dup	GW	9/19/2023	1355	2	N	TDS, B, Ca, CI, F, SO ₄
Comments:	MW-2016-8	GW	9/20/2023	1135	2	N	TDS, B, Ca, Cl, F, SO ₄

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

Date

Form # 80-910005-1

Transferred by

See above for page number

Received by

Date

Time

Effective Date: 26 Aug 2022

ROI Therm. #

Y/N Y/N



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 Workorder: 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:



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

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.

Report Date: Thursday, June 8, 2023 10:37:44 AM



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

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)



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

Analytical Results

 Lab ID:
 14750001
 Date Collected:
 05/03/2023 13:45
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-10
 Date Received:
 05/05/2023 16:05
 Collector:
 Client

Temp @ Receipt (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 245.1

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 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	1.02	mg/L	0.1	1	05/05/2023 17:01	05/11/2023 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 6020B

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	MDE	
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.

Report Date: Thursday, June 8, 2023 10:37:44 AM

Page 3 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 14750001
 Date Collected:
 05/03/2023 13:45
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-10
 Date Received:
 05/05/2023 16:05
 Collector:
 Client

Temp @ Receipt (C): 4.8

Method: SM4500-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-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 Solids	640	mg/L	10	1	05/09/2023 16:10	05/09/2023 16:10	RAA	

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.

Report Date: Thursday, June 8, 2023 10:37:44 AM

Page 4 of 20



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

Analytical Results

 Lab ID:
 14750002
 Date Collected:
 05/03/2023 11:40
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-11
 Date Received:
 05/05/2023 16:05
 Collector:
 Client

Temp @ Receipt (C): 4.8

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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	Ву	Qual
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	Qual
Boron	1.29	mg/L	0.1	1	05/05/2023 17:01	05/11/2023 09:25	MDE	
Calcium	65.4	mg/L	1	1	05/05/2023 17:01	05/09/2023 11:40	MDE	
Lithium	0.0321	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	Qual
Antimony	<0.001	mg/L	0.001	5	05/05/2023 17:01	05/12/2023 16:55	MDE	
Arsenic	0.0084	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 16:55	MDE	
Barium	0.0485	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 16:55	MDE	
Beryllium	<0.0005	mg/L	0.0005	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	mg/L	0.002	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	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 16:55	MDE	
Molybdenum	0.0095	mg/L	0.002	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	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 16:55	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.

Report Date: Thursday, June 8, 2023 10:37:44 AM

Page 5 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 14750002
 Date Collected:
 05/03/2023 11:40
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-11
 Date Received:
 05/05/2023 16:05
 Collector:
 Client

Temp @ Receipt (C): 4.8

Method: SM4500-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	AMC	

Method: SM4500-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	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	RAA	

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.

Report Date: Thursday, June 8, 2023 10:37:44 AM

Page 6 of 20



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

Analytical Results

 Lab ID:
 14750003
 Date Collected:
 05/04/2023 08:37
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 05/05/2023 16:05
 Collector:
 Client

Temp @ Receipt (C): 4.8

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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	Qual
Mercury	<0.0002	mg/L	0.0002	1	05/09/2023	05/09/2023	MDE	

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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	Qual
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	05/12/2023 16:59	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	

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.

Report Date: Thursday, June 8, 2023 10:37:44 AM

Page 7 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 14750003
 Date Collected:
 05/04/2023 08:37
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 05/05/2023 16:05
 Collector:
 Client

Temp @ Receipt (C): 4.8

Method: SM4500-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: SM4500-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 I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1240	mg/L	10	1	05/09/2023 16:10	05/09/2023 16:10	RAA	

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.

Report Date: Thursday, June 8, 2023 10:37:44 AM

Page 8 of 20



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

Analytical Results

 Lab ID:
 14750004
 Date Collected:
 05/04/2023 09:18
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-13
 Date Received:
 05/05/2023 16:05
 Collector:
 Client

Temp @ Receipt (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 245.1

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 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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 6020B

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 17:04	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 17:01	05/12/2023 17:04	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.

Report Date: Thursday, June 8, 2023 10:37:44 AM

Page 9 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 14750004
 Date Collected:
 05/04/2023 09:18
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-13
 Date Received:
 05/05/2023 16:05
 Collector:
 Client

Temp @ Receipt (C): 4.8

Method: SM4500-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	AMC	*

Method: SM4500-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	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	RAA	

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.

Report Date: Thursday, June 8, 2023 10:37:44 AM

Page 10 of 20



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

Analytical Results

Lab ID:14750005Date Collected:05/03/2023 11:40Matrix:GroundwaterSample ID:DupDate Received:05/05/2023 16:05Collector:Client

Temp @ Receipt (C): 4.8

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	184	mg/L	5	1	05/10/2023 12:03	05/10/2023 12:03	AMC	

Method: EPA 245.1

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury	<0.0002	mg/L	0.0002	1	05/09/2023	05/09/2023	MDE	

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	1.23	mg/L	0.1	1	05/05/2023 17:01	05/11/2023 09:27	MDE	
Calcium	63.2	mg/L	1	1	05/05/2023 17:01	05/09/2023 11:43	MDE	
Lithium	0.0308	mg/L	0.02	1	05/05/2023 17:01	05/11/2023 13:48	MDE	

Method: EPA 6020B

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 17:09	MDE	
Arsenic	0.0083	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:09	MDE	
Barium	0.0445	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:09	MDE	
Beryllium	<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:09	MDE	
Cadmium	<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:09	MDE	
Chromium	<0.002	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:09	MDE	
Cobalt	<0.002	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:09	MDE	
Lead	<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:09	MDE	
Molybdenum	0.0093	mg/L	0.002	5	05/05/2023 17:01	05/12/2023 17:09	MDE	
Selenium	<0.005	mg/L	0.005	5	05/05/2023 17:01	05/12/2023 17:09	MDE	
Thallium	<0.0005	mg/L	0.0005	5	05/05/2023 17:01	05/12/2023 17:09	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.

Report Date: Thursday, June 8, 2023 10:37:44 AM





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

Lab ID:14750005Date Collected:05/03/2023 11:40Matrix:GroundwaterSample ID:DupDate Received:05/05/2023 16:05Collector:Client

Temp @ Receipt (C): 4.8

Method: SM4500-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: SM4500-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 Solids	581	mg/L	10	1	05/09/2023 16:10	05/09/2023 16:10	RAA	

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.

Report Date: Thursday, June 8, 2023 10:37:44 AM

Page 12 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

C Resul	ts Summary						WO #:	147	50
Sulfate QC Type	Original Sample ID	Blank Rissolt	Spike Amount	Units: mg/	Spike Duplicate N Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB			100	93.4		85	115		
н			100	103.0		BS.	115		
n			100	92.8		85	115		
n			100	95.3		85	115		
я			100	101.0		85	115		
William		ŝ							
uği		d							
MB		śÅ							
Mill		(45)							
vig		d							
450	14345001		500	84.5	87.9	85	115	2.0	20
MSD.	14570002		100	74.9	73.0	85	115	0,8	20
ASO	14750004		100	177.3	77.1	85	115	0.0	20
isa	14750005		100	88.5	92.9	85	iis	1.5	20
Chloride				Units: mg/					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB -			30	93,0		90	110		
10			10	93.2		90	110		
řs .			30	93,3		90	110		
n)			10	93.3		90	110		
rji			10-	93.9		90	110		
ii)			30	94.7		90	110		
ra -			10-	94.5		90	(110-		
Ma		-12.00							
мв		12.00							
WE		-<2.00							
ek		<2.00							
Wel		r2.00							





Account #: 2040

Client: Basin Electric Power Cooperative

Chloride DC Type	Original Sample (D.	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lawer Control	Upper Control	RPD (%)	RPD Limit (%)
de lype	Softman autorials (D.	-12.0	Space serrically	Recovery		% Resovery	Limit (%)	Limit (%)	van fail	mr. Lumin (39)
wa		14.0								
M50	14737003		30	89.5		90.0	80	120	0.3	20
ASD:	14485001		150	132.1		1814	80)	120	.0.3	20
A5D	14750004		10	131.0		130.2	80	(120-	0.2	20
Calcium				Units:	mg/L					
ос Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Recovery	Lawer Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
OSD	14750005		100	97.6		98.5	75-	125	0,6	50
Antimony				Units	mg/L					
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lawer Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD (imit (%)
FB-MS			0,1	104.0			85	115		
viā.		10.001								
M50)	14544003		6.4	107.0		104.0	70	130	18	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	1115		
ra.		×0.000								
ma	14644003		0.4	104.0		108.0	70	130	1.0	20.
Barium				Units:	mg/L					
QC Type	Original Sample IO	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate & Recovery	Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (5))
FIJ-MS			0.1	101.0			96	115		
AW		10.002								
45D	14644003		0.4	103.0		102.0	70	130	1.0	20'
Beryllium				Units:	mg/L					
QC Type	Original Sample IO	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control	Upper Control	RPD (%)	RPD (imit (%)
FB-MS			0.1	98.2			85	115		
AEI.		2,0005								
tso	14644003		0.4	(80)		106.0	70	130	1.9	20
Cadmium				Units:	mg/L					
ас туре	Onemai Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate III. Recovery	Lawer Control Limit (%)	Upper Control	100 100	RPD Limit (%)
FB-445			0.1	110.0			85	115		
rec.		~0.000g								





Account #: 2040

Client: Basin Electric Power Cooperative

Chromium				Units:	mg/L					
QC Type	Original Sample (D)	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate N. Resovery	Lawer Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
FII-M5			0.1	110.0			85	Ths:		
в		<0.003								
MSD-	14544003		0.4	112.0		112.0	70	130	0.0	20
45D	14644003		0.4	112.0		112.0	70	130	(0.0)	20
Cobalt			70	Units:	mg/L	V				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Si-Recovery	Lawer Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-M5			0.1	110.0			85	115		
Act		-0.007								
69	14644003		0.4	111.0		110.0	70	130	0.9	20
ead				Units:	mg/L					
дс Туре	Original Sample ID	Blank Résult	Spiké Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	KPD (%)	RPD Limit (%)
FB-M5			0.1	99,4			85	115		
10		<0.0005								
150	14644003		0.4	106.0		105 0	70	110	1:0	wo -
Molybdenum				Units:	mg/L					
С Туре	Original Sample IIX	Blank Result	Spille Amount	Spike W. Recovery		Spike Duplicate Resovery	Lower Control	Upper Control	KPD (%)	RPD Limit (%)
EB-MS			0.1	112.0			85	115		
As .		<0.002								
150	14644003		.0.4	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	Lower Control Limit (%)	Lipper Control	APD (%)	RPD Limit (%)
FB MS			1.0	97.8		200001	89	115		
AG		-0.01								
460	14644003		D.A	106-0		100.0	70	CHO	7.0	-80
hallium				Units	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lawer Control Limit (%)	Limit (%)	HPD (96)	RPD Limit (%)
FII-M5			0.1	98.8			85	115		
16		-0.0005								
150	14684003		9.4	105/0		105.0	10	140	10	20
Antimony				Units:	mg/L					
OC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control	RPD (%)	RPD Limit (%)
PKD.	14109001		0.1	92,9		93.2	75	125	0.3	20





Account #: 2040

Client: Basin Electric Power Cooperative

Arsenic				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate N. Resovery	Lawer Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
PKD	14106001		0.1	90.1		88.2	75	J25	41	20
ex:	14750001		1.0	95.8			75	125		
Barium				Units:	mg/L					
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate & Recovery	Lawer Control	Lipper Control Limit (%)	HPD (%)	RPD Limit (%)
PKO	14106001		pt	89.8		R9.5	75	325	0.3	50
Pir	14750001		ů.i	95.4			75	125		
Seryllium				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lawer Control Limit (%)	Lipper Control	RPD (%)	RPD Limit (%)
PN	141060U1		0.1	94.2			75	125		
PWD	14106001		0.1	92.7		98.4	75	125	4.1	20
admium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate. % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PKD	14109001		0,1	97.6		92.3	75	125	0,4	20
Chromium				Units:	mg/L					
СТуре	Original Sample IO	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate M. Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PKD .	14106001		0.1	95.1		97.7	75	125	2.7	20
×	14750001		0.1	103.0			75	125		
obalt				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spile Amount	Spike % Recovery		Spike Duplicate Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Livvic (%)
PKD	14106001		1.0	96.0		96.8	75	125	0.8	20.
PK.	14750001		ñí	103.0			75	125		
ead				Units:	mg/L					
C Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spice Duplicate % Recovery	Lawer Control Limit (%)	Limit (%)	(M) D911	RPD Limit (%)
PKD	141060U1		0.1	89,4		88.9	75	325	II;5	50
HC	14750001		nt.	95.0			75	125		
Molybdenum				Units:	mg/L					
C Type	Original Sample (D)	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	(RPD (%)	RPD Limit (IS)
PKD	14106001		0.1	94.7		93.6	75	125	1/2	20
PK	14750001		0.1	97,2			75	125		
elenium				Units:	mg/L					
IC Type	Original Sample ID:	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate To Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
KD.	14105001		D.I.	84.7		9 2M	75	125	7.0	20





Account #: 2040

Client: Basin Electric Power Cooperative

Thallium				Units:	mg/L					
ОС Туре	Original Sample (D.	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate N. Resovery	Lawer Control Limit (%)	Lipper Control	RPD (%)	RPD Limit (%)
PKD	14106001		0.1	83.9		R1-5	75	325	0.1	20'
ex:	14750001		0.1	89.8			75	125		
				45.4						
Boron				Units:	mg/L					
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike %		Spike Duplicate % Recovery	Lawer Control	Upper Control	RPD (%)	RPD Limit (%)
FII-OE			D.A.	99.3			85	115		
Adis		-0.1								
tsa	14750001		0.4	98.3		105.0	75-	125	1.9	50
Calcium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	TEPD (%)	RPD Limit (%)
FB-MI			100	Recovery 109.0		% Recovery	Limit (%)	Limit (%)		
ta .		4								
UP	14705001								29	20.
ithium		Mark Park	Assessed to	Units:	mg/L	F-61 6 7 7 2		manage and	W00.771	nor a second
IC Type	Original Sample ID:	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-DE			0.4	103:0			85	115		
ro.		×0.04								
na	14710001		0.4	100.0		100.0	76	129	0.1	20.
Antimony				Units:	mg/L					
Q⊂ Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Jawer Control	Upper Control	RPD (%)	RPD Limit (51)
Fij-MS			0.1	Recovery 93.0		% Recovery	Limit (%)	120		
18		s.0.001								
45D	14750001		0.4	95.9		99.3	75	125	6.3	20
Arsenic	and the second	Mark Break	Total Control	Units:	mg/L	Waster Waterflatte	lamatera i	Description (BAD INI	popul (may her)
C Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Si-Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
FB-M5			0.1	92.1			80	120		
B-TC			0,1	101.0			80	120		
10		e0.002								
		4.44								
150.	14750001		0.4	94.6-		OR #	35-	125	4.9	90
Barium				Units:	mg/L					
2C Types	Original Sample (D	Blank Résult	5pike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control	RPD (%)	RPD Limit (%)
FB-M5			0.1	95.5			80	126		
ta.		<0.002								
		- AMANA								
600	14750001		0.6	99.5		98.4	25	125	ATT	90





Account #: 2040

Client: Basin Electric Power Cooperative

Cadmium	Original Sample (D)	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lawer Control	Upper Control	RPD (%)	RPD Limit (%)
PB-M5			0.1	Recovery 101.0		% Resovery	Limit (%) 80	Limit (%)		
EN		(0.0003								
45D	14750001		0.4	100.0		102.0	15	125	7.0	20'
	14.04.01					110-11				-
Chromium				Units:	mg/L					
ос Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Si Recovery	Lawer Control Limit (%)	Lipper Control Cimit (%)	RPD (96)	RPD Limit (%)
FB-MS			0.1	105,0			80	120		
4EL		>0.007								
ASD-	14750001		0.4	104.0		102.0	75	125	1.7	50
Cobalt				Units:	mg/L					
C Type	Original 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	27. 7	
		-70-00								
AS		≺0.001								
150	14750001		0.4	102.0		-100.0	75	125	0.0	20
ead	Date of Francis III	Blank Result	the state of the s	Units:	mg/L	Police Program	Lower Control	(Contra Contra)	WDD (W)	000 (0-0.00)
aC Type	Original Sample ID:	DIAME RESULT	Spille Amount	Recovery		Spike Duplicate III- Resovery	Limit (86)	Upper Control Umit (%)	KPD (%)	RPD Limit (%)
FB-MS			0.1	96.8			80	120		
Asi		<0,0005								
45D	14750001		0.4	101.0		101.0	75.	125	0.0	20
130	247.0000			102.0		101.0	**	10	0.0	
Molybdenum				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	5pill# Атошия	Spike is Recovery		Spike Duplicate Recovery	Liner Control Limit (%)	Limit (%)	APD (N)	RPD Limit (%)
FB MS			D.I	98.5			80	120		
Act		-0.002								
AKD	14750001		D.8.	96.2		97.3	75.	125	13.	-90
ielenium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lawer Control	Upper Control	RPD (%)	RPD Limit (%)
FB-M5			0,1	Recovery 91.9		% Recovery	Limit (%) 80	Limit (%).		
18.00				60			44	150		
16 TC			9.1	96.6			80	120.		
AB		i0.005								
(5D)	14750001		0.4	96.7		98.0	75	125	1/3	20
	- January									
Thallium				Units:	mg/L					
IC Type	Orininal Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate To Recovery	Lower Control Limit (%)	Upper Control Limit (%)	KPD (%)	RPD Limit (%)
FII-MS			0.1	92.0			80	120		
Ma		-:0.0005								



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

Thallium				Units: m	g/L				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Resovery	Lawer Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
VISD	14750001		0.4	96.4	96.4	75	325	0.3	20
Mercury				Units: m	g/L				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spire Deplicate Recovery	Lower Control	Upper Control Limit (%)	RPD (96)	RPD Limit (%)
FB			0.003	105.0		85	135		
nia an		-0.6002							
MSN	11691001		0,002	107.0	100.0	70	140	ėė	20
450	14644902		0,002	55.5	67.4	90	130	3,3	20
VSQ-	14750005		0.002	99.1	89.1	70	130	10.5	20
Fluoride				Units: m	g/L				
QC Type	Original Sample ID	Blank Résult	Spike Amount	Spike % Recovery	Spike Duplicate N. Recovery	Lower Control Limit (%)	Upper Control	KPD (%)	RPD Limit (%)
RM-F			319	98.8		83.8	222		
1640			0.5	104.0		90	310		
19.0			0.5	104.0		90	-110		
W. F		-(0,)							
Ne.		<0:1							
MSD-F	14750001		0,5	108.0	114.0	80	120	11	20
Total Dissolve	ed Solids			Units: m	g/L				
DC Type	Original Sample IDI	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate N. Recovery	Lawer Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
CRM			736	99.0		90.35	110.98		
MB		(10							





Account #: 2040 Client: Basin Electric Power Cooperative

	Bismarck, NE Phone: (701) 258-9 ee: (800) 279-6885						14							ige	·		_ of		
	BASIN ELECTRIC POWER COOP. Leland Olds Station 3901 HIGHWAY 200A STANTON, ND 58571					ntac	-	M	Hz	en mb	ber	ger	-		: t2	2 Kn	ger.	& bepla	7751 GDC. CON
					Pro	ject	Nun		Nur	nbe	r: o		10	ااد		ate Sul urchas	e Ord	der #:	23
	Sample Information	on			Ne	w					e Ty		Ne	حاا	_		4	752lele ·	e 04
	- Campio inicimadi	Sample Matrix	Filtered	YorN				3,					-	-				Analysi	•
Only Lab umber	Sample ID	PW- Potable Water GW- Groundwater WW- Wastewater SW- Surface Water S - Soil/Sludge O- Other	Date Sampled	Time Sampled	Untreated	Sterile	500 ml HNO3	1000 ml M2804H	250 ml H2SO4	1000 ml NaOH	Amber HCI	Amber Unpres.	VOC Vials HCI	Amber H2SO4	40 mi viais nzao4	Other	A	nalysis Rec	uired
901	MW-2017-10	GW	5.3.23	1345		0)	X	X								B	G	"CL"F	504
22	MW-2017-11	GW	5-3-23	1/40			X	X								5	· A	S. Ba	Be Ca
03	MW-2017-12	GW,	5 4 23	0837			X	X								Co	-1	p. Pb	Li. Ho
74	MW-2017-13	GW.	5-423	0918			X	X								M	1	Se, T	
105	Dup.	GW	5-3-23	1140			X	X						4	-	Ra	LON	226	× 228
					Н			-		_	_	-	-	-	+	T	D.	5	
					Н	-	-	-	-	-	Н	+	+	+	+	-			
					H			-	\dashv			+	+	+	+				
omment	s:							_	_			_							
	Transferred by:	Date:	Time:	Sample 0	cond.	itio	n: I			Rei	cejv	l ha	hv-		_	Date		Time:	Temp:
2.0 11	nium Express	5-5.23	Time;	Sumpie C	5110				(-			TO		5	Mayo		1605	4.8.6
	-//												- 3			-			TM920



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

Workorder: LOS CCR Wells (20725) **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:



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



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

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.

Analysis Results Comments

20725002 (Dup)

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



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

Analytical Results

 Lab ID:
 20725001
 Date Collected:
 07/12/2023 09:30
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 07/12/2023 15:00
 Collector:
 Client

Temp @ Receipt (C): 4.7 Received on Ice: Yes

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	30.4	mg/L	5	1	07/19/2023 11:23	07/19/2023 11:23	AMC	

Method: EPA 245.1

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury	<0.0002	mg/L	0.0002	1	07/18/2023 09:25	07/18/2023 11:44	MDE	

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.24	mg/L	0.1	1	07/12/2023 17:34	07/19/2023 09:35	SLZ	
Calcium	20.5	mg/L	1	1	07/12/2023 17:34	07/14/2023 12:32	SLZ	
Lithium	<0.02	mg/L	0.02	1	07/12/2023 17 [.] 34	07/26/2023 14·14	SLZ	

Method: EPA 6020B

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony	<0.001	mg/L	0.001	5	07/12/2023 17:34	07/13/2023 18:14	MDE	
Arsenic	<0.002	mg/L	0.002	5	07/12/2023 17:34	07/13/2023 18:14	MDE	
Barium	0.0481	mg/L	0.002	5	07/12/2023 17:34	07/13/2023 18:14	MDE	
Beryllium	<0.0005	mg/L	0.0005	5	07/12/2023 17:34	07/19/2023 11:44	MDE	
Cadmium	<0.0005	mg/L	0.0005	5	07/12/2023 17:34	07/13/2023 18:14	MDE	
Chromium	<0.002	mg/L	0.002	5	07/12/2023 17:34	07/13/2023 18:14	MDE	
Cobalt	<0.002	mg/L	0.002	5	07/12/2023 17:34	07/13/2023 18:14	MDE	
Lead	<0.0005	mg/L	0.0005	5	07/12/2023 17:34	07/13/2023 18:14	MDE	
Molybdenum	0.0091	mg/L	0.002	5	07/12/2023 17:34	07/13/2023 18:14	MDE	
Selenium	<0.005	mg/L	0.005	5	07/12/2023 17:34	07/13/2023 18:14	MDE	
Thallium	<0.0005	mg/L	0.0005	5	07/12/2023 17:34	07/13/2023 18:14	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.

Report Date: Wednesday, August 2, 2023 12:09:17 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 20725001
 Date Collected:
 07/12/2023 09:30
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 07/12/2023 15:00
 Collector:
 Client

Temp @ Receipt (C): 4.7 Received on Ice: Yes

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	39.1	mg/L	2.0	1	07/18/2023 10·25	07/18/2023 10·25	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.61	mg/L	0.1	1	07/13/2023 11·29	07/13/2023 11·29	RAA	



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

Analytical Results

 Lab ID:
 20725002
 Date Collected:
 07/12/2023 09:30
 Matrix:
 Groundwater

 Sample ID:
 Dup
 Date Received:
 07/12/2023 15:00
 Collector:
 Client

Temp @ Receipt (C): 4.7 Received on Ice: Yes

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	29.7	mg/L	5	1	07/19/2023 11:24	07/19/2023 11:24	AMC	*

Method: EPA 245.1

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury	<0.0002	mg/L	0.0002	1	07/18/2023 09:25	07/18/2023 11:44	MDE	

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.23	mg/L	0.1	1	07/12/2023 17:34	07/19/2023 09:36	SLZ	
Calcium	19.8	mg/L	1	1	07/12/2023 17:34	07/14/2023 12:36	SLZ	
Lithium	<0.02	mg/L	0.02	1	07/12/2023 17:34	07/26/2023 14:16	SLZ	

Method: EPA 6020B

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony	<0.001	mg/L	0.001	5	07/12/2023 17:34	07/13/2023 18:19	MDE	
Arsenic	<0.002	mg/L	0.002	5	07/12/2023 17:34	07/13/2023 18:19	MDE	
Barium	0.0466	mg/L	0.002	5	07/12/2023 17:34	07/13/2023 18:19	MDE	
Beryllium	<0.0005	mg/L	0.0005	5	07/12/2023 17:34	07/19/2023 11:47	MDE	
Cadmium	<0.0005	mg/L	0.0005	5	07/12/2023 17:34	07/13/2023 18:19	MDE	
Chromium	<0.002	mg/L	0.002	5	07/12/2023 17:34	07/13/2023 18:19	MDE	
Cobalt	<0.002	mg/L	0.002	5	07/12/2023 17:34	07/13/2023 18:19	MDE	
Lead	<0.0005	mg/L	0.0005	5	07/12/2023 17:34	07/13/2023 18:19	MDE	
Molybdenum	0.0092	mg/L	0.002	5	07/12/2023 17:34	07/13/2023 18:19	MDE	
Selenium	<0.005	mg/L	0.005	5	07/12/2023 17:34	07/13/2023 18:19	MDE	
Thallium	<0.0005	mg/L	0.0005	5	07/12/2023 17:34	07/13/2023 18:19	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.

Report Date: Wednesday, August 2, 2023 12:09:17 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 20725002
 Date Collected:
 07/12/2023 09:30
 Matrix:
 Groundwater

 Sample ID:
 Dup
 Date Received:
 07/12/2023 15:00
 Collector:
 Client

Temp @ Receipt (C): 4.7 Received on Ice: Yes

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	39.2	mg/L	2.0	1	07/18/2023 10:26	07/18/2023 10:26	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.62	mg/L	0.1	1	07/13/2023 11·49	07/13/2023 11·49	RAA	

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.

Report Date: Wednesday, August 2, 2023 12:09:17 PM





Effective Date: 26 Aug 2022

Account #: 2040 Client: Basin Electric Power Cooperative

	2616 East Broadway Avenue Bismarck, ND 58501 Phone: (701) 258-9720 Toll Free: (800) 279-6885 Fax: (701) 258-9724				Po	wei	r Coope	Chain of Custody Page 1 of 1			
Company Name ar	nd Address <u>Basin Electric Pow</u> <u>Leland Olds St</u> 3901 Highway	ation	Account #	2040 Mark Dihl	e		Phone :	701-745-7238 701-557-5488 Is e@bepc.com_aknutson@bepc.com y.hurshman@aecom.com lach@aecom.com Date Submitted			
Billing Address (in	Stanton, ND 5 ndicate if different from abo	8571	Name of S Myles Sch Quote Nu	Sampler nettler			jermey.l jason.la				
			Project Na	ame/Numb		ells		クフーロスー みる Purchase Order <u>79</u>			
Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A		Analysis Re	quired		
001	MW-2016-12	GW	7/12/2023	930		100	B, Ca, Cl, F	F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co, b, Se, Tl, Ra226, Ra228 F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,			
002	Dup	GW	7/12/2023	930				Se, TI, Ra226, R		GI, GO,FB,	
Comments:											
Transfe 1. 2.	erred by	Date Time	Received	by	12	Dat		e Temp	ROI Y/N	Therm. #	

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

See above for page number

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.

Report Date: Wednesday, August 2, 2023 12:09:17 PM

Form # 80-910005-1



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

Workorder: LOS CCR Wells (22208) **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:



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

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.

Report Date: Friday, August 11, 2023 3:01:03 PM



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

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.

Analysis Results Comments

22208001 (MW-2016-12)

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



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

Analytical Results

 Lab ID:
 22208001
 Date Collected:
 07/26/2023 08:15
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 07/27/2023 15:09
 Collector:
 Client

Temp @ Receipt (C): 5.3

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	24.8	mg/L	5	1	08/02/2023 14·43	08/02/2023 14·43	AMC	

Method: EPA 245.1

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury	<0.0002	mg/L	0.0002	1	07/31/2023	08/02/2023 08:31	MDE	_

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.22	mg/L	0.1	1	07/28/2023 17:18	08/04/2023 12:16	SLZ	
Calcium	17.4	mg/L	1	1	07/28/2023 17:18	08/01/2023 10:51	SLZ	
Lithium	<0.02	mg/L	0.02	1	07/28/2023 17:18	08/04/2023 15:07	SLZ	

Method: EPA 6020B

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony	<0.001	mg/L	0.001	5	07/28/2023 17:18	08/07/2023 16:49	MDE	
Arsenic	<0.002	mg/L	0.002	5	07/28/2023 17:18	08/07/2023 16:49	MDE	
Barium	0.0467	mg/L	0.005	5	07/28/2023 17:18	08/07/2023 16:49	MDE	
Beryllium	<0.0005	mg/L	0.0005	5	07/28/2023 17:18	08/08/2023 10:03	MDE	
Cadmium	<0.0005	mg/L	0.0005	5	07/28/2023 17:18	08/07/2023 16:49	MDE	
Chromium	<0.002	mg/L	0.002	5	07/28/2023 17:18	08/07/2023 16:49	MDE	
Cobalt	<0.002	mg/L	0.002	5	07/28/2023 17:18	08/07/2023 16:49	MDE	
Lead	<0.0005	mg/L	0.0005	5	07/28/2023 17:18	08/07/2023 16:49	MDE	
Molybdenum	0.0088	mg/L	0.002	5	07/28/2023 17:18	08/07/2023 16:49	MDE	
Selenium	<0.005	mg/L	0.005	5	07/28/2023 17:18	08/07/2023 16:49	MDE	
Thallium	<0.0005	mg/L	0.0005	5	07/28/2023 17:18	08/07/2023 16:49	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.

Report Date: Friday, August 11, 2023 3:01:03 PM

Page 3 of 13





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 22208001
 Date Collected:
 07/26/2023 08:15
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 07/27/2023 15:09
 Collector:
 Client

Temp @ Receipt (C): 5.3

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	42.6	mg/L	2.0	1	08/01/2023 13:53	08/01/2023 13:53	AMC	*

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.62	mg/L	0.1	1	07/31/2023	07/31/2023	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1460	mg/L	10	1	07/28/2023 14:27	07/28/2023 14:27	RAA	

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.

Report Date: Friday, August 11, 2023 3:01:03 PM

Page 4 of 13





Account #: 2040 Client: Basin Electric Power Cooperative

C Result	s Summary						WO #:	222	208
Sulfate QC Type	Oddad Sanda (S	Blank Result	Toka beresid	Units: 1	ng/L	1 Same Comme	Honor Control	APD (%)	RPD Limit (%)
LFB	Original Sample ID	ausin HESUII.	Spike Amount	Recovery 89.2	Spike Duplicate % Recovery	Lower Control Limit (%)	Limit (%)	New (30)	NP LIMIT (26)
180			100	85.3		85	115		
FB			100	94.9		85	115		
10			100	100.0		85	115		
FR			100	not n		85	215		
ři.			100	0.501		85	115		
où.			100	:101-0		85	115		
21)			100	92.9		85	115		
rg.			100	93.5		85	115		
ма		15							
MR		13							
wa.		(5)							
wig		d							
MB		0							
Will		-5							
AB.		O.							
мв		d							
AB.		4							
MS/MSD	22177002		500	92.2	92.2	85	115	0,0	30
MS/MSD	22177013		1000	94.0	93.0	85	115	8.5	20
MSVMSD	22179004		500	95.6	95.8	85	115	0.2	20
MS/MSD	22209001		100	88.5	82.5	85	115	0,9	20
WS/MSD	72203017		100	69.4	68.9	RS	115	0.0	30-
MS/MSD	22327002		100	88.0	29.8	RS	115	1.8	30
MS/MSD	22541001		100	82.0	83.6	RS	115	1.6	20
MS/MSD	22541003		100	80.8	81.5	85	iis	0.7	20
Chloride				Units:	mg/L				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate N Recovery	Lower Control Limit (%)	Upper Control	RPD (%)	RPD Limit (%)





Account #: 2040 Clier

Client: Basin Electric Power Cooperative

Chloride QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	mg/L	ipike Duplicate 6 Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
Fel			30	95.1			90	110		
rii			30	90.4			90	110		
110			30	93.2			50	iio		
FB			30	94.0			90	110		
FD			30	95.1			-90	110		
FO			30	95.3			90	220		
			30	97.4			90	110		
10			30	97.4			90	110		
19			30	94.5			40.	110		
			30	34.2			-	-10		
AII)		<2.0								
AB-		<2.0								
As		<2.0								
AR		<2.0								
Ais		<2.0								
AB		40								
Alls.		<2.0								
AR		<2.0								
dis.		<2.0								
AB.		Ø.0								
MS/M/SD	21916002		30	1.68	8	4.6	60	120	0.3	20-
MS/MSD	22177006		30	88.1	8	9.6	80	120	0.3	20
MS/MSO	22202003		30	91.9	9	1.4	80	120	0.0	20
AS/AASD	22206003		30	867		30	80	120	0.0	20
MIVMSD	22708001		30	me	-1	29.4	190	120	0.9	20-
Boron				Units:	mg/L		_			
ос туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		pike Duplicate Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-OE			0.4	97.0			85	115		
16-01			0.4	981			22	iiš		
AB.		<0.1								
da		50.1								





Account #: 2040

Client: Basin Electric Power Cooperative

Boron				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate ** Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
MS/MSD	22206001		0.4	90.0		89.5	70	130	0.4	20
MS/MSD	22208001		0.4	87.9		941	70	130	4.3	20
Calcium				Units:	mg/L					
ОС Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	-	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	MED (AP)	RPD Lines (16)
LD-548			100	itte			85	115		
10.56			100	1180:			85	X15		
48		10								
40		-81								
NUP	22151001								8.8	20
	243404								A1D	100
SUP	72203010								3.3	ZD=
DUP	22208001								ži.	20
Lithium				Units:	mg/L	-				
дс туріг	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPG (%)	RPD Limit (%)
HI-DE			0.4	104.0			85	115		
FB-OE			0.0	107.0			**	115		
/B		s0.04								
AE		×0.64								
ASVANIA.	Z2206001		0.4	99.0		30.6	70.	1100	33	ZD-
ns/msd	22200001		0.4	102.0		105.0	70	130	22	20
Calcium				Units:	mn/l					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	SPD Limit (%)
D5/PDSD	21916003		100	Recovery 108.0		% Recovery	Limit (%) 75	Limit (%) 125	0.6	. 20
DS/PDSD.	22177002		100 1	106.0		106.0	75	125	0.4	20
DS/PDSD	22177016		500	96 g		101.0	75	125	10	20
05/PEIS0	22202007		100	1110		110 0	75	125	16	20
OS/POSO	22209009		100	105.0		105.0	75	125	0.2	20
05/P050	22250001		100	108.0		108.0	75	125	0.2	alo.
Antimony				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Ammunt	Spike M		Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
AS/MSD	22102001		0.4	105.0		% Recovery 105.0	Limit (%) 70	Limit (%) 130	0.2	26
Arsenic				Units:	mg/L					
OC Type	Original Sample ID	Blank Result	Spike Amount	Spike M. Recovery		Spile Duplicate Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	SPD Limit (%)



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

Barium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (96)
45/M5D	22102001		0.4	101.0		100.0	70	130	12	.20
Beryllium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spice Dupicate S Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (96)
IS/MSD:	22102001		0.4	102.0		102.0	70	130	0.5	-50
admium.				Units:	mg/L					
IC Type	Original Sample ID	Blank Hesult	Spike Amount	Spike in Recovery		Spike Duplicate % Recovery	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
s/Msu	22102001		0.4	104.0		106.0	70	130	2.1	20
hromium				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate & Recovery	Lower Control	Lipper Control Limit (%)	HPD (%)	RPD Limit (%)
S/MSD	22102001		0.4	106.0		306.0	70.	130	9.2	2b-
Cobalt				Units:	mg/L					
IC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
S/MSD	22102001		0.4	105-0		305.0	70	130	0.0	20
ead				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate W Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
S/MSD	22107001		n'u	99.2		97.3	All	130	2.0	30
Molybdenum				Units:	mg/L					
СТуре	Original Sample 10	Blank Result.	Spike Amount	Spike W. Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
s/MsD	22102001		0.4	111.0		134.0	70	130	28	-20
elenium				Units:	mg/L					
СТуре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
S/MSD	22102001		0,4	104.0		98.4	70.	130	5,7	50
hallium				Units:	mg/L					
С.Туре	Original Sample ID	Blank Result	Spike Amount:	Spike W Recovery		Spike Duplicate	Lower Control Limit (%)	Lipper Control Limit (%)	KPD (%)	RPD Limit (%)
IS/MSD	22102061		0.4	92.4		% Recovery 91.4	70 .	130	ir	20
intimony				Units:	mg/L					
СТуре	Original Sample ID	Blank Result.	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Umit (%)	RPD (%)	RPD Limit (96)
W.	72208001		0.1	109.0		% Recovery	75 75	125		
rsenic				Units:	mg/L					
СТурп	Original Sample III	Blank Result	Spike Amount	Spike %	- India	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
90	22208001		0.3	Recovery 1,12,0		* Recovery	1(mit (%) 75	Limit (%) 125		
arium				Units:	mg/L					
C Type	Original Sample (D	Blank Result	Spike Amount	Spite %	-	Soike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
N.	22208001		0.1	97.6		% Recovery	15 (%)	Limit (%) 125		
eryllium				Units:	mg/L					
СТуре	Original Sample ID	Blank Result	Spike Amount	Spike N		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
				Recovery		% Recovery	Limit (%)	Limit (%)		





Account #: 2040

Client: Basin Electric Power Cooperative

Cadmium	A III I III I	Ac. 400 To.	Maria Comment	Units:	mg/L	Lakin was	Company and	and the form	install to Co	her
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike 16 Recovery		Spike Duplicate ** Recovery	Lower Control Limit (16)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
DK.	22208001		0.1	95.3			75	125		
Chromium				Units:	mg/L					
дс тури	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (96)
PK	22208001		0.1	Recovery 103 0	_	% Recovery	Limit (%)	Limit (%) 125		V-7-10-11
-	22200001		0.1	3,09,0			1.0	123		
Cobalt				Units:	mg/L	_				
C Type	Original Sample ID	Blank Result	Spike Amount	Spike in Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PX.	22209001		0.1	103.0		is incorning	75	125		
ead				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike N	mg/c	Spike Duplicate	Lower Control	Lipper Control	HPD (%)	RPD Limit (%)
	100/11/10	park nemi		Recovery		% Recovery	Limit (%)	Limit (%)	nice (m)	new tame from
FX	22208001		0.1	84.9			75	125		
Molybdenum				Units:	mg/L					
OC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK	22208001		0.1	109 0		(a necovery	75	125		
Calanium				Units:	me/l					
Selenium IC Type	Original Sample (D	Blank Result	Spike Amount	Units: Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
	B - 1	prairie desart		Recovery	4	% Recovery	Limit (%)	Limit (%)	W-15/M	Valy frame fact
P#:	22200001		0.1	105.0			75	125		
Thallium				Units:	mg/L	-				
C Type	Original Sample 10	Blank Result.	Spike Amount	Spike W. Recovery		Spike Duplicate	Lower Control	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
PK.	22208001		0.1	88.4		* necovery	75	125		
Antimony				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike %	ingre	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-M5	0.430403		0.1	Recovery		% Recovery	Limit (%)	120 120	100.00	
19-705			0,1	104.0			30	120		
IB-MS			0.3	99.5			30	120		
10		< 0.001								
10		-(0.001								
rs/MSO	72203009		0.4	106.0		102.0	75	125	4.1	20
NS/MSD	22208001		0.4	101.0		105.0	75	125	1.6	-20
Arsenic				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Ammunt	Spike W		Spike Duplicate	Lower Control	Lipper Control	HPD (%)	RPD Limit (90)
F6-MS			0.1	Recovery 102 g		% Recovery	Limit (%)	Limit (%) 120		
			01	102.0			90	120		
EFLANS.			0.1	122.0			-	140		
FB-MS-										
FB-MS-		<0.002								
		<0.002								





Account #: 2040 C

Client: Basin Electric Power Cooperative

Arsenic				Units:	mg/L					
QC Type	Original Sample 10	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate & Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
AS/M5D	22208001		0.4	102.0		105.0	75	125	41	20
Barium				Units:	mg/L					
QC Typer	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate S Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Lunut (III)
10-145			0.1	26.9			80	120		
TI-MS			0.1	101.0			90	120		
10		<0.005								
is		<0.005								
MS/AMBIO	22203009		0.4	304.0		99.0	a	125	5.0	ZD-
NS/MSD	22209001		0.4	89.6		92.1	79	125	2.4	20
Beryllium	Lavore Ver			Units:	mg/L	00 0 V			63.5	142000
(С Туре	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	104.0			,80	120		
FB-MS			0.1	96.8			80	120		
45		<0.0005								
in .		<0.0005								
N/MSD	22209009		0.4	:09.0		105.0	75	125	4.0	2/5
45/MSD	22200001		U.A	99.6		102.0	75	125	3.0	20
Cadmium				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Ammont	Spile W		Spike Duplicate	Lower Control	Lipper Control	HPD (NI)	RPD Limit (%)
				Recovery		% Recovery	Limit (%)	Limit (%)	11.5.000	3,74
FB-MS			0.1	107.0			180	120		
FB-AAS.			0.1	107.0			80	120		
la.		<0.0005								
(B		<0.0005								
HS/MSDI	22203009		0.4	101.0		99.4	75	125	13	50
es/iwso	22209001		0.8	99.5		101.0	75	125	35.	20
Chromium				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-M5			0,1	109.0			30	320		
FB-MS			0.1	107.0			80	120		
10		-0.002								
10		<0.002								





Account #: 2040

Client: Basin Electric Power Cooperative

Chromium QC Type	Original Sample 10	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
MS/MSD	22208001		0.4	Recovery 100.0		% Recovery 105.0	Limit (%) 75	Limit (%) 125	41	20
				1/						
Cobalt QC Type	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Spike Dupkcate	Lower Control	Upper Control	RPG (%)	RPD Limit (%)
70-145			0.1	Recovery 111.0		% Recovery	Limit (%)	Limit (%) 120	negating.	0.550,000
TRANS			0.1	7(00)0			90	320		
Ais-		<0.007								
AEI.		<0.002								
ts/Athix	22203009		0.4	108.0		105.0	ri.	129	33	ZD-
AS/MSD	22209001		0.4	102.0		1,05,0:	76	125	12.7	20
Lead		7.7		Units:	mg/L				7	
ос Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FE-M5			0.1	91.8			.80	120		
F6-M5			0.1	96.7.			80	120		
10		<0.0005								
la.		<0.0005								
NA/ANSD	22208009		0.4	104.0		101.0	75	125	2.4	26
AS/MSD	22208001		0.4	85.2		87.5	75	125	2.6	20
Molybdenum				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Ammont	Spile % Recovery		Spike Duplicate N Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	107.0		3 3040703	30 Thur (50)	120		
FB-AAS.			0.1	109.0			80	120		
AEI,		<0.002								
AB.		< 0.002								
AS/MSD	22293009		0.4	1090		105.0	75	125	4	50
AS/NVSD	222690001		0.4	102.0		104.0	75	125	2.1	20
Selenium OC Type	Original Sample (D	Blank Result	Spike Amount	Units: Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-M5	organi semple (D	Demin ACHUIT	0.1	Recovery 98.2	1	is Recovery	Limit (%)	Limit (%)	Mr to (NI)	PATRIME (#)
FISHMS			0.2	100.0			80	120		
AG		<0.005								
		W. 4120								
40		<0.005								





Account #: 2040

Client: Basin Electric Power Cooperative

Selenium				Units:	mg/L					
QC Туре	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate & Recovery	Lower Control Limit (IS)	Limit (%)	RPD (%)	RPD Limit (%)
AS/MSD	22200001		0.4	104.0		108.0	75	125	14	20
Thallium				Units:	mg/L					
дс тури	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (95)
F0-M5			0.1	98.0			80	120		
IB-MS			0.1	95.9			100	120		
Ala		<0.0005								
ÁB		<0.0005								
MS/MSID	22203009		0.4	97.9		34.2	ra.	425	3.0	ZD
ns/msb	22209001		0,4	89.5		92.2	16	125	3,0	20
Mercury				Units:	mg/L					
QC Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spile Duplicate S Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
Fil			0.002	114.0			85	115		
RB		₹0.0002								
HS/MSD	22206003		0.002	ille		102.0	70	330y	00	50
tsymsu	2220MR/1		0.002	104.0		309.0	70	230	0.0	20
luoride				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 (%)
RM-F			3.39	1010			88.8	111		
PB-F			0.5	96.0			90	110		
16-7			0.5	94.0			90	110		
ra-F			0.5	98.0			90	110		
AB F		<0.1								
AR F		<0.1								
AS F		:0.1								
AS/MSD-4	22178002		0.5	112.0		116-0	90	120	3.5	20
Total Dissolve	d Solids			Units:	mg/L					
ac Type	Original Sample (D	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
RM			736	95.0		# Necovery	Hmit (%) 90,35	Limit (%)		
AB.		<16								



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**

MVI	2616 East B Bismarck, N Phone: (701) 258	anni de la company de la compa	tories, Inc.	Basin WO: 2	Electric 22208	Po	wer		Chain o	1_ of_	200
Toll Free	e: (800) 279-6885	Fax: (701) 258-9724		1100110-110	118 11810 11811 W		111 188		Work Order # Lab Use Only	‡	
Company N	lame and Address	Floatric Power Coop		Account #		_		Phone		704 557 5	400
	Lel	and Olds Station		Contact	2040 Mark Dihl	e		Emails mdihle@	701-745-7238 @bepc.com akn		
				Name of S				jermey.l	hurshman@aeco		
Jilling Add	ress (indicate if differer	Fax: (701) 258-9724 SS Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571 different from above) Sample ID		Myles Sch				jason.la	ch@aecom.com		
				Quote Nu	mber				Date Submitted		
				Project Na	ame/Numb		ells		Purchase Orde	r# 90708-04	
Lab Use Only Lab	s	ample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	Y/N		Analysis Re	quired	
001	MV	N-2016-12	GW	7/26/2023	815				, SO ₄ , Sb, As, B Se, Tl, Ra226, R		Cr, Co,Pb,
							7				
Comments	:										
	Transferred by	Date	Time	Received	by		Date			ROI	Therm. #
1.			16	whether	st_	2	1Jul	1509	55°C	YIM	7m920

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

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



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

Workorder: LOS CCR Wells (28209) **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:



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.

Report Date: Thursday, October 19, 2023 11:13:05 AM





Account #: 2040 Client: Basin Electric Power Cooperative

Workorder Summary



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**

Analytical Results

Lab ID: 28209001 LOS Landfill MW Sample ID:

2016-12

Date Collected: Date Received: 09/14/2023 08:00 09/14/2023 16:12

Matrix: Collector:

Groundwater

Client

Temp @ Receipt (C): Received on Ice: 5.4

Yes Results **Parameter** Units **RDL** DF **Prepared** Analyzed Qual By

Method: ASTM D516-16

Parameter Units **RDL** Results DF Prepared Analyzed Ву Qual 09/20/2023 09/20/2023 20.0 5 Sulfate mg/L 1 AMC 10:53 10:53

Method: EPA 245.1

Parameter Units **RDL** DF Results Prepared Analyzed By Qual 09/19/2023 09/20/2023 Mercury < 0.0002 0.0002 MDE mg/L 1 10:05 15:42

Method: EPA 6010D

Parameter Results Units **RDL** DF Prepared Analyzed Qual By 09/14/2023 09/26/2023 Boron 0.25 mg/L 0.1 1 MDE 16:51 10:12 09/14/2023 09/21/2023 Calcium 15.1 mg/L 1 SLZ 16:51 13:37 09/14/2023 09/28/2023 Lithium 0.0223 mg/L 0.02 1 MDE 16:51 09:55

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 14:53	MDE	
Arsenic	<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 14:53	MDE	
Barium	0.0537	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 14:53	MDE	
Beryllium	<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/20/2023 11:19	MDE	
Cadmium	<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/19/2023 14:53	MDE	
Chromium	0.0025	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 14:53	MDE	
Cobalt	<0.002	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 14:53	MDE	
Lead	0.0010	mg/L	0.0005	5	09/14/2023 16:51	09/19/2023 14:53	MDE	
Molybdenum	0.0087	mg/L	0.002	5	09/14/2023 16:51	09/19/2023 14:53	MDE	
Selenium	<0.005	mg/L	0.005	5	09/14/2023 16:51	09/19/2023 14:53	MDE	
Thallium	<0.0005	mg/L	0.0005	5	09/14/2023 16:51	09/20/2023 11:19	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.

Report Date: Thursday, October 19, 2023 11:13:05 AM

Page 3 of 14



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



Matrix:

Groundwater

Client

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

Analytical Results

Date Collected: Lab ID: 28209001 09/14/2023 08:00 LOS Landfill MW Sample ID: Date Received: 09/14/2023 16:12 Collector:

2016-12

Temp @ Receipt (C): Received on Ice: 5.4 Yes

Results **Parameter** Units **RDL** DF **Prepared** Analyzed Qual By

Method: SM4500-CI-E 2011

Parameter Units **RDL** DF Results Prepared Analyzed Ву Qual 09/19/2023 09/19/2023 43.2 Chloride mg/L 2.0 1 AMC 10:52 10:52

Method: SM4500-F-C-2011

Parameter Units **RDL** DF Results Prepared Analyzed By Qual 09/15/2023 09/15/2023 Fluoride 0.66 0.1 1 RAA mg/L 20:22 20:22

Method: USGS I-1750-85

Parameter Results Units **RDL** DF Prepared Analyzed Qual By 09/15/2023 09/15/2023 **Total Dissolved Solids** 1480 mg/L 10 1 CMG 12:42 12:42

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.

Report Date: Thursday, October 19, 2023 11:13:05 AM

Page 4 of 14



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

C Kesuli	ts Summary						WO #:	282	.09
Sulfate				Units: mg/l					
QC Type	Original Sample ID	Blank Result.	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	APD (%)	RPD Limit (16)
FB			100	93.9		BS	115		
16			100	96.3		85	115		
FB.			100	87.5		85	115		
10			100	91.6		85	115		
FIL			100	91.1		85	115		
FB			100	46.1		85	115		
rit.			100	:100.0		85	115		
FIL			100	100.0		85	115		
hii i			100	95.0		85	115		
0		15							
ia.		3							
la		15							
ip.		d							
48		3							
46		45							
48		3							
46		d							
48		4							
		9							
IS/MSD	27999010		4000	87.4	87.9	85	115	0.2	20
MS/MS71	28070003		500	KF 7.	88.2	85	115	0.3	28)
ns/MSD	28072001		500	92.0	93.8	81	115	0.9	20
ns/MsD	28072011		500	86.1	92.6	85	115	1.7	20
45/MSD	78215007		100	79.3	79.4	RS	115	0.1	20
45/M5D	28216004		1000	84.8	83.9	RS	115	0.6	30
IS/MSD	28433007		500	86.3	86.6	RS	115	0.4	20-
HS/MSD	28433003		500	101.5	101-1	85	115	0.7	20
Chloride				Units: mg/l					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike W	Spike Duplicate 'N Recovery	Lower Control Limit (%)	Upper Control	RPD (%)	RPD Limit (K)





Account #: 2040

Client: Basin Electric Power Cooperative

Chloride				Units: mg	/L				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery	Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
Feli			301	97.4	277777	90	110		
ra			90	96.9		90	110		
10			80	95.5		40	iio		
FB			90	96.3		90	110		
10			30	96.8		90	330		
FB.			90	96.3		90	230		
riv .			30	96.5		100	110		
MO		<2.0							
ND		×2.0							
AG.		<2.0							
		<20							
An									
As,		<2.0							
AIR		<2.0							
All		<2.0							
All		20							
IS/MSD	28070002		90	88.9	88,9	80	120	0.0	30
AS/MSD	28072001		30	917	94.3	180	120	0.4	20
to to ton	man for a		46		les.		176		
AS/MSD	28215004		30	86.8	85.9	30	120	0.3	20
AS/MSD	28354001		90	97.0	96.4	30	120	0.0	30
Calcium				Units: mg	/L				
ac Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
P8-MI			100	112.0	ii iiisaanij	MS	115		
FBANI			100	112.0		65	115		
Aŭ,		:6\							
All		-80							
	111111							ii.	
MP.	28052001							42	20
WP.	28070005							1.9	20
NIP.	28072012							òi	20
AUP.	28075002								20



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

Boron	14004077	4.000	War in the	Units:	mg/L	Late Water	and the same of th	and the trace	GO GV	Ave. William
1¢ Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery		Spike Duplicate Secovery	Lower Control Limit (16)	Limit (%)	RPD (%)	RPD Limit (%)
05/P050	28580005		3	96.0		95.2	75	125	0.3	.20
Calcium				Units:	mg/L					
C Typir	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (III)
DS/P050	27649002		100	102.0		102.0	75	125	0.1	-50
DS/PTISD	27844003		100	Min		310.0	75	125	9.7	20
DS/POSO	78070004		100	102.0		110.0	76	125	1.6	20
D5/PD5D	28072001		100	(05,0)11.0	75	125	11	QD.
D5/PD5D	28072012		100	108.0		112.0	75	125	3.0	25
D5/PDSD	28215000		100	:102.0		104.0	75	125	0.0	20
DS/PDSO	78216007		100	101.0		398. R	75	125	1.1	20
Antimony				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike %	mg/c	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
W/SPKD	28072001		0.1	Recovery 97.2		% Recovery 99.1	Limit (%) 75	Limit (%) 125	1.9	20
				West of the	-					
rsenic	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
IC Type FK/SPKD	28072001	BARRIN FRESUR	0.1	Recovery 91.2		% Recovery	Limit (%)	Limit (%)	1.0	20
N/A/NO	23072302		**	72.5		79-0-	7.0	140		40.
arium	- Complete Complete		Cary Harri	Units:	mg/L	No. more	W 0		500	
IC Type	Original Sample ID 28072001	Blank Result	5cilie Amazint	Spike M Recovery 80.5		Spike Duplicate in Recovery 78-7	Lower Control Limit (M)	Limit (%)	RPD (%)	RPD Limit (N)
N/SPEU	28072001		0.1	00.3		784	4.0	123	1.8	20
Seryllium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Recovery	Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK/SPKD	28072001		0.1	107.0		102.0	75	125	4.0	20
Cadmium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Splike Amount	Spike is Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	KPD (%)	RPD Limit (%)
FN/SPND	28072001		0.3	87.7		87.8	79	125	0.1	50
hromium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Williams	Lower Control Limit (N)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FK/SFKD	28072001		0.1	99.2		97.3	75	125	1.2	20-
Cobalt		5 7		Units:	mg/L					
кс Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spile Duplicate % Recovery	Lower Control Limit (%)	Limit (%)	R2D (%)	RPD Llimit (96)
PK/SPKD	28072001		0.1	97.1		94.7	75	125	2.4	20
				34.70.0	200.00					
ead				Units:	mg/L					





Account #: 2040

Client: Basin Electric Power Cooperative

Molybdenum				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
SPK/SPKD	28072001		0.1	94.9		96.3	75	125	1.7	20
Selenium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
SPK/SPKO	28072001		0.1	Recovery 89.0		% Recovery 86.0	Limit (%) 75	Limit (%) 125	3,4	20
T 10.				Webs						
Thallium QC Type	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
	1	Bratik Heault	100000	Recovery		% Recovery	Limit (%)	Limit (%)		
PK/SPKD	28072001		0.1	16.7		86.0	75	125	0.8	20
Boron				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike til Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Limit (%)	HPD (%)	RPD Limit (%)
FRIGE			0.4	102.0			®S .	115		
16-01			0.4	107.0			ß	115		
MIN		80.1								
MB .		<0.1								
MS/MSII	28070001		0.4	96.5		90 9	75	125	1.8	altr
AS/MSD	28072001		0.0	84.4		84 8	75	125	0,0	10
vis/MSD	28072004		0.4	95.7		94.9	76.	125	0.2	20
AS/MSD	28072005		0.4	80.3		77.5	7%	125	0.5	:20
AS/MSD	28072011		0.4	101.0		95.2	75	125	1.9	20
Lithlum				Units:	mg/L	-				
оступе	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control	Lipper Control Limit (%)	RPD (%)	RPD Limit (96)
FB-OE			0.4	104.0			85	115		
FB-OL			0.4	105.6			85	115		
Ag		r0.04								
AB		<0.04								
AS/MSD	28070001		0.4	96.0		962	75	125	2.2	20
AS/MSD	28072004		0.4	94.8		92.6	75	125	1,7	20
AS/MSD	28072005		0.4	97.0		90.2	75.	125	1.2	20
AS/MSD	28072013		0,4	96.8		96.8	75	125	0.0	20
	260128.4		1997	44.0			Te.	-	0,0	3.5
Antimony	Even Day of the	I dans	134.00	Units:	mg/L	Gw X a -	In collection	W11 12 15 15	Garage .	Kan or store
QC Type	Original Sample ID	Blank Result	Spike Ammont	Spike W Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
Ĵ-BI-MS			0.1	102.0			.80	120		
FB-AAS			01	104.6			60	126		





Account #: 2040 Client: Basin Electric Power Cooperative

Antimony QC Type	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
Ma Whe	or Marie Semble (A)	<0.001	-spens remarks	Recovery		% Recovery	Limit (%)	Limit (%)	6.8436	and Came And
wa		~0.001								
MS/MSD	28070001		0.4	101.0		102.0	75	125	1.2	20
MS/MSD	28072004		0.4	1010		1000	75	125	2.7	20
MS/MSD	28072005		0.4	86.8		67.3	75	125	0.9	20
VIS/MSD	28072011		0,4	103.0		102.0	75	125	1.5	25
Arsenic				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (N)	Lipper Control Limit (N)	RPD (%)	RPD Limit (%)
FII-MS			0.1	97.2			80	120		
PI-MS			0.1	57.4			80	120		
иш		×0.002								
Aij.		<0.002								
AS/NASID	28070001		0.4	95.7		97.4	75	125	15	20
AS/ASD	28072004		0.4	99.4		945	75	124	3.2	20
ASYNASO	28072005		0.4	96.8		97.6	75	125	0.7	20
AS/MSD	28072013		0.4	101.0		100.0	75	125	10	26
Barium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount:	Spike %		Spike Dupkcate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FILMS			0.1	Recovery 92.0		% Recovery	Limit (%)	Limit (N) 120	30.30	
MI-MII			0.1	95.1			80	120		
MB		+0.002								
Ass		<0.002								
MIT/AAUD:	2)(070001		0.0	- KB-T		010	15	125	3.6	30
AS/HASD	28072004		0.4	89.2		67.5	Th	125	1.4	20
AS/MSD	28072005								10	20
AS/MSD	28072013		0.4	91.1		69.4	75	125	ir	20
Beryllium				Units:	mg/L					
дс Туре	Original Sample ID	Blank Result	Spike Amount	5pike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (16)
FB-M5			0.1	104.0			30	120		
FB-MS			0.1	:100.0			80	120		
etn .		<0.0005								





Account #: 2040

Client: Basin Electric Power Cooperative

Beryllium QC Type	Original Sample 10	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
		BIANK WESLIE		Recovery		% Recovery	Limit (%)	Limit (%)		
MS/MSD	28070001		0.4	101.0		305.0X	75	125	\$,6	20
AS/IASDI	28072004		0.4	1080		105.0	75	125	2.6	20
AS/MSD	28072005		0.4	105.0		106 O	75	125	èé	20
AS/IASD	28072013		0.4	1110		109.0	75	125	2.1	20
Cadmium				Units:	mg/L					
ac Type	Original Sample (D	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-4/5			0.1	Recovery 100.0		% Recovery	Limit (%)	Limit (%) 1.20		
FILMS			0.1	102.0			81	120		
AD		<0.0005								
An-		c0.0005								
IS/MSD	28070001		0.4	97.4		978	75	125	0.3	20
45/M5D	28072004		0.1	100.0		97.(75	125	11	20
IF WARES	28072005		0.4	44.5		-	-	in	0	-20
IS/MSD	280721815		U.A.	95.7		95.1	(5)	125	0.0	-20
IS/MSD	28072013		0.4	98.9		97.6	75	125	1.5	20
hromium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
H-M5.			0.1	3.000			30	120		
riems.			0.1	109.0			80	120		
		<0.002								
10		<0,002								
10		<0.002								
45/MStx	28070001		0.4	104.0		306.00	76	125	1.7	20
AS/MSD:	28072004		0.4	109.0		105.0	75	125	4.0	20
is/MSD	28072005		0.4	1060		107 0	75	125	0.4	-20
HS/MSD	28072013		0.4	109.0		110.0	75	125	67.	20
to/wou	200721112		U.	105.0		211.0	a	125	42	201
Cobalt	Constitution of the	Blank Result	40000000	Units:	mg/L	Spike Duplicate	Lower Control	Upper Control		
C Type	Original Sample III	presult delately	Spike Amount	Recovery		% Recovery	Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
FB MS			0,1	(07.0			30	320		
10		<0.002								
10		<0.002								
AS/AASIX	28070001	<0.002	0.4	305.0		109. b	76	125	Li	.2D



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

Cobalt	Original Sample ID	Blank Result	Spike Amount	Units: mg/	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
MS/MSD	28072004		0.4	Recovery 106.0	% Recovery 103.0	Limit (%) 75	Limit (%) 125	8.6	.20
M5/M5D	28072005		0.4	102.0	102.0	75	125	0.0	20
MS/MSD	28072013		0.4	107.0	105.0	75	125	14	20
Lead				Units: mg/					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
UFB-M5			0.2	102.0		30	120		
IFB-MS			9.5	103.0		30	330		
MB		×0.0009							
MO		<0.0005							
MISMISH	28370001		0.0	99.5	107.0	ris .	175	1.0	QD-
MS/MSD	28072004		0.4	100.0	99.0	75	125	4.3	20
M5/M5D	28072005		10.8	96.1	96.1	75	125	0.0	20-
MS/MSD	28072013		0.4	102.0	iono	75	125	10	20
Malub de acces				Ministry month					
Molybdenum QC Type	Original Sample ID	Blank Result	Spike Amount	Units: mg/	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
JFB-M5	1.0000000	- 20-000	0.1	Recovery 102.0	% Recovery	Limit (%)	Limit (%)	228	
FE-445			.0.1	104.0		30	120		
мв		<0.002							
MO		-10.002							
MS/MSO	28070001		0.4	96.3	97.2	75	125	1.0	-20
MS/MSD	28072004		-0.4	96.8	97 A	75	125	11	20
MS/MSD	28072005		0.4	0.0.1	115.7	75	125	3.8	gb-
MS/MSD	28072013		0.4	102.0	98.5	75	125	18	70
Selenium				Units: mg/					
QC Type	Original Sample ID	Blank flesult	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
LFB-M5			0/2	97.6		30	120		
			.0.1	94.7		80	3.80		
FB-MS									
		<0.005							
мв		<0.005 <0.005							
MB MB MB/MBD	28070001		0.4	95.6	**	m-	120	ii	.2b





Account #: 2040

Client: Basin Electric Power Cooperative

Selenium	11 6 W CHANTON	4.74	Various	Units:	mg/L	Laboration Control	11 11211111	and the later of	COON	Annual States
QC Type	Original Sample 10	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (16)	Limit (%)	RPD (%)	RPD Limit (%)
AS/MSD	28072005		0.4	94.7		94.7	75	125	0.5	20
AS/MSD	28072013		0.4	98.1		100.0	75	125	2.3	20
Thallium				Units:	mg/L					
C Type	Original Sample III	Blank Result	Spike Amount	Spike % Recovery		Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD [%)	RPD Limit (%)
B-M5			0.1	96.3			360	120		
FB-MS			0,3	97.2			30	320		
48		<0.0005								
.0		-4,0005								
10		< 0.0005								
ns/mstx	29070001		0.4	94.1		94.1	75	125	0.3	20
neg William	apayand)		10.41	24.1		Strate	1,2	162	y/a	100
AS(MSD)	78072004		0.4	94.8		94.7	75	125	0.5	20
45/MSD	28072005		9.4	94.2		92.1	75	125	0.8	20
45/MSD	28072013		0.4	96.1		95.4	75	125	0.5	30
Mercury				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 (16)
Fb			0.002	94.6			57	115		
т			0.002	99.6			85	115		
па		<0.0002								
ни		<0.0002								
ns/msb	27912001		0,002	97.4		101.0	70	130	5.1	20
MS/MSD	27912007		0,002	107.0		104.0	70	130	0.0	ZD
IS/MSD	28072001		-0.002	1060		MI.O	70)30:	4.0	-20
IS/MSD	28072011		0.002	96.6		107.0	70	130	10.0	20
luoride IC Type	Original Sample ID	Blank Result	Spike Amount	Units: Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (96)
	Cirgosal Sample ID	many learns		Recovery		% Recovery	Limit (%)	Limit (%)	MCD [36]	NA PRINT (19)
RM-T			17	97.5			53.8	111		
BF			0.5	98.0			90	330		
B.F			0.5	100,0			90	22.0		
			0.5	100.0			90	230		
FO F										
FD F			0.5	100.0			90	110		
		#0.1	0.5	2000			90	110		





Account #: 2040 Client: Basin Electric Power Cooperative

Fluoride				Units: mg/L					
QC Туре	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery	Spike Duplicate & Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
MB-F		<0.1							
AB-II		ed. i							
AS/MSD-I	28070001		0.5	1000	102.0	60	120	0.0	20
45/MSD-F	28070011		0.5	104.0	104.0	80	120	00	20
NSD-F	28072001		0.5	106.0	1010	30	120	10	20
45/AASID-F	28072013		0.5	0.02.0	90.0	30	320	1.8	20
Total Dissolv	ed Solids			Units: mg/L					
C Type	Original Sample (D	Blank Result	Spike Amount	Spike to Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
RM			736	97.0		90.35	110,38		
AB		<10							
our	78700001							La	20





Effective Date: 26 Aug 2022

Account #: 2040 Client: Basin Electric Power Cooperative

Toll Free: (8	2616 East Broa Bismarck, ND Phone: (701) 258-972	dway Avenue 58501	ories, Inc.	W0: 2	Electric 8209				Pag Work Ore	e		tody
	Basin Elect Leland 3901 Hi Stanton	Olds Station ghway 200A n, ND 58571		Account # Contact Name of S	2040 Mark Dihl	e			701-745-7	238 70 aknuts	son@be	
Billing Addres	2616 East Broadway Avenue Bismarck, ND 58501 Phone: (701) 258-9720 ree: (800) 279-6885 Fax: (701) 258-9724 y Name and Address Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571 ddress (indicate if different from above) Sample ID LOS LANDFILL MW 2016 - 12 LOS LANDFILL MW 2016 - 12 Transferred by Date			mls Quote Nui Project Na			ells	jason.la	Date Subm	nitted 9/14 Order#	1/2023 t 708-04	
Lab Use Only Lab	Samp	le ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A		Analys	is Requ	iired	
001	LOS LANDFILL	MW 2016 - 12	GW	9/14/2023	800	3			F, SO ₄ , Sb, A , Se, Tl, Ra2			
Comments:												
		Date 9/14/2023	Time NOON	Received	by	-	Date Sep				ROI Y/N	Therm. #

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

See above for page number

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.

Report Date: Thursday, October 19, 2023 11:13:05 AM

Form # 80-910005-1



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

Workorder: LOS CCR Wells SP 143 (32039) 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:



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.

Report Date: Tuesday, November 28, 2023 4:15:49 PM



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

Analytical Results

 Lab ID:
 32039001
 Date Collected:
 10/24/2023 08:24
 Matrix:
 Groundwater

 Sample ID:
 MW - 2016 - 12
 Date Received:
 10/24/2023 16:45
 Collector:
 Client

Temp @ Receipt (C): 2.8 Received on Ice: Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: ASTM D516-16							
Sulfate	26.9	mg/L	5	1	11/01/2023 15:10	11/01/2023 15:10	
Mathada EDA 045 4							
Method: EPA 245.1	.0.000	,,	0.0000	_	44/00/0000 00 00	44/00/0000 44 00	
Mercury	<0.0002	mg/L	0.0002	1	11/02/2023 09:26	11/02/2023 11:26	
Method: EPA 6010D							
Boron	0.24	mg/L	0.1	1	10/25/2023 15:50	11/08/2023 10:28	
Calcium	11.7	mg/L	1	1	10/25/2023 15:50	10/30/2023 12:44	
Lithium	0.0213	mg/L	0.02	1	10/25/2023 15:50	11/08/2023 11:33	
Method: EPA 6020B							
Antimony	<0.001	mg/L	0.001	5	10/25/2023 15:50	11/09/2023 11:11	
Arsenic	<0.002	mg/L	0.002	5	10/25/2023 15:50	11/09/2023 11:11	
Barium	0.0405	mg/L	0.002	5	10/25/2023 15:50	11/09/2023 11:11	
Beryllium	<0.0005	mg/L	0.0005	5	10/25/2023 15:50	11/09/2023 16:36	
Cadmium	<0.0005	mg/L	0.0005	5	10/25/2023 15:50	11/09/2023 11:11	
Chromium	<0.002	mg/L	0.000	5	10/25/2023 15:50	11/09/2023 11:11	
Cobalt	<0.002	mg/L	0.002	5	10/25/2023 15:50	11/09/2023 11:11	
Lead	<0.002	mg/L	0.0005	5	10/25/2023 15:50	11/09/2023 11:11	
Molybdenum	0.0084	mg/L	0.000	5	10/25/2023 15:50	11/09/2023 11:11	
Selenium	<0.005	mg/L	0.002	5	10/25/2023 15:50	11/09/2023 11:11	
Thallium	<0.005	-	0.0005	5	10/25/2023 15:50	11/09/2023 11:11	
manium	<0.0005	mg/L	0.0003	5	10/25/2025 15.50	11/09/2023 11.11	
Method: SM4500-CI-E 2011							
Chloride	42.6	mg/L	2.0	1	10/31/2023 11:25	10/31/2023 11:25	
Method: SM4500-F-C-2011							
Fluoride	0.66	mg/L	0.1	1	10/25/2023 21:10	10/25/2023 21:10	
Method: USGS I-1750-85							
Total Dissolved Solids	1530	mg/L	10	1	10/27/2023 13:13	10/27/2023 13:13	





Account #: 2040 Client: Basin Electric Power Cooperative

C Result	ts Summary						WO #:	320	39
Sulfate				Units: 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 (%)
FB			100	104.0		RS	115		
14			100	107 0		85	115		
FB			100	102.6		85	115		
14			100	106.0		85	115		
şu .			100	106-0		93	115		
Ħ			100	107.0		85	115		
FB			100	101.0		85	115		
rit.			100	:105 (0		85.	115		
riv			100	106.0		85	115		
ru .			100	305.4		85	115		
All		45							
via.		3							
MB.		(5)							
Ap		d							
AB		3							
All)		<5							
All		S							
All .		d							
AB		45							
-0									
AS/MSD	31825019		100	104.6	105.7	85	115	1.6	30
AS/MSD	31877007		1000	10.6	83.0	85	115	18	20
MS/MSD	31962004		1000	81.3	89.7	63	115	0.6	20
MS/MSD	32066001		1000	75.5	75.8	85	115	0.8	20
AS/MSD	32088007		4000	104.3	103.8	RS	115	0.4	20
AS/MSD	82226005		5000	105.0	105.2	RS	115	0.0	.30
us/Msd	32226013		4000	95.7	97.2	RS	115	0.9	20-
AS/MSD	32339005		500	98.0	92.0	85	115	2.3	20
Chloride				Units: mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W	Spike Duplicate % Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)





Account #: 2040

Client: Basin Electric Power Cooperative

Chloride QC Type	Original Sample ID	Blank Result	Spike Amount	Units: n	Spile Duplicate Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
řei			30	98.8		90	310		
10			90	98.1		90	110		
10			30	96.7		50	iio		
FB			30	97 8		90	110		
FD .			30	95.4		90	110		
FB .			30	90.6		90	230		
			30	98.6		90.	110		
ru			30	90.4		90	110		
13			30	10.0			110		
AUS		<2.0							
AD-		<2.0							
Ass		<2.0							
AR		<2.0							
Ai)		<2.0							
46		Q0							
46		<2.0							
Alk		<2.0							
/B		<2.0							
AEI .		<2.0							
AS/MSD	32039061		30	119.8	139.3	80	120	0.1	20
ns/MSD	32202004		30	110,4	131.8	80	120	0.8	20
ts/MS0	32254001		30	106.2	115.6	80	120	3.1	20
AS/MSD	524A5001		30	91.9	92.0	80	120:	0.0	20
MVMSD	32445002		30	88.8	84	160	120	0.4	90-
Calcium				Units: n	ng/L				
QC Type	Original Sample ID	Blank Result	Spike Amount	5pike % Recovery	Spike Duplicate # Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
DS/PDSD	32034001		400	104.0	105.0	75	125	1.1	20
DS/PDSD	320/58006		800	97.6	93.3	75	125	0.6	20
05/P050	32151001		400	103.0	\$05.0	75	125	1.0	20
OS/POSO	323390077		80	3146	123.0	75	125	0.5	- X() -





Account #: 2040

Client: Basin Electric Power Cooperative

Calcium				Units:	mg/L					
ОС Туре	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate Recovery	Lower Control	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
PD5/PDSD	32354007		300	101.0		302.0	75 75	125	0.9	20
* order or or				Males	an aid					
Antimony	AND DESTRU	w7x7		Units:	mg/L	40.0	No. of Contract	W. C. A		Maria da
ДС Турн	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (96)
AS/MSD	32151001		0.4	104.0		106/0	70	190	1.9	-20
Arsenic				Units:	mg/L					
QC Type	Original Sample ID	Blank Nesult	Spike Amount	Spike in		Spike Duplicate % Recovery	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
NS/MSD	32151001		0.4	Recovery 99.1		102.0	70	Limit (%) 130:	15	26
Barium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (91)
		-wie nerwit	-	Recovery	_	% Recovery	Limit (%)	Limit (%)		
WS/MSD	32151001		0.4	94.6		95.K	70.	130	1.2	20
Beryllium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	F(PD (%)	RPD Limit (%)
AS/IASD	32151001		0.4	106-0		108.0	70	130	1.5	20
Cadmium				Units:	mg/L					
ac Type	Original Sample (D	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
AS/MSID	32151001		0,4	Recovery 101.0	4	% Recovery 101.0	Virrit (%)	Limit (%)	0.3	30
Chromium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W. Recovery		Spike Duplicate © Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
AS/MSD	32151001		0.4	101.0		103.0	70	130	2.7	20
Cobalt				Units:	mg/L					
дс тура	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Dupkcate	Lower Control	Upper Control	RPD (%)	RPD Lunit (%)
AS/MSD	32151001		0.4	Recovery 96.4		% Recovery 100.0	Limit (%) 70	130 230	2.0	30
Lead				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount:	Spike W Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	KPD (%)	RPD Limit (%)
AS/MSD	32151061		0.4	95.7		100.0	70	130	0.8	.20
Molybdenum				Units:	mg/L	-				
ос туре	Original Sample ID	Blank Result.	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (16)
45/M5D	32151001		0.4	Recovery 97.9		% Recovery 97.6	Limit (%) 70	Limit (%)	0.5	20
Selenium				Units:	mal)					
QC Type	Original Sample III	Blank Result	Spike Amount	Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD LEVIL (96)
AS/MSD	32151001	many leading	DA DA	Recovery		S Recovery	Limit (%)	Limit (%)	0.7	Sign Crane Land
NA PROPERTY.	24434004		0,4	4,00,0		201.0	-76	230	9.5	QII.
Thallium				Units:	mg/L					
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Soike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
MS/MSO	32151001		0.4	91.9		93.3	70	130	1.4	26
Antimony				Units:	mg/L					
дс Туре	Original Sample ID	Blank Result	Spike Amount	Spike N		Spile Duplicate	Lower Control	Upper Control	RPD (N.)	RPD Limit (%)
				RECOVERY		% Recovery	Limit (%)	Limit (%)		





Account #: 2040 Client: Basin Electric Power Cooperative

Arsenic				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate	Lower Control Limit (16)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
DK.	32039001		0.1	114.0			75	125		
Barium				Units:	mg/L					
дс туріг	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (96)
PK	82039001		0.1	109.0			75.	125		
Beryllium		_		Units:	mg/L					
IC Type	Ore mal Sample ID	Blank Kesult	Spike Amount	Spike in Mecavery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FK.	32039001		0.1	119.0			75	125		
PC:	52039001		0.02	521.0			75	125		
Cadmium				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 (%)
PK	32039001		0.1	107.0			75	125		
hromium				Units:	mg/L					
IC Type	Original Sample ID	Blank Hesult	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PB.	32039001		0.1	115.0			75	125		
obalt				Units:	mg/L					
СТуре	Original Sample ID	Blank Result	Spike Ammunt	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
PX.	32039001		0.1	115.0			75	125		
ead				Units:	mg/L					
СТуре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Secovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
AC:	32039001		0.1	104.0			75	125		
Volybdenum				Units:	mg/L					
С.Туре	Original Sample III	Blank Result	Spike Amount	Space % Recovery		Spice Duplicate N Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Linux (%)
PK.	32039001		0.1	122.0			75	125		
elenium				Units:	mg/L					
IC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PR	32039001		0.1	103.0			75	125		
hallium			72	Units:	mg/L					
СТуре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Recovery	Lower Control Limit (46)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK .	32039001		0.1	96.6			35	125		
-K	32151001									
soron				Units:	mg/L					
СТуре	Original Sample III	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPE LINUE (NS)
EB-OE			0.4	99.0			85	115		
18		300								





Account #: 2040

Client: Basin Electric Power Cooperative

Calcium QC Type	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
LFB-MI			100	Recovery 109.0		% Recovery	Limit (16)	Limit (%) 115		
MB		d								
DUP.	32038008								0.6	20
our	32088003								2.9	20
DUP	3,2088003								8.2	20
Lithium				Units:	mg/L					
ОС Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (N)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
JIH-DE			0.4	103.0		A RELLYEY	85	115		
Mili		<0.04								
ME/MED:	32039001		0.4	99.0		16.0	·13	125	1.0	20
Antimony				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate & Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD LETHE (%)
FB-M5			0.1	102.0			80	120		
vis		c0.001								
Maywau	32039001		0.4	108 0		106.0	75	125	2.3	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 (%)
PH-M5			0.1	98.5		a meaning	.00	120		
MB		<0.002								
MS/MSD	32039001		0.4	106,0		102.0	75	125	14	20
Barium				Units:	mg/L					
QC Type	Original Sample ID	Ellanic Result	Spike Amount	Spike 1/ Recovery		Spike Duplicate % Recovery	Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
T0-M5			0.1	96.1			80	120		
мій		<0.002								
MS/MSD	92099001		0.4	99.4		97.0	75	125	ìā	20
Beryllium ac type	Original Sample ID	Blank Result	Splike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Upper Control	KPD (%)	RPD Limit (%)
GC Type JFB-M5	City inal Sample ID	BARIK RESUR	Spike Amount.	Spike % Recovery		% Recovery	Limit (%)	Limit (%)	KOPES (76)	KAD FILITE [42]
e arriffo			0,2	101.0			3)	120		
Mil		<0.0005								
MS/WSD	32039001		0.4	202.0		1010	75	125	1.0	20-
Cadmium			7.2	Units:	mg/L					
QC Type	Original Sample ID	Blank Result.	Spike Amount	Spile % Recovery		Spile Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	99.6			80	120		





Account #: 2040

Client: Basin Electric Power Cooperative

Cadmium	- Carlos	4.60	2/47	Units:	mg/L	La Wiles State	and the second	AND SALES	500	And works
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery		Spike Duplicate Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
Ma		<0.0005								
MS/MSD	32039001		0.4	102.0		102.0	75	125	0.2	20
Chromium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike to Recovery		Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	Miso Lie)	RPD Librat (%)
TB-M5			0.1	99.5			an .	320		
Mit.		s0.002								
AS/MSD	32039001		0,4	1010		103.0	75	125	0.2	30
Cobalt				Units:	mg/L					
ос туре	Original Sample ID	Blank Result	Spike Annunt	Spike M		Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
FB-MS			0.1	Recovery 100.0		% Recovery	Limit (%)	Limit (%)		
47		10.000								
EM		<0.002								
WI/MSD	52039001		0.4	102.0		101/0	75	125	0.5	20
(and				Maitre	ma/r					
Lead QC Type	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Spice Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-M5	- Collegnal Sample ID	weens instruct		Recovery		% Recovery	Limit (%)	Limit (%)	APIG (30)	NP Land (15)
19-4D			0.1	99.9			80	120		
WO		<0.0005								
MS/MSD	32039001		0.4	99.8		98.7	75.	125	1.0	20
1100 1100	arshi 2004		3011	37/4		-		-40		1467
Molybdenum				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate % Recovery	Lower Control Limit (N)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FRIANE			0.1	107.0			80.	120		
in.		r() (00)								
Will.		- seeme								
MS/MSDT	32039001		0.4	107 0		504.0	75	125	2.1	20
Selenium				Units:	mg/L					
остури	Original Sample ID	Blank Besult	Spike Amnunt	Spike N		Spile Dupleate	Lawer Control	Upper Control	RPD (%G)	RPD Limit (%)
FB-MS			0.1	Recovery 98.8		% Recovery	Limit (%)	130 130		
dm.		-D 005								
МВ		<0.005								
MS/MSD	32039061		0.4	102.0		102.0	75	125	0.5	20
Thallium				Units:	mg/L	-				
DC Type	Original Sample (D	Blank Result	Spike Amount	Spike W		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
P8-M5			0.1	Recovery 95.1		N Recovery	Limit (%)	Limit (%) 120.		
		c0.0008								
AT.										





Account #: 2040

Client: Basin Electric Power Cooperative

Mercury				Units: mg/					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate	Lower Control Limit (IS)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
(FI)			0.002	101.0		85	115		
LFB			0.002	105-0		85	115		
88		<0.0002							
MB		<0.0002							
MS/MSD	32088003		0,002	95-2	87 8	70	130	8.7	30
M5/MSD	32567001		0.002	104.0	102.0	700	180	4.9	20
MS/MSD	32673006		0.002	105.0	105.0	70	130	0.0	.2b
Fluoride				Units: mg/	L				
QC Туре	Original Sample ID	Blank Result.	Spike Amount	Spike N Recovery	Spike Duplicate Si Aecovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (95)
RM-F			15.3	104.0		E1:99	111.11		
184			0.5	104-0		90	ìtα		
56-8			0.5	104.0		50	110		
16/			0.4	1044		40	iii		
MR.F		90.1							
MB ∈		si i							
MB-E		MI							
MS/MSD-F	32039001		0.5	114.0	300 0	30	220	2.5	- 000
MS/MSO-I	32088008		.65	98.8	300.0	50	120	4.2	ab.
Total Dissolve	ed Solids			Units: mg/	L				
дС Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
RM.			736	99.0		90.35	110.58		
ма		<10							
in/i	92078017							2.5	die





Effective Date: 26 Aug 2022

Account #: 2040 Client: Basin Electric Power Cooperative

	Minnesota Valley Testing Laboratories, Inc. 2616 East Broadway Avenue Bismarck, ND 58501 Phone: (701) 258-9720 Toll Free: (800) 279-6885 Fax: (701) 258-9724 Impany Name and Address				lectric P 039	owe	er (Coope	Chain of Custody Page of Work Order #			
Company Nam		Mario Acti		Account # Phone #								
	Leland O	c Power Coop. Ilds Station hway 200A		Contact	2040 Mark Dible	,		Emails	701-745-7238 701-557-5488 mails dihle@bepc.com aknutson@bepc.com			
Illian Adda		ND 58571		Name of S	ampler			jerme	/.hurs	hman@aecor		
silling Addres	s (indicate if different from	n above)		mls Quote Nun	nber		_	jason.		e Submitted		
				Project Na				440	Pur	chase Order		
				LO	S CCR W	ells	SP	143	_	790	0708-04	_
Lab Use Only Lab	Sample	e ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A			Analysis Rec	juired	
001	MW - 201	6 - 12	GW	10/24/2023	824	3			CI, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,Pb, Mo, Se, TI, Ra226, Ra228, TDS			
	pH &	7.88										
Comments:					1	-	_					
Tra	nsferred by	Date	Time	Received			Dat	e Ti	me	Temp	ROI (Y)/ N	Therm. #
MILLENNIUM		10/24/2023			bese							Tmya

See above for page number

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.

Form # 80-910005-1



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

Workorder: LOS CCR Wells (17868) **PO**: 675266-04

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:



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

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.

Report Date: Monday, June 26, 2023 1:27:46 PM





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.



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

Analytical Results

 Lab ID:
 17868001
 Date Collected:
 06/06/2023 14:00
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-10
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	265	mg/L	5	1	06/13/2023 14:52	06/13/2023 14:52	AMC	

Method: EPA 245.1

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 6010D

Parameter	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	86.1	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 6020B

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 17:13	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	MDE	
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	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 3 of 31





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868001
 Date Collected:
 06/06/2023 14:00
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-10
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: SM4500-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: SM4500-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	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	670	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 4 of 31





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868002
 Date Collected:
 06/06/2023 12:45
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-11
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	175	mg/L	25	5	06/13/2023 14:53	06/13/2023 14:53	AMC	

Method: EPA 245.1

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	MDE	

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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 6020B

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 17:30	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	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 5 of 31





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868002
 Date Collected:
 06/06/2023 12:45
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-11
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (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 Solids	504	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 6 of 31



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

Analytical Results

 Lab ID:
 17868003
 Date Collected:
 06/07/2023 10:45
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (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 245.1

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 6010D

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	
Lithium	<0.02	mg/L	0.02	1	06/08/2023 17:48	06/22/2023 10:29	SLZ	

Method: EPA 6020B

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	MDE	
Lead	<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	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868003
 Date Collected:
 06/07/2023 10:45
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: SM4500-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-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 Solids	1380	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 8 of 31





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868004
 Date Collected:
 06/07/2023 10:30
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-13
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	42.2	mg/L	25	5	06/13/2023 15:12	06/13/2023 15:12	AMC	

Method: EPA 245.1

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	MDE	_

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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	
Lithium	<0.02	mg/L	0.02	1	06/08/2023 17:48	06/22/2023 10:30	SLZ	

Method: EPA 6020B

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 17:39	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	
Lead	<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	
Thallium	<0.0005	mg/L	0.0005	5	06/08/2023 17:48	06/15/2023 17:39	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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 9 of 31





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868004
 Date Collected:
 06/07/2023 10:30
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-13
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: SM4500-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: SM4500-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 Solids	1540	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 10 of 31



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

Analytical Results

 Lab ID:
 17868005
 Date Collected:
 06/07/2023 08:45
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-8D
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	489	mg/L	25	5	06/13/2023 15·14	06/13/2023 15·14	AMC	

Method: EPA 245.1

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 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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	
Lithium	0.0612	mg/L	0.02	1	06/09/2023 16:36	06/22/2023 10:32	SLZ	

Method: EPA 6020B

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 11:55	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 16:36	06/20/2023 10:10	MDE	
Cadmium	<0.0005	mg/L	0.0005	5	06/09/2023 16:36	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	
Lead	<0.0005	mg/L	0.0005	5	06/09/2023 16:36	06/16/2023 11:55	MDE	
Molybdenum	<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	
Thallium	<0.0005	mg/L	0.0005	5	06/09/2023 16:36	06/16/2023 11:55	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.

Report Date: Monday, June 26, 2023 1:27:46 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868005
 Date Collected:
 06/07/2023 08:45
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-8D
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: SM4500-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: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.61	mg/L	0.1	1	06/12/2023	06/12/2023	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	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 12 of 31





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868006
 Date Collected:
 06/06/2023 14:00
 Matrix:
 Groundwater

 Sample ID:
 Dup
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

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 245.1

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	MDE	_

Method: EPA 6010D

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	
Lithium	<0.02	mg/L	0.02	1	06/09/2023 16:36	06/22/2023 10:33	SLZ	

Method: EPA 6020B

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	
Lead	<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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 13 of 31





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868006
 Date Collected:
 06/06/2023 14:00
 Matrix:
 Groundwater

 Sample ID:
 Dup
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	12.3	mg/L	2.0	1	06/09/2023 15:38	06/09/2023 15:38	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.79	mg/L	0.1	1	06/13/2023 12:09	06/13/2023 12:09	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	655	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 14 of 31





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868007
 Date Collected:
 06/07/2023 09:55
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-8
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: ASTM D516-16

Method. Ad I'm Do 10-10								
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 6010D								
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: SM4500-CI-E 2011

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: SM4500-F-C-2011

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 Solids	3740	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 15 of 31





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868008
 Date Collected:
 06/07/2023 13:10
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-7
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: ASTM D516-16

moundary to the Botto To								
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 2011

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

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	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM

Page 16 of 31





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17868009
 Date Collected:
 06/07/2023 14:25
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-4
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (C): 3.2

Method: ASTM D516-16

method. Actim boto to								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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	Qual
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	SLZ	

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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	Qual
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	Qual
Total Dissolved Solids	774	mg/L	10	1	06/09/2023 09:41	06/09/2023 09:41	RAA	

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.

Report Date: Monday, June 26, 2023 1:27:46 PM





Account #: 2040 Client: Basin Electric Power Cooperative

C Result	ts Summary						WO #:	178	68
Sulfate				Units: mg/					
QC Type	Original Sample ID	Blank Result.	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB			100	100.0		ES	115		
14			100	97.3		85	115		
FB.			100	97.4		85	115		
10			100	95.5		65	115		
FIL			100	107.0		85	215		
FB			100	89.8		25	215		
rit.			100	97.9		85	115		
ris -			100	107.C		85	115		
HI .			100	114.0		85	115		
0		15							
ia.		3							
(a		<							
ip.		d							
48		6							
46		45							
48		3							
9		45							
48		4							
IS/MSD	17714005		100	83.3	87.5	85	115	0.9	20
AS/MBD	1784GWM		100	84.2	85.0	85	115	8.7	26
MS/MSID	17846014		2000	854	92.1	63	115	2.6	20
ns/MsD	17846024		1000	117.9	84.7	85	115	1.0	20
45/MSD	17846034		100	96.2	96.0	RS	115	0.0	20-
45/M5D	17868003		500	109.3	1105	RS	115	0.0	30
IS/MSD	17876004		100	311-6	112.4	RS	115	0.7	20-
HS/MSD	28644001		1000	81.0	81.7	85	115	0.5	20
Chloride				Units: mg/					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike % Récovery	Spike Duplicate '% Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)





Account #: 2040 Client: Basin Electric Power Cooperative

Chloride QC Type	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
ira			30	Recovery 05.6		% Recovery	90 90	Limit (%)		
			-	00.1			90	440		
LFB			30	96.1			-90	110		
140			90	95.5			90	iio		
FB			30	95.9			-90	110		
FB			30	90.6			60	230		
FO D			30	95.0			90	330		
rn			30	95.4			90	110		
tu.			30	95.4			90	110		
19			30	95.6			.00	110		
rn			30	95.1			80	110:		
MA-		i20								
vis		<2.0								
uili .		<2.0								
vii)		<2.0								
All:		40								
мв		<2.0								
Mil.		<2.0								
wis .		<2.0								
ME		<2.0								
MB		<2.0								
MO.		<2.0								
MS/MSO	17448005		30	137.1		138.6	80	120	0.0	20
MS/MSD	17710004		80	134.0		134.5	80	120	0.0	70
WIVMSD	17846019		30	314.6		234.8	190	120	0.0	20-
M5/M5D	17846039		30	117.0		1165	60	120	0.2	.20
vis/MSD	17874001		30	134.0		133.4	80	120	0.0	20
Calcium				Units:	mg/L					
дс туре	Original Sample ID	Blank Result	Spike Amount	Spike %. Recovery		Spike Duplicate % Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
HIM			100	108,0		74	85	315		
FUAN			100	100.0			85	115		



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

Calcium QC Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery	ng/L Spike Duplicate ≫ Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FII-MI			100	112.0		85	115		
FB-MI			100	105.0		85	115		
Mily		si							
MIR		d							
мв		si.							
AE		\vec{q}							
SUP	177.14002							6,3	20
NUP	17719001							18	20
sue	17846029							0.8	(20)
NOTE:	17852001							1.0	20
NJF	17868007							0.0	20
our	17858005							0.0	20
NJP	57878003							-2.8	20-
ithium				Units: n	ng/L				
QC Type	Original Sample III	Blank Result	Spike Amount	Spike % Recovery	Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RIPE LEVOL (96)
TB-OE			0,4	109.0	(chester)	85	115		
18-0E			0.4	200.6		85	235		
Adi		-10.04							
AD.		₹0.04							
		3000							
us/MSD	17868001		0.4	99.0	105.0	70	3:90:	3.0	20
AS/MSD	17868006		0.4	(100.0)	101.0	70	130:	1.2	20
	17868006		0.4			70	130:	12	
Calcium QCType	17868006 Original Sample ID	Blank Result	0.4 Spike Amount	Units: n	ng/L Spike Duplicate	Lower Control	Upper Control	1.2 RPD (%)	
Calcium		Blank Result.		Units: n	ng/L				30
Calcium QC Type	Original Sample ID	Blank Result.	Spike Amount	Units: n	ng/L Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	20 RPD Limic (%)
Calcium QC Type DS/PDSO	Original Sample ID 177588007	Blank Result	Spike Amount	Units: n Spike % Recovery 103.0	Spike Duplicate % Recovery 106.0	Lower Control Limit (%). 75	Upper Control Umit (%)	RPD (%)	20 8PD Limit (%) 20
Calcium QC Type IDS/POSO IDS/POSO	Original Sample 10 17268007	Blank Result	Spike Amount	Units: n Spike % Recovery 103.0	Spike Duplicate 16 Recovery 106.0	Lower Control Limit (%) 75	Upper Control Unit (%) 125	RPD (%) 2.1 0.3	20 APD Limit (%) 20 20
Calcium OC Type DS/POSO DS/POSO DS/POSO	Original Sample ID 17768007 17768007 17448005	Blank Result.	Spile Amount 100 100 500	Units: n Spike % Recovery 103.0 103.0	ng/L 50lle Duplicate 16 Recovery 106.0 103.0	Lower Control Limit (%) 75	Upper Control Limit (%) 125 125	APD (%) 2.1 0.5	30 8PD Limit (%) 20 20
Calcium OC Type OS/POSO	Original Sample ID 17268007 17268007 17268007	Blank Result.	Spike Amount 100 100 500	Units: In Spike W. Recovery 103.0	Spike Duplicate 16 Recovery 106.0 103.0 108.0	Lower Control Unit (14) 75	Lipper Control Limit (b) 125 325 125	APD (%) 2.1 0.3 1.1 5.4	20 20 20 20 20
Calcium 1C Type 155/P050 155/P050 055/P050 055/P050 055/P050	Original Sample ID 17748807 17748807 17744005 17714006	Blank Result	Spike Amount 100 100 500 100	Units: n Spike % Recovery 103.0 103.0 97.3 96.1	108.0 108.0	Lower Control (Jink 198) 75 75 75	Upper Control Umit (%) 125 125 125 125 125	APD (%) 2.1 0.3 3.1 5.4 0.5	30 APD Limit (M) 20 20 20 20 20 20 20





Account #: 2040

Client: Basin Electric Power Cooperative

Calcium				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 Limit (%)
PDS/PDSD	18218007		100	10E.0		107.0	75	125	0.9	20
POS/POSO	18304005		100	99.5		101.0	75	125	0.8	20
PDS/PDSD	18304016		100	102.0		108-0	75	125	18	-20
05/PDS0	18304023		100	96.3		927	75	125	1.7	20
Antimony				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.5	100 0			65	335		
40		<0.001								
vs/MSD	17/17002		0.4	:102:0		99.6	70	130:	2.2	20
AS/MSD	17900007		0.4	107.0		107.0	70	130	0.5	20
A annual o				Hatt						
Arsenic	Original Sample III	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD LEYOR (%)
FE-MS	ST WITH SECURITY (U.	and the post.	0.1	Recovery 97.1		S Recovery	Limit (%)	Umit (%)	16.00	A S Plant List
2 4 4 13			3.1	21.1				.13		
Ally		r9-005								
Asymou	1771/002		0.6	TOLO		99.7	70	130	1.8	20
AS/MSD	12900002		0.4	101.0		103.0	70.	130	1.7	20
1000	- Common			ADAM.					***	44
Barium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	HPD (%)	RPD Limit (%)
FIHMS			0.1	101.0			85	115		
AD.		-0.602								
MINNED:	17717002		0.4	03:2		Ser.	70	130:	-3.2	20-
AS/MSD	15.000005		0.4	95.7		95.0	70	130	0.0	.20
Beryllium				Units:	mg/L					
QC Typer	Original Sample ID	Blank Hesuit	Spike Amount	Spike %		Spice Duplicate	Lower Control	Upper Control	RPD (%)	RPD LUNUE (%)
F0.M5			0.1	Recovery 94.5		% Recovery	Limit (%) 85	1.15		
Als		×0.0005								
		- mossil								
AS/MSD	17717002		0.4	102.0		205.0	70	130	2.7	XD.
AS/MSD	17900002		0,4	145.0		1320	70	180	2.5	30
Cadmium				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Amount	Spike N Recovery		Spike Duplicate % Recovery	Lower Control	Ligger Control Limit (%)	RPD (%)	RPD Limit (%)
PEL-MS			0.1	106.0		-a messavery	BS BS	115		
AB		€0.0005								
		4110005								
MS/MSD:	17737002		8.4	97.6		98.3	vii v	130	0.8	20





Account #: 2040

Client: Basin Electric Power Cooperative

er dentemb				Matter	madi.					
Cadmium	6.000.00	A	No. of Contract	Units:	mg/L	water with	Lower Control	Lipper Control	RPD (%)	Ann VI - In fact
QC Type	Original Sample 10	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate & Recovery	Limit (%)	Limit (%)	1444	RPD Limit (%)
WS/MSD	17908002		0.4	MLS		98.4	-70	130:	0.0	-20
Chromium				Units:	mg/L					
дс туріг	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPG (%)	RPD Limit (95)
7-0-M5			0.1	106.0			85.	115		
AET.		<0.002								
AS/MSD	17717002		0.4	10010		101.0	70	130	n,n	265
AS/MSD	17908002		U,A	95.5		95.1	70	130	0.0	30
Cobalt				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Anymint	Spike %		Soile Duplicate Il Recovery	Lower Control	Lipper Control Limit (%)	RPD (NI)	RPD Limit (%)
FB-MS			0.1	105.0		a necovery	Limit (%) 85	115		
AB		<0.002								
AS/MSD	17717007		0.4	98.9		98.4	70	30:	0.6	20
AS/MSD	£7908002		0.4	105.0		106.0	70	130	0.7	20
7.47				AVC 6-1						
ead	Patrick Francis on	mark navita	Trades described	Units:	mg/L	Print Printers	Lower Control	Upper Control	harri mu	from travers for V
СТуре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Limit (%)	Limit (%)	RPD (%)	RPD Limit (M.)
FB-MS			0.1	101.0			85	115		
AD CO		<0.0005								
M/MND	17717003		0.4	92.9		97.5	70	330	0.5	20-
may remain	11/11/102		101	304		3(3)	711	Jan	100	144
ORM/N	17908007		0.4	- 98EX		98.2	711	130	0.3	20
Molybdenum				Units:	mg/L					
QC Type	Original Sample ID	Blank Result.	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	107.6			65	115		
All		<0.002								
AS/AASD	17717007		0.4	101.0		100.0	701	130	1.0	alti
	11 Stand		344	1100.70		13576		598	1.00	SW.
AS/MSD	17908002		0.4	106.0		507.0	70.	130	0.6	20
Selenium				Units:	mg/L	~~~				
aC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0,1	96.3			85	115		
Au		~0.01								
	Towns and the same of the same									
ASVAASID.	17717002		0.6	107.E		102.0	70	130	A.E	20-
AS/MSD:	15000005		0.4	100.0		100.0	70	130	0.3	.20



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

Thallium IC Type	Original Sample 10	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
FB-M5			0.1	Recovery 95.5		% Recovery	Limit (%)	Limit (%)		
4.40			912	40-4				***		
48		₹0.0005								
IS/MSDI	17717002		0.4	96.3		95.Z	70	130	10	-20
IS/MSD	57908002		0.4	914		93.0	70	190	0.5	20
cymou	P. Security		U.H	34.5		25,11		120	05.	40
intimony				Units:	mg/L					
IC Type	Original Sample (D	Blank Result	Spike Amount	Spire %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
h()	17717007		0.1	Recovery 104.0		% Recovery	Dmit (%)	Limit (%)		
PK/SPKD	17717003		0.8	311.0		105.0	75	125	dr	20
PK	Manual						40	125		
	17908002		0.1	106.0			75	125		
Arsenic				Units:	mg/L					
С Туре	Original Sample ID	Blank Result	Spike Amount	Spike %	-	Spile Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
PK:	17717002		0.1	Recovery 101.0		% Recovery	Limit (%)	(imit (%) 125		
PK/SPKD	17717003		0.8	101.0		100.0	75	125	0.9	20
16	17908002		0.1	101.0			75	125		
Sarium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike W	11100	Spike Duplicate	Lower Control	Upper Control	(CPD (%)	RPD Limit (%)
N.	17717002		0.1	Recovery 97.6		% Recovery	Limit (%)	Limit (%)		
	27741092		0.4	21.00						
PK/NPKD	17717001		O.X	91.8		92.5	76	125	1.2	30
PK :	17908002		0.1	11.11			73	125		
seryllium				Units:	mg/L					
СТуре	Original Sample ID	Blank Result.	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (96)
PK .	17717002		0.1	Recovery 98.8		% Recovery	Limit (%). 75	Limit (%)		1 3 1 4 3 5
PK/SPKD	17717003		0.8	120.0		112.0	75	125	hT	20
	A striction -							-		
PyC	17908002		0.1	1140			75	125		
admium				Units:	mg/L					
IC Type	Original Sample (II)	Blank Result	Spike Amount	Spike %		Spike Ouplicate	Lower Control	Upper Control	RED (%)	RPD LUNE (NS)
76	17717001		0.1	Recovery 97.8		% Recovery	Limit (%)	Limit (%) 125		
	-101-1-10			2,00						
FK/SPKD	17717003		0,8	96.0		102.0	75	125	6.5	.20
PIC:	17908007		0.1	841			75	125		
hromium				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike %	ing/c	Spike Duplicate	Lower Control	Upper Control	RPD (%)	SPD Limit (%)
				Recovery		% Recovery	Limit (%)	Limit (%)	43.60	0.000000
	12212002		0.5	Batta						
·K	17717002		0.1	1010			75	125		



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

Chromium				Units:	mg/L					
QC Type	Original Sample 10	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate * Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
ibe.	17908007		0.1	57.1			75	125		
Cobalt				Units:	mg/L					
дс турк	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK	17717002		0.1	98.9			75	125		
PK/SPKII	17717001		0.8	105.0		104.0	75	125	a e	20
SPK	12908002		0.1	104.0			75	125		
Lead				Units:	mg/L					
ОС Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	KPD (%)	RPD Limit (%)
PK	17717007		0.1	96.6			75	125		
EPK/APKD	17717001		0.8	96.6		101.0	75	125	98	20
ipk:	17908002		0.1	X9.5			75	125		
Molybdenum				Units:	mg/L					
QC Type	Original Sample (D.	Blank Result	Spike Amount	Spike % Recovery		Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PK	17717002		0.1	106.0			75	125		
PN/SPND	17717003		8.0	(01.0)		98.6	75	125	2.2	(20)
PK	17908003		0.1	102.0			75	125		
Selenium				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery		Spike Duplicate III Recovery	Lower Control Umit (M)	Limit (%)	RPD (NJ)	RPD Limit (%)
PK	17717002		0.1	97.3			75	125		
PK/SPKD	17717003		8.0	na.I		161.0	75	125	33	20
PK	17908002		0.1	87.8			Ø.	125		
Thallium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
PC	17717002		0.2	92.2			75	125		
PK/SPKD	17717003		0.8	91.4		97.5	75	125	6.7	30
PN	17908002		0.1	85-1			76	125		
3oron				Units;	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike is Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
EP-DE			0.4	97.3			63	115		
FB-OE			0.4	96.3			BS.	115		
FBIGE			0.4	98.6			RE	115		
F6-01			0.4	1021			Ø5	115		





Account #: 2040

Client: Basin Electric Power Cooperative

Boron QC Type	Original Sample ID	Blank Result	Spike Amount	Units: my Spike % Recovery	Spike Duplicate	Lower Control Limit (III)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
MB)		<0.1		necovery	- necovery	Linia (a)	Line (M)		
AB		<0.1							
Ally		ali							
AS/NASD	17846001		0.4	87.8	85.8	75	125	0.5	20
AS/MSD	17846005		0.4	96.3	97.4	75	125	0.5	20
rs/Msix	17846028		0.4	89.7	86.5	75	125	2.0	20
AS/MSD	17861001		0.4	109.0	76.0	76	125	49	20
MS/MSD	17858001		0.4	95.0	3,02,0x	76	125	12	210
AS/MSD	17863006		0.4	99.6	99.6	75	125	0.0	25
Antimony				Units: mj					
ić Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate	Lower Control Limit (%)	Lipper Control Limit (%)	KPD (%)	RPD Llimit (%)
FB-M5			0.1	99.5		90	120		
H-MS			0.1	102.0		30	320		
F6-M5			0.1	104.0		90	120		
ia i		<0.001							
ed.		<0.001							
(B		100.00							
MS/MNID:	17734001		0.4	99.4	98.5	71	326	10	10
ts/Msit	1784G028		0.4	104.0	103.0	75	125	0.5	20
IS/MSD	17861001		0.4	107.0	104.0	75	125	2.4	20
IS/MSD	17868001		0.4	102.0	104.0	75	125	22	20
NS/MSD	1786MDGG		0.4	106.0	103.0	75	125	2.4	20
Arsenic					g/L				
C Type	Original Sample ID	Blank Result	Spike Amount 0.1	Spike % Recovery	Spive Dupvionte % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
			0.1	100.0		er.	120		
FB-MS			0.1	101.0		30	120		
FB.MS			Àż	197.2		80	120		
iā.		<0.007							
10		<0.002							
en e		<0.002							





Account #: 2040

Client: Basin Electric Power Cooperative

Arsenic				Units: mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W. Recovery	Spike Duplicate & Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
MS/MSD	17846026		0.4	97.0	101.0	75	125	4.2	-70
MS/MSD	17851001		0.4	103.0	504.0	75	125	0.5	20-
AS/MSD	17858001		0.4	94.8	100.0	75	125	1.3	20
AS/MSD	17868006		0.4	97.9	98.7	75	125	0.8	20
Barium		40000	490100	Units: mg/L		We come	- MONTH (1997)	*57.00	-
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	97.9		30	120		
FIFMS			0.1	1014		80	120		
FII-M5			0.1	99.2		80	120		
un-		×0.007							
As,		<0.002							
48		E0.002							
		50.000							
IS/MSD	17714001		0.4	97.0	96.2	75	125	0.5	-20
HS/MSD	17846025		0.4	97.6	97.3	75	125	0.2	20
ts/MSD	17861001		0.4	101.0	97.2	76	125	1.1	20
45/MSD	17858001		9.4	97.5	19.4	75	125	9.6	20
ts/MSD	17868006		0,4	95.6	93.1	75	125	22	26
Beryllium				Units: mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike W Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	KPD (%)	RPD Limit (%)
FII-MS			0.1	97.7		80	120		
FB-M5			0.1	105.0		80	120		
FB MAS.			0.1	108.0		190	120		
40		<0.0005							
4/5		<0.0005							
46		c9.0005							
45/44SE	17714001		0.8	(0)3,0	97.7	75	125	8.0	20
IS/NSD	17846078		0.4	102.0	108.0	75	125	15	30
			n a	107.0	104.0	75	325	81	20
IS/MSD	17851001		140						
AS/MSD AS/MSD	17860001		0.4	106 0	108.0	ri.	125	1.0	.25





Account #: 2040

Client: Basin Electric Power Cooperative

Cadmium					g/L				
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery	Spike Duplicate Secovery	Lower Control Limit (16)	Limit (%)	RPD (%)	RPD Limit (%)
FB-M5			0.1	104.0		80	120		
FB-MS			0.1	98.8		80	120		
F6-MS			0.1	101.0		80	120		
AB		<0.0005							
da .		<0.0005							
Asi		<0.0005							
NS/MSD	17714001		0.4	101.0	96.M	75	125	6.0	ZD
us/msb	17846078		0.4	301.0	102.0	76	125	0.5	20
Distriyan	17861001		0.4	101.0	98.6	75	125	is	20
AS/AASD	17858001		0.4	99.2	97.0	75	125	13	.30
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
AS/MSD	17868006		0.4	107.0	103.0	75	125	0.2	20
Chromium				Units: m	g/L				
ос туре	Original Sample ID	Blank Result.	Spike Amount	Spike %	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-MS			0.1	Recovery 105.0	% Recovery	Limit (%).	Limit (%) 320		
FB-MS			0.3	104.0		30	120		
FD-M5			0.1	102.0		30	320		
Als		<0.002							
Ad.		<0.002							
AD .		<0.002							
	Value of the last				100				
MS/MSD	17714001		0.4	101.0	58.3	75	125	5.0	20
AS/MSD	17846075		0.4	100.0	105.0	75	125	21	20
WS/MSD	17861001		0.4	:106.0	101.0	75	125	5.1	70
	***************************************							,	
MS/MSD	17868001		0.4	101.0	102.0	75	125	0.5	30
VS/MSD	17858006		0.4	101.0	103.0	75	125	0.0	20
Cobalt oc Type	Original Sample ID	Blank Hesuit	Spike Amount	Units: m	g/L Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Lunit (%)
HI-MS	Original sample to	DESIGN RUSUIT	0,1	Recovery 2010	% Recovery	Limit (%)	Dimit (%)	10.07(10)	to of cause that
W-413			49.2	3014			2,20		
H-MS			0.3	104.0		30	120		
FB-MS			0.1	105.0		80	120		
ASS.		<0.002							





Account #: 2040 Client: Basin Electric Power Cooperative

Cobalt				Units: mg	L				
QC Туре	Original Sample ID	Blank Result	Spike Amount	Spike M Recovery	Spike Duplicate & Recovery	Lower Control	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
WB		<0.003							
MS/MSD	17714001		0.4	101.0	97.2	75	125	33	20
AS/MSD	17846028		0.4	100 0	502.0	75	125	2.2	20
AS/MSD	17861901		0.4	101.0	98.6	75	125	4.7	20
AS/MSD	17868001		0.4	96.7	101.0	75	125	2.0	20
is/MSD	17868006		0.4	ma	100.0	75	125	1.7	20
Gymou	17000000		0,4		304.0		345	414.	36
ead				Units: mg	L				
C Type	Original Sample (D	Blank Result	Spike Amount	Spike %	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
FB-MS			0.1	Recovery 95.9	% Recovery	Limit (%)	Limit (%)		
FH-MAS			0.1	99.7		80	120		
NI-M5			0.1	200.2		100	120:		
48		ER 0005							
10		<0.0005							
48		<0.0005							
ts/MSD	17714001		0.4	97.1	56.8	75	125	0.3	20
45/MSD	17846028		0.4	98.2	96.5	75	125	1.8	70
						75			
ts/MSD	17861001		0.4	98.8	97.6		125	1.2	26
MS/MSD	17868001		0.4	98.7	99.8	75	125	1.0	215
MS/MSID	17868009		0.4	:105/0	204.0	75	125	0.7	(20)
Molybdenum	A	Com I		Units: mg				Sec. of a	70000
E Type FB-MS	Original Sample ID	Blank Result	Spike Amount	Spike M. Recovery 106.0	Spike Duplicate & Recovery	Lower Control Limit (%)	Limit (%)	HPD (%)	RPD Limit (%)
			an a	-8000.00		-			
FB-MS			0.1	109.0		-	320		
FB-M5			0.1	104.6		190	120		
16		<0.002							
16		<0.002							
18		<0.002							
	1771ADDI		U.A	100.0	97.8	75	125	1.5	201
HS/MISID									
	17846028		0.4	108.0	208.0	16	125	0.5	ZD
ns/msd	178460J8 17861001		0.4	108.0	108.0	75	125	0.5	ZD ZD



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

Molybdenum	Contraction of the Contraction o	2000	J.v.	Units:	mg/L	Tale Tollar	ATT SHAPE OF THE S	and the second	C2-0v	
IC Type	Original Sample IO	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (16)	Limit (%)	RPD (%)	RPD Limit (%)
IS/MSD	17858006		0.4	99.6		98.4	75	125	17	.20
elenium				Units:	mg/L					
IC Typii	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate & Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (96)
(I-M5			0.1	104.0			80	120		
B-MS			0.1	104.0			30	120		
E MS			0.3	97.9			80	320		
18		<0.005								
		40.009								
10		<0.005								
10		<0.005								
ASCAMBIO:	17718001		0.4	105.0		101.0	75	175	3.1	20
HS/MSD	17845026		0.4	80.9		99.3	75	125	1.5	-20
IS/MSD	17861001		0.4	106.0		106.0	75	125	2.3	50
IS/MSD	17868001		104	1060		108-0	75	325	2.6	20
s/Msb	17868006		0.4	106.0		100.0	75	125	67	20
hallium				Units:	mg/L					
СТуре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit [%]
B-M5			0.1	97.6			30	320		
B-645			0.1	93.0			80	120		
10-441			0.1	97.1				120		
10		<0.0005								
16		<0.0005								
un.		<0.0005								
IS/MSD	17714001		0.4	95.4		94.9	75	125	0.8	-20
5/MSD	1784/028		0.4	96.0		94.6	75	125	16.	20
IS/MSD	17861001		0.4	96.0		94.6	75	125	4.6	20
S/MSD	17868001		0.4	96.4		917	75	125	1.6	20
	17868006		0,4	100.0		99.3	75	125	0.8	26
IS/MSD										
Mercury	200000	70-7		Units:	mg/L					
	Original Sample ID	Blank Result	Splice Amount	Units: Spike W Recovery	mg/L	Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	KPD (%)	RPD Limit (%)





Account #: 2040

Client: Basin Electric Power Cooperative

Mercury				Units:	mg/L					
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Secovery	Lower Control Limit (16)	Limit (%)	RPD (%)	RPD Limit (%)
AS/MSD	178580Q6		0.002	96.0		97.0	70	130	9.0	20
Fluoride				Units:	mg/L					
дс тури	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate & Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (95)
RM-F			3,39	103.0			85.8	111		
RM-F			3,39	98 8			83.8	111		
rai			0.5	(00.0			90	230		
FB.F			0.5	100.0			90	110		
me.			0.5	104-0			90	110		
rii-r			0.5	:100:0			90	110		
re c			0.5	100.0			90	110		
FB-F			0.5	102.0			110	ita		
AB-II		etri								
104		:01								
16.7		dit								
(B €		\$0.1								
18-F		×0.1								
in é		\$0.1								
AS/MSD.4	17946001		10	94.0		107.0	w	120	(4)	40
AS/MSO-F	17868003		0.5	19.0		31.0°	60	120	3.8	.20
AS/MSO-)	18057002		25	92.0		86.0	80	120	2.0	.20
Total Dissolve	d Solids			Units:	mg/L	-				
2С Туре	Original Sample ID	Blank Result	Spike Ammunt	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (N)	RPD Limit (%)
RM.			736	1010			9035	110.115		
RM.			736	101.0			9035	110.15		
46		<10								
ø		<10								
uii.	17448005								0,1	30
	17874001									





Account #: 2040 Client: Basin Electric Power Cooperative

	Bismarck, ND Phone: (701) 258-97						ı							ge		of		
1	BASIN ELECTRIC POV Leland Olds State		-		Acc	cour	nt #:							hone		70	657	5488
	3901 HIGHWAY 2	200A				ntac	1.5	1		11	1/2	. ,	, E	mail:	0	Knutso	no bepl	
	STANTON, ND 58	35/1			Har	me o	of S	150/ ami	oler	11/4	K	Dil			ndible a bept, con			
lling Add	dress (indicate if different	from above):								ME	6		F	or e-ma		ort check bo		×
					Qui	ote	Nun	nbe	r						Dat	e Submitt	ed: 6-8-	23
					Pro	ject	Na	me	Nur	nbe	er:	11/			Pur	chase Ord	der#: 15266	- 14
	Secretary Control		1		-	0_) (e Ty				_	6		01
	Sample Information		Filtered	YON						HUDS							Analysis	3
Only Lab Number		Sample Matrix PW- Potable Water GW - Groundwater WW - Wastewater SW - Surface Water S - Soll/Sludge O - Other	Date	Time	Untreated	Sterile	500 ml HNO3	1000 ml H2SO4	250 ml H2SO4	1000 ml Nach HA	Amber HCI	Amber Unpres.	VOC Vials HCI	Amber H2SO4 40 ml Vials H2SO4	Other:			T
	Sample ID		Sampled	Sampled	5	St	20	9	25	¥ V	Ā	Ā	>	A 64	ő	A	nalysis Req	uired
101	MW-2017-10 MW-2017-11	GW	1-1-2	1400	Н		7	-		ð	Н		+	+		D, (a	JOI P	SOH
003	MW-2016-12		6-1-23	1045			Н			Ŷ				+		56,	15, 12a, 1	1: Ha
NU	MIN-2016-13		6-7-23	1030						V						Ma	81 17	Radion
05	MW-2017-8D		1.7.23	0845			Т			X						226 +	228	Major
206	Dup,		66-23	1400			Ĭ			X	J.C.						1	
700	MW-2017-8		6.7-23	0955												B. Co	x, Cl.	F. 504
208	MW-2017-7		6-7-23	1310														
2009	MW-2017-4	V	6-7-23	1425			V										V	
omments	s:																	
	Transferred by:	Date:	Time:	Sample (Cond	litio	n:		,	Re	ceiv	ed	by:		1	Date:	Time:	Temp:
Miller	mium Express	6-8-23						1	W	5	XU		-		80	ma3	300	TM 815
		1 1 1 1 1					-	-				_				81.	1538	3.200



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

Workorder: 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:



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

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.

Report Date: Wednesday, July 12, 2023 2:03:55 PM





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.



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

Analytical Results

Lab ID: 19625001 LOS POND MW-Sample ID:

Date Collected: Date Received: 06/26/2023 14:06 06/28/2023 16:24 Matrix:

Groundwater

2017-10

Collector: Client

Temp @ Receipt (C): 5.6

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	328	mg/L	25	5	07/07/2023 10:31	07/07/2023 10:31	AMC	

Method: EPA 245.1

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 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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 6020B

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 16:31	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	

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.

Report Date: Wednesday, July 12, 2023 2:03:55 PM

Page 3 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Date Collected:

Analytical Results

 Lab ID:
 19625001

 Sample ID:
 LOS POND MW

2017-10

LOS POND MW- Date Received:

06/26/2023 14:06 06/28/2023 16:24 Matrix: Groundwater

Collector: Client

Temp @ Receipt (C): 5.6

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	11.7	mg/L	2.0	1	07/06/2023 09:53	07/06/2023 09:53	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.77	mg/L	0.1	1	06/30/2023 18:53	06/30/2023 18:53	AMC	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	682	mg/L	10	1	07/05/2023 16:55	07/05/2023 16:55	RAA	





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 19625002

 Sample ID:
 LOS POND MW

2017-11

Date Collected: Date Received:

06/26/2023 12:11 06/28/2023 16:24 Matrix: Groundwater

Collector: Client

Temp @ Receipt (C): 5.6

Method: ASTM 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 245.1

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 6010D

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 6020B

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	MDE	
Selenium	<0.005	mg/L	0.005	5	06/29/2023 16:48	07/06/2023 16:49	MDE	
Thallium	<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:49	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.

Report Date: Wednesday, July 12, 2023 2:03:55 PM

Page 5 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Date Collected:

Analytical Results

Lab ID: 19625002 Sample ID: LOS POND MW-

2017-11

LOS POND MW- Date Received:

06/26/2023 12:11 06/28/2023 16:24 Matrix: Groundwater

Collector: Client

Temp @ Receipt (C): 5.6

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	11.7	mg/L	2.0	1	07/06/2023 09:54	07/06/2023 09:54	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.70	mg/L	0.1	1	06/30/2023 19:10	06/30/2023 19:10	AMC	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	571	mg/L	10	1	07/05/2023 16:55	07/05/2023 16:55	RAA	

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.

Report Date: Wednesday, July 12, 2023 2:03:55 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 19625003
 Date Collected:
 06/26/2023 12:11
 Matrix:
 Groundwater

 Sample ID:
 Dup
 Date Received:
 06/28/2023 16:24
 Collector:
 Client

Temp @ Receipt (C): 5.6

Method: ASTM D516-16

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 245.1

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 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
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 6020B

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 16:53	MDE	
Arsenic	0.0100	mg/L	0.002	5	06/29/2023 16:48	07/06/2023 16:53	MDE	
Barium	0.0490	mg/L	0.002	5	06/29/2023 16:48	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	

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.

Report Date: Wednesday, July 12, 2023 2:03:55 PM

Page 7 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 19625003
 Date Collected:
 06/26/2023 12:11
 Matrix:
 Groundwater

 Sample ID:
 Dup
 Date Received:
 06/28/2023 16:24
 Collector:
 Client

Temp @ Receipt (C): 5.6

Method: SM4500-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: SM4500-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 10:16	AMC	_

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	583	mg/L	10	1	07/05/2023 16:55	07/05/2023 16:55	RAA	

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.

Report Date: Wednesday, July 12, 2023 2:03:55 PM

Page 8 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

Lab ID: 19625004 Sample ID: LOS LANDFILL

MW2016-12

Date Collected: Date Received: 06/26/2023 08:40 06/28/2023 16:24 Matrix: Gro

Groundwater Client

Temp @ Receipt (C): 5.6

Method: ASTM D516-16

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 245.1

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 6010D

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	
Lithium	<0.02	mg/L	0.02	1	06/29/2023 16:48	07/05/2023 16:25	SLZ	

Method: EPA 6020B

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	
Lead	<0.0005	mg/L	0.0005	5	06/29/2023 16:48	07/06/2023 16:58	MDE	
Molybdenum	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	

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.

Report Date: Wednesday, July 12, 2023 2:03:55 PM

Page 9 of 20



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

Analytical Results

Lab ID: 19625004 LOS LANDFILL Sample ID:

MW2016-12

Date Collected: Date Received: 06/26/2023 08:40 06/28/2023 16:24

Matrix: Groundwater Collector:

Client

Temp @ Receipt (C): 5.6

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	38.9	mg/L	2.0	1	07/06/2023 10:04	07/06/2023 10:04	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.60	mg/L	0.1	1	06/30/2023	06/30/2023 19:22	AMC	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1360	mg/L	10	1	07/05/2023 16:55	07/05/2023 16:55	RAA	





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

Lab ID: 19625005 Sample ID: LOS LANDFILI

2016-13

19625005 Date Collected: LOS LANDFILL MW- Date Received:

06/26/2023 07:50 06/28/2023 16:24 Matrix: Groundwater

Collector: Client

Temp @ Receipt (C): 5.6

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	45.7	mg/L	5	1	07/07/2023 10:56	07/07/2023 10:56	AMC	

Method: EPA 245.1

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 6010D

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 6020B

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 16:48	07/06/2023 17:02	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.

Report Date: Wednesday, July 12, 2023 2:03:55 PM

Page 11 of 20



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

Analytical Results

Lab ID: 19625005 LOS LANDFILL MW-Sample ID:

Date Collected: Date Received:

06/26/2023 07:50 06/28/2023 16:24

Matrix: Collector: Client

Groundwater

2016-13

Temp @ Receipt (C): 5.6

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	59.6	mg/L	2.0	1	07/06/2023 10:05	07/06/2023 10:05	AMC	

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.50	mg/L	0.1	1	06/30/2023 10:30	06/30/2023	AMC	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1500	mg/L	10	1	07/05/2023 16:55	07/05/2023 16:55	RAA	_



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

Result	ts Summary						WO #:	196	25
Sulfate				Units: mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	Spike Duplicate 16 Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	APD (%)	RPD Limit (16)
FB			100	101.6		RS	115		
10			100	105-0		85	115		
-B			100	107 6		85	115		
Få			100	101.0		85	115		
HI.			100	94.5		85	115		
FB			100	98-2		85	115		
ii.			100	94.6		85	115		
			100	:100,0		85	115		
16		rd.							
ia .		15							
ia,		15							
la		45							
in .		d							
18		0							
10		45							
NO.		Q.							
IS/MSD	19619001		1000	88.0	88.3	85.	115	0.0	-20
IS/MSD	19625002		500	108.2	107.1	85	115	0.7	20
IS/MSD	19772001		500	111.6	120.6	85	115	0.7	20
NS/MND	19801002		500	621	76.4	85	115	5.6	26
IS/MSD	19801012		1000	85.9	88.9	83	115	1.3	20
IS/MSD	19972005		500	84.4	88.0	85.	115	2.5	20
IS/MSD	20040001		500	60.5	66.3	RS	115	4.Z	20
hloride				Units: mg/L					
СТуре	Original Sample ID	Blank Result.	Spike Amount	Spike % Recovery	Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
4			30	93.3	,	90	110		
ă.			80	93.3		90	iio		
d			30	92.1		90	110		





Account #: 2040

Client: Basin Electric Power Cooperative

Chloride QC Type	Original Sample ID	Blank Wesult	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
				Recovery		% Recovery	Limit (%)	Limit (%)	14.5	
1.74			30	93.9			90	110		
LFB			30	92.9			50	110		
40			âŭ	92.6			.90	110		
MB		×2.0								
мв		<20								
ME		42.0								
MD		×2.0								
		-								
MO		-2.0								
MB		×2.0								
MIS		<3.0								
CHANGE.	19619003		30	THE		145.2	80	120	0.3	20
MS/MSD	19772006		30	94.0		961	30	120	0.0	20
naj resur				200		200	-		, or o	
MS/MSD	19926001		90	1000		123.3	90	120	0.7	201
Boron				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike 9 Recovery		Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RIPE LLYOE (96)
JB-OE			0,4	1010			85	115		
Via		-10.1								
MS/MSD	19025001		0.4	303.6		133.00	70	3:10:	2.6	20
Calcium				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-MI			100	110.0			85	115		
ма		<1								

QUP.	19828001								10	20
Lithium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	BPD (%)	RPD Limit (%)
J-D-OE			0.4	106.0			85	115		
MB		<0.04								
-		-0.04								
MS/MSD	19625001		0.4	um q		101.0	70	(a)	01	30
				No. 2						
Boron QC Type	Original Sample ID	Blank Result	Spile Amount	Units: Spike M	mg/L	Spile Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)





Account #: 2040

Client: Basin Electric Power Cooperative

Calcium QC Type	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
D5/PDSD	17146005		100	Recovery 105.0		% Recovery 105.0	Limit (16)	Limit (%) 125	0.2	20
D5/P050	17346005		100	105.0		\$05.0	42	125	0.2	. 20
DS/PDSD	19772001		100	95.9		97.6	75	125	0.7	20
DS/PDSO	19807001		100	1060		105.0	75	125	àā	-20
DS/PDSO	19922006		100	97.9		97.5	75	125	0.2	20
DS/PDSD	19922008		100	108-0		108.0	75	125	0.0	26
Antimony				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike N	mg/c	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
NS/MSD	19637001		0.4	Recovery 103.0		% Recovery	10 (W)	Limit (N) 130	1.5	ZD-
Arsenic				Units:	mg/L					- Towner o
ОС Туре	Original Sample ID	Blank Result	Spike Amaunt	Spike % Recovery		Spile Duplicate % Recovery	Limit (%)	Limit (%)	RPD (%)	RPD Llinit (%)
IS/MSD.	19637001		0.4	1030		101.0	70	130	2.7	20
Barium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Ouplicate	Lower Control	Upper Control Limit (%)	RED (%)	RPD LEvet (%)
IS/MSD	19637001		0,4	98.8		98.1	70	130	0.7	2/5
seryllium				Units:	mg/L					
тс Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate N Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD [76]	RPD Limit (%)
IS/MSD	19637001		0.4	101.0		98.5	70	130	2.3	20
admium				Units:	mg/L					
СТуре	Original Sample (0	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Lipper Control	RPE (%)	RPD Limit (%)
IS/MSD	19637001		0.4	Recovery 102.0		% Recovery 103.0	10 (%)	Limit (%)	12	70
hromium				Units:	mg/L					
LC Type	Original Sample ID	Blank Hesult	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
IS/M\$D	19637001		0,4	103,0	-	% Recovery 102.0	Limit (%)	130	0.7	-20
				24.55						
Cobalt IC Type	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Some Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit 1661
- 11		BINNIK HESWIT	-3-1	Recovery	£	% Recovery	Limit (%)	Limit (15)	10.7	(20.3)
IS/MSD	19637001		0.4	(103/0)		1,02,0	70	3.30	1.0	26
ead				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike til Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
	19637001		0.4	97.9		97.1	70	130:	1.0	20
HS/MSD										
Molybdenum				Units:	mg/L					
Volybdenum	Original Sample ID	Blank Result	Spike Amount	Spike %	1.7	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
	Original Sample ID 19637001	Blank Result	Spike Amount		1.7	Spike Duplicate % Recovery 110.0	Lower Control Limit (%)	Upper Control Umit (%)	RPD (%)	RPD Limit (%)
Malybdenum IC Type		Blank Result	14-10-1	Spike % Recovery	1.7	% Recovery	Limit (%)	Limit (%)		





Account #: 2040 Client: Basin Electric Power Cooperative

Thallium				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 (%)
AS/AASD	19637001		0.4	95.3		94.2	70	130	11	.20
Antimony				Units:	mg/L					
дс Туріг	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate S Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (96)
PK	19637001		0.1	107.0		- necostry	75	125		
Arsenic				Units:	mg/L					
ac Type	Original Sample ID	Blank Kesult	Spike Amount	Spire in		Spike Duplicate % Recovery	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
PK.	19637001		0.2	Hecovery 104.0		A MECOVERY	7.5	125		
Barium				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike %	- 12	Spike Duplicate	Lower Control	Upper Control	HPD (%)	RPD Limit (96)
PX	19637001		0.1	Recovery 100.0		% Recovery	Limit (%) 75	Limit.(%)		
				Males	marie 46					
Beryllium C Type	Original Sample ID	Blank Result	Spike Amount	Units: Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
PK.	19637001	media (seant)	0.1	Recovery 114.0		% Recovery	Limit (%)	Limit (%)	New York	No or Comme Hall
			-							
Cadmium	San	200	14350.4	Units:	mg/L	A	140-00-00-00-00-00-00-00-00-00-00-00-00-0	Maria Sarah	Series	1 April 100
IC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery	4	Spike Duplicate Williams	Lower Control Limit (%)	Upper Control Limit (%)	RPD [NG]	RPD Limit (%)
PE	19637001		0.1	98.9			75	125		
hromium				Units:	mg/L					
(C Type	Original Sample (0	Blank Result.	Spike Amount	Spike W. Recovery		Spike Duplicate 6 Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
PK	19837001		0.1	104.0			75	125		
Cobalt			-	Units:	mg/L					
дс Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Lunit (%)
PK	19637001		0,2	105.0		in the state of	75	125		
ead				Units:	mg/L					
ac Type	Original Sample ID	Blank Result	Spike Amount:	Spike W		Spike Duplicate	Lower Control	Upper Control	KPD (%)	RPD (amit (%)
PK.	19637061		0.1	96.I		% Recovery	Umit (%)	Limit (%) 125		
Molybdenum				Units:	mg/L	-				
(С Туре	Original Sample 10	Blank Result.	Spike Amount	Spike %	1100	Spile Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (96)
PK	19637001		0.1	Recovery 112.0		% Recovery	Limit (%) 75	Limit (%) 125		
Selenium				Units:	mg/L					
QC Type	Original Sample III	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
Pat	19637001		0.3	Recovery 98.2		% Recovery	Limit (%) 75	Limit (%) 125		
Thallium				Units:	mg/L					
IC Type	Original Sample (D	Blank Result	Spike Amount	Spite %	- Hear	Spike Duplicate	Lower Control	Upper Control	RPD [%]	RPD Limit (%)
PK.	19637001		0.1	Recovery 93.0		% Recovery	Limit (%) 75	Limit (%) 125	76	
Antimony				Units:	mg/L					
C Type	Original Sample ID	Blank Result	Spike Amount	Spike N	mg/L	Spile Duplicate	Lower Control	Upper Control	RPD (N.)	RPD Limit (%)
				Becovery		N-Recovery	Limit (%)	Limit (%)		



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

Antimony				Units:	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 (%)
Mil		< 0.001		HELDERY		- necovery	Direct Anni	Linite (M)		
MS/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 % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RED (%)	RPD Limit (%)
10-M5			0.1	Recovery 101.6		/# Nectovery	an Control	320		
Mili		<0.002								
MS/MSII	19625001		0,4	104.0		101.0	75	125	3.4	30
Barium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Ammunt	Spike %		Spike Duplicate	Lower Control	Lipper Control	APD (%)	RPD Limit (%)
EFB-MS			0.1	Recovery 100.0		% Recovery	Limit (%)	Limit (%)		
Ma		<0.002								
MS/MSD	19675001		0.4	100.0		99.5	75	125	0.4	20
Beryllium				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Ouplicate % Recovery	Lower Control Limit (%)	Upper Control	RPG (%)	RPD Limit (%)
FB-M5			0.1	99.0		N NECOVERY	30 .	120 120		
MO		<0.0005								
M5/M5D	19625001		0.4	99.8		99.4	75.	125	1.3	ZD-
Cadmium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Duplicate	Lower Control	Upper Control	KPD (%)	RPD Limit (%)
FRIME			0.1	ID7.6		% Recovery	Limit (N)	Limit (%)		
Mily		ri) 0005								
MS/MSD	19625001		0.4	102.0		102.0	75	125	0.5	20
Chromium	-	2.7.		Units:	mg/L					
рстури	Original Sample ID	Blank Birsult	Spike Amnunt	Spar to Recovery		Spire Duplicate % Recovery	Limit (%)	Lipper Control Limit (%)	RPD (%C)	RPD LIMIT (M.)
FB-MS			0.1	(08,0			80	120		
MB		<0.007								
	19675001		0.4	103.0		101.0	75	125	1.0	20
MS/MSD										
MS/MSD.				Units:	mg/L					
MS/MSD Cobalt										
	Original Sample (D	Blank Result	Spike Amount	Spike W Recovery		Spike Duplicate M. Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
Cobalt	Original Semple (D	Blank Result	Spike Amount	Spike N Recovery		Spike Duplicate N Recovery	Lower Control Limit (%)	Upper Control Limit (%) 120	KPD (%)	RPD Limit (%)
Cobalt OC Type	Original Sample ID	Blank Result	1.00	Recovery		Spike Duplicate N. Recovery	Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)





Account #: 2040

Client: Basin Electric Power Cooperative

Lead QC Type	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
	ordinar semble (n	South treatment		Recovery		% Recovery	Limit (%)	Limit (%)	secritar.	ne a come (no)
FH-M5			0.1	104.0			80	120		
MB		<0.0005								
MS/MSD	19625001		0.4	102.0		102.0	75	125	0.5	-20
Molybdenum	_			Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spire W	g/ c	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
FB-M5			0.2	Recovery 112.0		% Recovery	Limit (%)	Limit (%)		
				2,000			-			
ME		<0.002								
MS/MHO	19025001		0.4	3040		105.0	n	125	11	ZD
WAY WOOD	13813001		9.4	1040		2010	-14	113	14	120
Selenium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spire Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (16)
FB-M5			0.1	Recovery 95.7		% Recovery	Limit (%) 80	Limit (%) 120		
MRI		<0.005								
MS/MSD	19625001		0.4	101.0		103.0	75	125	45	20
	1000					13		1.5	2	
Thallium				Units:	mg/L					
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
311-MS			0.1	99.4			81	120		
MB		<0.0005								
M5/M5D	19675001		0.4	98.1		99.0.	75	125	1.0	20
Mercury			1200	Units:	mg/L					270
QC Type	Original Sample ID	Blank Result	Spike Ammunt	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (91)
F6			0.002	87.8			85	115		
MB		<0.0002								
MS/MSD	19227003		0.002	95.6		67.8	70	150	54	20
M5/M5D	19625004		0.002	87.2		19.1	70	(3)	57	20
TOWN TRANSPORT	A PORTUNE		V1095	11/-2		-8.4	***	-	-	10
M5/M50	19922001		0.002	90.8		99.0	\overline{m}	(30	0.0	20
ALCO MED	10095047		ANN	0.000		W. A.	100	100		20
MS/MSD	19922012		0.002	910		97.5	M	3.00	.5.4	20
MS/MSD	20030001		0,002	91.6		50.6	70.	130	9.0	20
Fluoride				Units:	mg/L		_			
qc Type	Original Sample ID	Blank Result	Spike Amount	Spike %	mg/L	Spike Duplicate	Lower Control	Lipper Control	RPD (%)	RPD Limit (%)
RMF		-30/30/	139	Recovery 97.3		% Recovery	Limit (N)	Limit (%)		
on the same of the			2.29				44.4			
MF			0.5	98.0			00	110		
								0.00		
994			0.5	98.0			90	110		





Account #: 2040 Client: Basin Electric Power Cooperative

Fluoride				Units:	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 (%)
MB-F		<0.1								
MB-F		30.1								
WE-F		:0.1								
MS/MSD-4	19625001		0.5	102.0		104.0	80	120	0.0	30
MS/MSD-F	19770001		0.5	102.0		104.0	30	750	13	20
Total Dissolve	ed Solids			Units:	mg/L					
ОС Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Saike Duplicate % Recovery	Lower Control Limit (N)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
CRM			736	98.0			90.35	110.13		
M0		×10								
our	19324001								0.0	30
our	1967.5005								0.0	20





Account #: 2040 Client: Basin Electric Power Cooperative

MVTL	Minnesota V 2616 East Bi Bismarck, N Phone: (701) 258-	tories, Inc.	Basin WO: 1	Electric I 9625	Pow	rer	Сооре	Chain of Custody Page of				
Toll Free: (80	00) 279-6885	Fax: (701) 258-9724		1000000					ork Order #	#		
Company Name		ectric Power Coop.		Account #	2040			Phone #	01-745-7238	701-557-5	488	
	3901	nd Olds Station Highway 200A nton, ND 58571		Contact	Mark Dihl	e			epc.com akn		pc.com	
Billing Address	(indicate if differen			Name of S	ampier				mey.hurshman@aecom.com on.lach@aecom.com			
				Quote Nu	mber				ate Submitted			
				Project Na	LOS CC		ells	Pi	urchase Order <u>67</u>	r# '5266-04		
Lab Use Only Lab	Sa	mple ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A		Analysis Re	quired		
001	LOS PON	D MW-2017-10	GW	6/26/2023	1406	3		B, Ca, Cl, F, S Li, Hg, Mo, Se	, TI, Ra226, R	a228, TD	S	
002	LOS PONI	MW-2017-11	GW	6/26/2023	1211	3	N	B, Ca, Cl, F, S Li, Hg, Mo, Se				
003		Dup	GW	6/26/2023	1211	3	TO	B, Ca, CI, F, S Li, Hg, Mo, Se	O4, Sb, As, B	a, Be, Cd,	Cr, Co,Pb,	
004	LOS LANDF	ILL MW2016-12	GW	6/27/2023	840	3		B, Ca, Cl, F, S Li, Hg, Mo, Se	, TI, Ra226, R	a228, TD	S	
005	LOS LANDFILL MW-2016-13 GW				750	3	N		Io, Se, TI, Razzo, Razzo, TDS I, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,Pb, Io, Se, TI, Razze, Razza, TDS			
Comments:				1		_						
Tran	sferred by	Date	Time /m	Received	by	-	Dat		Temp	ROI	Therm. #	
2.	AFRE33		- Tell	TUC	_	28	Ju	23 1624	5.60	Y/N	TM 920	

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



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

Workorder: LOS CCR Wells (25638) **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:



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





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.



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

Analytical Results

Lab ID:25638001Date Collected:08/23/2023 08:10Matrix:GroundwaterSample ID:LOS LANDFILL MWDate Received:08/23/2023 15:49Collector:Client

2016-12

Temp @ Receipt (C): 6.1 Received on Ice: Yes

Method: ASTM D516-16

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Sulfate	26.1	mg/L	5	1	08/29/2023 11:50	08/29/2023 11:50	EJV	

Method: EPA 245.1

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Mercury	<0.0002	mg/L	0.0002	1	08/24/2023 10:53	08/24/2023 12:53	MDE	

Method: EPA 6010D

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Boron	0.25	mg/L	0.1	1	08/23/2023 16:48	08/29/2023 12:15	MDE	
Calcium	15.8	mg/L	1	1	08/23/2023 16:48	08/30/2023 11:22	MDE	
Lithium	<0.02	mg/L	0.02	1	08/23/2023 16:48	08/29/2023 09:36	MDE	

Method: EPA 6020B

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Antimony	<0.001	mg/L	0.001	5	08/23/2023 16:48	09/05/2023 17:20	MDE	
Arsenic	<0.002	mg/L	0.002	5	08/23/2023 16:48	09/05/2023 17:20	MDE	
Barium	0.0507	mg/L	0.002	5	08/23/2023 16:48	09/05/2023 17:20	MDE	
Beryllium	<0.0005	mg/L	0.0005	5	08/23/2023 16:48	09/06/2023 10:06	MDE	
Cadmium	<0.0005	mg/L	0.0005	5	08/23/2023 16:48	09/05/2023 17:20	MDE	
Chromium	0.0029	mg/L	0.002	5	08/23/2023 16:48	09/05/2023 17:20	MDE	
Cobalt	<0.002	mg/L	0.002	5	08/23/2023 16:48	09/05/2023 17:20	MDE	
Lead	<0.0005	mg/L	0.0005	5	08/23/2023 16:48	09/05/2023 17:20	MDE	
Molybdenum	0.0101	mg/L	0.002	5	08/23/2023 16:48	09/05/2023 17:20	MDE	
Selenium	<0.005	mg/L	0.005	5	08/23/2023 16:48	09/05/2023 17:20	MDE	
Thallium	<0.0005	mg/L	0.0005	5	08/23/2023 16:48	09/05/2023 17:20	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.

Report Date: Friday, September 8, 2023 4:15:59 PM



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

Analytical Results

Lab ID:25638001Date Collected:08/23/2023 08:10Matrix:GroundwaterSample ID:LOS LANDFILL MWDate Received:08/23/2023 15:49Collector:Client

2016-12

Temp @ Receipt (C): 6.1 Received on Ice: Yes

Method: SM4500-CI-E 2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Chloride	41.5	mg/L	2.0	1	08/29/2023 08:53	08/29/2023 08:53	EJV	_

Method: SM4500-F-C-2011

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Fluoride	0.66	mg/L	0.1	1	08/24/2023 15:08	08/24/2023 15:08	RAA	

Method: USGS I-1750-85

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Total Dissolved Solids	1510	mg/L	10	1	08/25/2023 13:07	08/25/2023 13:07	RAA	





Account #: 2040 Client: Basin Electric Power Cooperative

C Result	ts Summary						WO #:	256	38
Sulfate QC Type	Original Sample ID	Blank Result.	Spike Amount	Units: mg/	L Spike Duplicate % Recovery	Lower Control	Upper Control Umit (%)	APD (%)	RPD Limit (%)
FB			100	Recovery 97.7.	эь кесочегу	Limit (%) RS	115		
14			100	99.7		85	115		
FB			100	96.6		85	115		
10			100	96.6		85	115		
As		8							
As .		S							
nis .		16.							
MD		35							
MS/MSD	25796002		500	79.8	17.7	95	115	12	20
M5/M5D	25787002		100	78.5	76.1	RS	115	1.0	20-
AS/MSD	25881007		500	84.9	83.0	RS	115	1.0	20
AS/MSD	25917001		500	91.6	91.0	RS	115	0.4	20
Chloride				Units: mg/	ι				
QC Түре	Original Sample ID	Blank Result.	Spike Amount	Spike % Recovery	Spike Duplicate % Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
H			30	101.0		90	330		
т			30	03.0		90	230		
10			30	103.0		90	33.0		
m			30	102.0		90	110		
rii .			30	303.0		90	110		
ND.		<2.0							
AR		<2.0							
AB		<2.0							
AB.		<2.0							
AR		<2.0							
AS/MSD	25546001		30	116.2	114.2	60	120	0.6	20
AS/MSD	25881002		30	97 0	98 h	80	120	1.2	20
est stone				Units: mg/	L				
Calcium ac Type	Orly in al Semple (D	Blank Result	Spike Amount	Spike %	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)





Account #: 2040

Client: Basin Electric Power Cooperative

Boron				Units:	mg/L					
OC Type	Original Sample 10	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (96)
DS/PDSDD	25673001		3	92.1		38.8	75	125	11	.20
Calcium				Units:	mg/L					
QC TYDH	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (III)
D5/P0500	25544001		500	1040		104.0	75	125	0,4	-50
DS/PTISDD	25544001		100	105.0		104.0	75	125	üs	30
DS/PDSDD	25638901		100	1010		103.0	76	125	0.2	20
D5/PD5DD	257511072		1000	(03.0)		103.0	75	125	0.5	30
DS/PDSDD	25791002		500	97.1		95.9	75	125	0.6	/XD
05/P0500	25881007		100	91.1		92.0	15	125	0.1	20
DS/PDS0D	26051007		100	106.0		105.0	75	125	1.2	20
ithium				Units:	mg/L					
IC Type	Original Sample III	Blank Result	Spike Amount	Space % Recovery		Spike Duplicate is Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD LETUE (%)
DS/PDSDD	25638001		0.4	94.2		92.6	75	125	1.7	20
Intimony				Units:	mg/L					7.0
IC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
is/MSU	25512001		0.4	104.0		106.0	70	130	1.9	26
Arsenic				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Spike Ammunt	Spike M Recovery		Spike Duplicate In Recovery	Lower Control Limit (M)	Limit (%)	RPD (NL)	RPD Limit (%)
IS/MSD	35512001		0.4	107.0		306.0	-70	130	9.8	20
Sarium				Units:	mg/L					
IC Type	Original Sample 10	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
ts/MSD	25512001		0.4	99.4		101.0	70	130	1.5	20
seryllium				Units:	mg/L					
IC Type	Original Sample ID	Blank Result	Splike Amount	Spike IF Recovery		Spike Duplicate % Recovery	Lower Control	Upper Control Limit (%)	KPD (%)	RPD Limit (%)
IS/MSD	25512001		0,4	110,0		110.0	70	130	0.0	- 20
Cadmium				Units:	mg/L					
1€ Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (N)	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
45/MSD	25512001		0.4	104.0		106.0	70	130	1.7	20-
hromium				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 (%)
is/MSD	25512001		0.4	105.0		107.0	70	130	1.9	20
Cobalt				Units:	mg/L					
СТуре	Original Sample (II)	Blank finsuft	Spike Amount	Spike % Recovery		Spike Ouplicate % Recovery	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
1990	The Manuscriptor (or	-aile intant	There is a complete	Recovery		75 Recovery	Limit (%)	Limit (%)	162-74	Josephine.





Account #: 2040

Client: Basin Electric Power Cooperative

Lead				Units:	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 (%)
MS/MSD	25512001		0.4	102.0		102.0	70	130	1.0	20
Molybdenum				Units:	mg/L					
дс тури	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Dupkcate S Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD Limit (96)
AS/MSD	25512001		0.4	107.0		108.0	70	130	0.7	50
Selenium				Units:	mg/L					
ac Type	Original Sample ID	Blank Kesult	Spike Amount	Spike in Recovery		Spike Duplicate % Recovery	Lower Control	Upper Control Limit (%)	RPD (%)	RPD Limit (%)
AS/MSD.	25512001		0.4	96.8		104.0	70	130	7.0	25
Thallium				Units:	mg/L					
QC Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate & Recovery	Lower Control	Lipper Control Limit (%)	HPD (%)	RPD Limit (%)
MS/MSD	25512001		0.4	96.3		97,0	70	130	0.8	20-
Beryllium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
PK/SPKD	25638001		0.1	97.3		97.fl	75	125	0.5	20
Boron				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control Limit (%)	RPC [W]	RPD Limit (%)
FB-Ω€			D,4	107.0			85	115		
AD .		<0.1								
Calcium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate Si Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (34)
FB-MI			100	111.0			85	115		
AB		-ci								
DUP.	25544002								1.9	20
Lithiam				Units:	mg/L					
DC Type	Orly nal Sample (D	Blank Result	Spike Amount	Spike W	mgr	Spike Duplicate % Recovery	Lower Control	Upper Control Limit (%)	RPD-(%)	RPD Limit (%)
JII-OE			0.4	Mecovery 104.0		% secovery	85	115		
de		<0.04								
Antimony				Units:	mg/L					
с Туре С Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery	g/ c	Spike Duplicate % Recovery	Lower Control Limit (%)	Lipper Control Limit (%)	HPD (%)	RPD Limit (%)
FR-MS.			0.1	104.6		a nerovery	80 Film((le)	120		
Ats.		<0.001								
AS/MSD	25628001		0.4	1060		109 0	75	125	30	20
Arsenic				Units:	mg/L					
QC Type	Original Sample (D	Blank Result	Spike Amount	Spike %		Spike Ouplicate	Lower Control	Upper Control	RPD (%)	RPD Linux (11)
FB-M5			0.4	Mecovery 101.0		% Recovery	Limit (%)	120 120		





Account #: 2040

Client: Basin Electric Power Cooperative

Arsenic	- Carlos	4.00	NAT.	Units:	mg/L	La a la colonia		40000	GR C	And the same of
QC Type	Original Sample ID	Blank Result	Spike Amount	Špile 16 Recovery		Spike Duplicate Recovery	Lower Control Limit (16)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
AS/AASD	25679001		0.4	105.0		108.0	75	125	2.6	.20
Barium				Units:	mg/L					
дс тури	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Dupkcate S Recovery	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
7 0-M5			0.1	Recovery 104.0		- necovery	Limit (%)	Limit (%) 120		
AEI		<0.002								
ds/MSD	25628001		0.4	97.2		96.1	75	125	a.s	305
Beryllium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Scike Duplicate % Recovery	Lower Control Limit (N)	Lipper Control Limit (%)	KPD (%)	RPD Limit (%)
FB-MS			0.1	98.8		76 HELDVETY	80	120		
		-								
All		<0.0005								
AS/MSD	25628001		0.4	1160		115.0	75	125	3.0	20-
Cadmium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike %		Spike Ouplicate	Lower Control	Upper Control	RED (%)	RPD Limit (%)
FB-445			0.1	Recovery 106.4		™ Recovery	Limit (%)	Limit (%)		
AB.		s0.0005								
ns/msu.	25678001		0.4	105.0		102.0	25	125	2.0	26
hromium				Units:	mg/L					
DC Type	Original Sample ID	Blank Result	Spike Annuint	Spike M Recovery		Spike Duplicate III Recovery	Lower Control Limit (M)	Limit (%)	RED (N)	RPD Limit (W)
FB-M5			0.1	104.0		m nectovery	160	120		
Ala		<0.007								
AS/MSD	25628001		A.d.	105-0		105.0	115	125	2.6	- 20
Cobalt				Units:	mg/L					
ос Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spike Duplicate % Recovery	Lower Control Limit (%)	Upper Control	RPD (%)	RPD Limit (%)
FB-M5			0.2	104.0		A Recovery	Limit (%)	120 120		
eff.		<0.002								
15/5/50	75628003		0.4	94.1		41.4	75	125	97	205
ead				Units:	mg/L			-		
2C Type	Original Sample ID	Blank Result	Splike Amount:	Spike is Recovery		Spike Duplicate % Recovery	Lawer Control Limit (%)	Lipper Control Limit (%)	RPD (%)	RPD Limit (%)
FB-MS			0.1	101.0			81	120		
All		<0.0005								
MVMSD	25628001		0.4	99.4		100 0	45	175	0.8	20
Molybdenum				Units:	mg/L					
ОС Туре	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Spice Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	TOPO (III)	RPD Limit [96]
FISMS:			0.1	109.0			-come dack	120		





Account #: 2040

Client: Basin Electric Power Cooperative

Molybdenum ac type	Original Sample IO	Blank Result	Spike Amount	Units:	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD (%)	RPD Limit (%)
Mil		<0.003		Recovery		% Recovery	Limit (%)	Limit (%)		
M5/M50	25628001		0.4	106.0		108-0	75	125	ai	20-
Selenium				Units:	mg/L					
ОС Туре	Original Sample III	Blank Result	Spike Amount	Spike to Recovery		Spike Duplicate	Lower Control Limit (%)	Upper Control Limit (%)	RPD (%)	RPD LEVEL (%)
118-465			0.1	16.1			MT.	120		
Mis		s0.005								
MS/MSII	2562/001		0,4	98.0		104.0	75	125	5.7	30
Thallium				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Amount	Spike % Recovery		Soile Duplicate	Lower Control Limit (%)	Lipper Control Limit (%)	RPD (N)	RPD Limit (%)
EFB-MS			0.1	97.1		и нециену	80	120		
Mā		<0.0005								
MN/MSD.	25628001		0.4	94.4		95.S	05	125	ii	20
Mercury ac Type	Original Sample ID	Blank Result	Spike Amount	Units:	mg/L	Spice Ouplicate	Lower Control	Upper Control	RPG (%)	RPD Limit (%)
LFB.			0,002	Recovery 114.0		% Recovery	85	Limit (%)		
LAtt		-0.000Z								
MS/MND	24287003		0.002	107.0		110.0	700	ide	ii	720
M5/M5D	25161001		0.002	108.0		110.0	70.	130	0.0	20
Fluoride				Units:	mg/L					
QC Type	Original Sample ID	Blank Result	Spike Ammunt	Spike % Recovery		Spike Duplicate Si Recovery	Lower Control Limit (%)	Limit (%)	RPD (%)	RPD Limit (%)
CRM-F			3.39	95.9			65.8	111		
U-0.0			0.5	98.0			-90	110		
150.0			0.5	104.0			90	iia		
MB-E		40.0								
Mine		shi								
MS/MSD-F	25638001		0,5	107.0		108.0	30	120	18	20
Total Discolus	Fallac			11600	me A					
Total Dissolved ac Type	Original Sample (D	Blank Result	Spike Amount	Units: Spike %	mg/L	Spike Duplicate	Lower Control	Upper Control	RPD [%]	RPD Limit (%)
CRM			736	101.0		% Recovery	Limit (N) 90:35	Denit (%) 110.38		
MB		210								





Account #: 2040 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 mpany Name and Address Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571 ling Address (indicate if different from above)					ow			701-745-7238 701-557-5488				
Company Name						е							
Billing Address	ling Address (indicate if different from above)				mls jason.l Quote Number Project Name/Number LOS CCR Wells					Lach@aecom.com Date Submitted 8/23/2023 Purchase Order # 790708-04			
Lab Use Only Lab	Samp	Sample Matr GW - Groundwate			Time Sampled	Bottles	N/A		Analysis Re	quired			
001	LOS LANDFILL	MW 2016-12	GW	8/23/2023	810	3			, SO ₄ , Sb, As, B Se, Tl, Ra226, R				
Comments:													
Tran MILLENNIUM E 2.	SEXPRESS	Date	Time	Received	by		Date			ROI Ŷ/N	TM930		

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

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.

Report Date: Friday, September 8, 2023 4:15:59 PM



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 Workorder: 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:



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

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.

Report Date: Friday, June 9, 2023 2:29:39 PM



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

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

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.

Report Date: Friday, June 9, 2023 2:29:39 PM



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

Analytical Results

 Lab ID:
 14751001
 Date Collected:
 05/03/2023 13:45
 Matrix:
 Groundwater

 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	

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.

Report Date: Friday, June 9, 2023 2:29:39 PM

Page 3 of 33



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

Analytical Results

 Lab ID:
 14751002
 Date Collected:
 05/03/2023 11:40
 Matrix:
 Groundwater

 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	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	

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.

Report Date: Friday, June 9, 2023 2:29:39 PM

Page 4 of 33



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

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 @ 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	

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.

Report Date: Friday, June 9, 2023 2:29:39 PM

Page 5 of 33



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

Analytical Results

 Lab ID:
 14751004
 Date Collected:
 05/04/2023 09:18
 Matrix:
 Groundwater

 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	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	

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.

Report Date: Friday, June 9, 2023 2:29:39 PM

Page 6 of 33





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

Lab ID:14751005Date Collected:05/03/2023 11:40Matrix:GroundwaterSample ID:DupDate Received:05/05/2023 16:05Collector: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	

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.

Report Date: Friday, June 9, 2023 2:29:39 PM



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



Trust our People. Trust our Data.

Billings, MT 800.735.4489 + Casper, WY 888.235.0515 Gillette, WY 866.686.7175 + Helena, MT 877.472.0711

ANALYTICAL SUMMARY REPORT

June 09, 2023

Minnesota Valley Testing Laboratories

C23050455

1126 N Front St

New Ulm, MN 56073-1176

Work Order:

Quote ID: C15480

Project Name: 14751

Energy Laboratories, Inc. Casper WY received the following 5 samples for Minnesota Valley Testing Laboratories on 5/10/2023

Lab ID Client Sample ID Collect Date Receive Date Matrix Test C23050455-001 14751001; MW-2017-10 05/03/23 13:45 05/10/23 Groundwater Radium 226, Total Radium 228, Total C23050455-002 14751002; MW-2017-11 05/03/23 11:40 05/10/23 Groundwater Same As Above 14751003: MW-2016-12: 05/03/23 9:37 C23050455-003 05/10/23 Same As Above Groundwater C23050455-004 14751004; MW-2016-13 05/03/23 9:18 05/10/23 Groundwater Same As Above C23050455-005 14751005; Dup 05/10/23 05/03/23 11:40

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:

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

Page 1 of 15



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 Client:

> **ENERGY** 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

Revised Date: 06/09/23 CLIENT: Minnesola Valley Testing Laboratories Report Date: 06/01/23 14751 Project: G23050455 Work Order:

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.

Page 2 of 15

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.

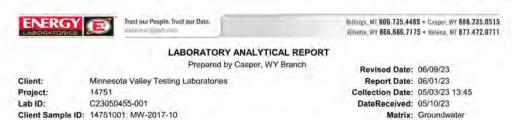
Report Date: Friday, June 9, 2023 2:29:39 PM



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



Client: Basin Electric Power Cooperative Account #: 2040



Catalon .	2.5 4.000	A CHARLE	20	MCL/		237 4378
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 pCVL				E903.0	05/23/23 11:12 / kdk
Radium 228	0,5 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

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 3 of 15

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.

Report Date: Friday, June 9, 2023 2:29:39 PM



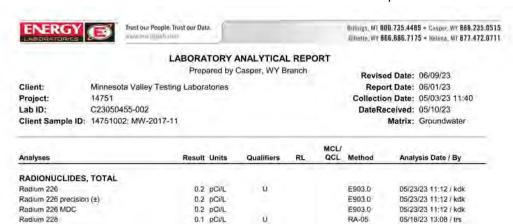
1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890 2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724 1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885 www.MVTL.com



Basin Electric Power Cooperative Account #: 2040 Client:

0.8 pCi/L

1,3 pCi/L



Report Definitions

Radium 228 precision (±)

Radium 228 MDC

RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

RA-05

RA-05

05/18/23 13:08 / trs

05/18/23 13:08 / trs

Page 4 of 15

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.

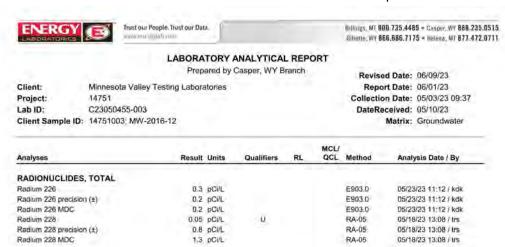
Friday, June 9, 2023 2:29:39 PM Report Date:



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 Client:



Report Definitions

RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 5 of 15

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.

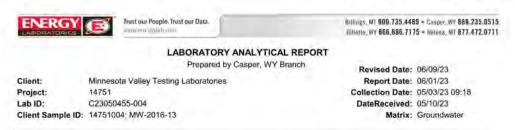
Friday, June 9, 2023 2:29:39 PM Report Date:



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/		
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	0,2 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)

Page 6 of 15

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.

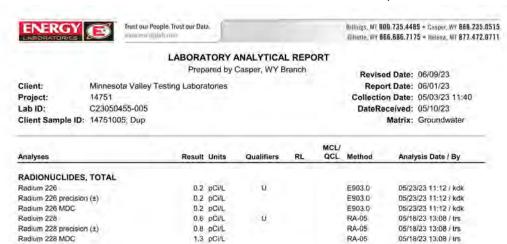
Report Date: Friday, June 9, 2023 2:29:39 PM



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 Client:



Report Definitions

RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 7 of 15

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.

Report Date: Friday, June 9, 2023 2:29:39 PM

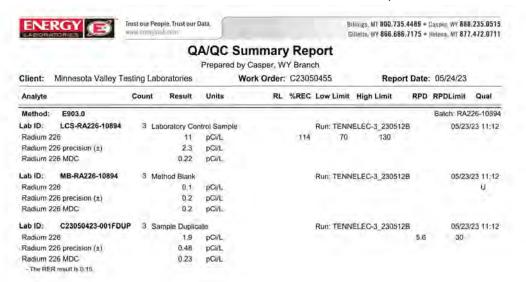


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page B of 15

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.

Report Date: Friday, June 9, 2023 2:29:39 PM

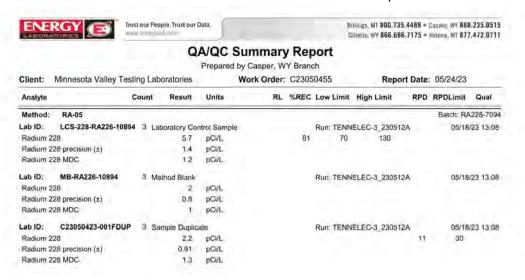


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers: RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Page 9 of 15

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.

Report Date: Friday, June 9, 2023 2:29:39 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Trust our People Trust our Dat	ta,		Billings, MT 406.252.6325 + Casper, WY 307.235.1 Billings, WY 307.686.7175 + Helena, MT 406.442.4				
Work Order Receipt Che	cklist						
Minnesota Valley Testing Laboratories		C23050455					
ogin completed by: Manford E. Hurley		Date Received: 5/10/2023					
Reviewed by: cjohnson		Received by: slr					
eviewed Date: 5/15/2023		Carrier name: UPS					
hipping 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 🗌					
thain of custody agrees with sample labels?	Yes 🗸	No 🗆					
amples in proper container/bottle?	Yes 🔽	No 🗆					
ample containers infact?	Yes 🗸	No 🗆					
sufficient sample volume for indicated lest?	Yes 🔽	No 🔲					
all samples received within holding time? Exclude analyses that are considered field parameters uch as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ✓	No 🗌					
emp Blank received in all shipping container(s)/cooler(s)?	Yes	No 🗸	Not Applicable				
container/Temp Blank temperature:	12.0°C No ice						
iontainers requiring zero headspace have no headspace or ubble that is <6mm (1/4*).	Yes 🔲	No 🗌	No VOA ylais submitted ☑				
Vater - pH acceptable upon receipt?	Yes 🔽	No 🗀	Not Applicable				
Standard Reporting Procedures:							
ab measurement of analytes considered field p H, Dissolved Oxygen and Residual Chlorine, a							
colid/soil samples are reported on a wet weight ata units are typically noted as -dry. For agricu and ground prior to sample analysis.							
he reference date for Radon analysis is the sa nalyses is the analysis date. Radiochemical pr							
Contact and Corrective Action Comm	nents:						

Page 10 of 15

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.

Report Date: Friday, June 9, 2023 2:29:39 PM



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



Page 11 of 15

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.

Report Date: Friday, June 9, 2023 2:29:39 PM





Account #: 2040 Client: Basin Electric Power Cooperative

THE PROPERTY OF THE PARTY OF TH	Calcalia several Di	Causers severin burns by Ail exposure routes	COLINES		
Sensitization	No information available	slabin			
Carcinogenicity	The table below in	The table below indicates whether each agency has listed any ingredent as a cardinogen.	th agency have list	ec any ingredent	as a cardinogen
Component CAS No Nario acid % (C.s. 70 7827.37.2	Mot Sated	Not laked	ACGIH Not laled	Notialed	Mexico Nor lated
Water Wutagenic Effects	No information available	Not isted	Not lated	Notimised	Not listed
Reproductive Effects	No information available.	slinble.			
Developmental Effects	No information available.	stable.			
Teratogenicity	No information available	Stable.			
STOT - single exposure STOT - repeated exposure	None known None known				
Aspiration hazard	No information evaluate	ellable			
Symptoms / effects,both acute and delayed		Progestor causes severe weeting, severe demaps to the deficie takes and denger of perforation if Proud's is concretely maken. Use of greatic lavage or emissis in operations of stronger or excepting the performance of stronger or recognise should be investigated.	ere darriage to the shall. Use of gass of stomach or exc	a delicale thave a his levage or eme phagus should be	nd denger of als is bytestigated
Endocrine Disruptor Information	No information sympaties	niste			
Other Adverse Effects	The toxicological	The toxicological properties have not been fully investigated	peen fully investig	pale	
	12. Ecol	12. Ecological Information	nation		1000
Esotoxisity. Do not empty into crains, Large amounts will effect pH and harm aqualin organisms	ats will affect pH an	d harm aquatic orgo	nams.		
Persistence and Degradability	Miscible with water	Miscible with water Persistence is unlikely based on information available.	kely based on infe	ormation available	5
Bioaccumulation/ Accumulation	No information available.	alacke.			
Mobility	Will likely be moth	Will likely be mobile in the environment that to its verter solubility.	it than to its water	solubility.	
Component Nitra add5 [C	14.04.5 C 70.44			log Pow	
	13. Dispo	13. Disposal considerations	rations	September 1	
Maste Disposal Methods	Chemical waste g hezardous waste. national hezardou	Destructed weaking presentative thank detailed whether at discounted referential at classified as a functional and security of the control of	mins whather a constant of the ensure comple	discentled chemics to ponsult local, re to and accurate of	al is classified a glonal, and atelfostion.
	14. Tra	14. Transport Information	nation		
DN. No UN-No Proper Shipping Name Nazard Class Subsiding Heard Class Packing Group	UNZOS1 NITRIC ACID 8 5.1				
UN-No Proper Shipping Name	UN2031 NITRIC ACID				

Appearance			
100		Clear Culorises, Light yellow	
Odor Threshold		Mo information available	
T C		< 1,0 (0,1M)	
Melting Po'nt/Range		41 10 / 418 1	
Molling Point/Kange		Not applicable	
Evaporation Rate		No information available	
Flammability (solid,ges)		Not applicable	
Hammability or explosive limits		the dala accellable	
Lower		No date eveleber	
Vapor Pressure		0.94 kPa (20°C)	
Vapor Density		No information available	
Specific Gravity		1,40	
Partition coefficient: n-octanol/water		No data available	
Autolonition Temperature		No information available	
Decomposition Temperature		No impermetton available	
Washing Formula		No information available	
Molecular Weight		43.01	
	10. Stability and reactivity	ind reactivity	
Reactive Hazard	7.06		
Stability	Oxidizer Contact with com	Oxiditier Contact with combustititieningshic material may cause lire.	zause fire.
Conditions to Avoid	Incompatible products. Co prolonged periods.	mbuskble material. Excess hes	incompatible products. Combraktitle material. Excess heat, Exposure to air or nidebare over prokinged periods.
incompatible Materials	Combustible material, Stro	Combusible material, Strong basies, Reducing Apart, Metres, Frirely powerland relabilis. Organic materials, Aldehides, Accrook, Cywriddes, Americals, Strong reducing assants.	tals, Finely powitered metals, one. Stone reducing agents
Hazandous Decomposition Products Nitrogen couldes (NDV), Thermal decomposition can lead to release of Instituting gases and second	Nitrogen oxides (NOr), Th	armal decomposition can lead to	o release of britating gases and
	-		
Excardous Polymerization	legardaus polymerization does not octur.	does not octar.	
fazardous Reactions	None under normal processing	Buyer	
	11. Toxicologic	11. Toxicological information	No.
Acute Toxicity			
	Resed on ATE data, the of Based on ATE data, the of Calagory 3, ATE = 1 - 6 m Based on ATE data, the of	Steed on ATE date, the idealfeation inferies are not met. ATE > 3000 mg/bg. Based on ATE date, the idealfeation official are not met. ATE > 3000 mg/bg. Callegory ATE = 1.6 mg. Language, as not met. ATE > 20 mg/. Based on ATE date, the date-facilisation official are not met. ATE > 20 mg/.	ATE > 2000 mg/kg. ATE > 2000 mg/kg. ATE > 20 mg/t.
Component Information	I Park David	1	
Navio acid % TO 16 761	Not listed	Not failed	LC60 = 2500 ppm, (Reth 1)1
oxicologically Synergistic	No intermetton available		
Products Delayed and immediate affects as well as chronic effects from short and long-term exposure	if an chronic effects from	a short and long-term exposu	The state of the s

Page 12 of 15

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.

Report Date: Friday, June 9, 2023 2:29:39 PM



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



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.

Report Date: Friday, June 9, 2023 2:29:39 PM





Account #: 2040 Client: Basin Electric Power Cooperative

1			П															Temp:							
Page 1 of 1	WO #14751	Phone #: 701-258-9720	Fax #: For faxed report check box	E-mail: ccarroll@mvtl.com	Date Submitted: 8-May-23	Purchase Order #: BL6690	Analysis	Analysis Required	Ra226 & Ra228	(23050455				Date:	1047 CT00										
		<u>a</u>	T.		O .	<u>a</u>	e	Other		Other		огрес		Glass Jar Other									e	H	S
							Bottle Type	Umpreserved Glass Jar					H			-	vali		Richias						
							ottl	VOC Vials								-	Ea.	d by	3						
			و				"	The second second						Untreated 1000 ml HNO3		2	2	2	2		+	+	eri	Received by:	
			Claudette	npler:	Jer.	ie/Number:		Time	1345	1140	0937	0918	1140				is a num	Rec	Shells						
		Account #:	Contact:	Name of Sampler:	Quote Number	Project Name/Number:		Date Sampled	3-May-23	3-May-23	3-May-23	3-May-23	3-May-23				ported a	Sample Condition:							
			0	1				Sample	GW	GW	GW	GW	GW				ist be re	Sample							
Ave	8 0724						ormation	Client Sample ID	MW-2017-10	MW-2017-11	MW-2017-12	MW-2017-13	Durb				All results must be reported as a numerical value	Time:	1700						
LABORA I ORIES, INC. 2616 E Broadway Ave Bismarck ND 58501	258-9720	av. (101) 20	MVTL Pete E Broadway	Bismarck, ND 58501	from above)	New Ulm, MN 56073	Sample Information	Client	WW.	WW.	WW.	MW-					All	Date:	8-May-23						
Z616 E E	(701)		M	Bismarck	Billing Address (indicate if different from above):	New Ulm,		MVTL Lab Number	14751001	14751002	14751003	14751004	14751005					Transferred by:							
	Phone:	Company Name and Address:			illing Address (IML Lab										Transf	T. Olson						

Page 14 of 15

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.

Report Date: Friday, June 9, 2023 2:29:39 PM





Account #: 2040 Client: Basin Electric Power Cooperative

GW 3-May-23 1345 2 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Type Sampled Sampled 5 2 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Type Sampled Sampled \$\vec{S}\$ and \$\vec
GW 3-May-23 1345 GW 3-May-23 1140 GW 3-May-23 0937 GW 3-May-23 0918 GW 3-May-23 1140	-10 GW 3-May-23 1345 -11 GW 3-May-23 1140 -12 GW 3-May-23 0937 -13 GW 3-May-23 1140 GW 3-May-23 1140	GW 3-May-23 1445 2 2 GW 3-May-23 1140 2 2 GW 3-May-23 0937 2 GW 3-May-23 1140 2 GW 3-May-23 1140 2 EW 3-May-23 1140 EW 3-May-23 III EW 3-May-23 II EW 3-May-2
GW 3-May-23 1140 2 GW 3-May-23 0937 2 GW 3-May-23 1140 2 GW	GW 3-May-23 1140 2 GW 3-May-23 0937 2 GW 3-May-23 1140 2 GW 3-May-23 1140 2	GW 3-May-23 1140 2 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
GW 3-May-23 0918 2 GW 3-May-23 1140 2 (2)	GW 3-May-23 0918 2 GW 3-May-23 1140 2 (22	GW 3-May-23 0918 2
GW 3-May-23 1140 2 (2	GW 3-May-23 1140 2 (2)	C2
(2305)	(2305)	Date:
All results must be reported as a numerical value		

Page 15 of 15

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.

Report Date: Friday, June 9, 2023 2:29:39 PM



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



Trust our People. Trust our Data.

Billings, MT 800.735.4489 + Casper, WY 888.235.0515 Gillette, WY 866.686.7175 + Helena, MT 877.472.0711

ANALYTICAL SUMMARY REPORT

June 01, 2023

Minnesota Valley Testing Laboratories

1126 N Front St

New Ulm, MN 56073-1176

Work Order:

Quote ID: C15480

Project Name: 14751

Energy Laboratories, Inc. Casper WY received the following 5 samples for Minnesota Valley Testing Laboratories on 5/10/2023

C23050455-002

C23050455-003

C23050455-004

C23050455-005

Lab ID Client Sample ID C23050455-001

14751005; Dup

C23050455

Collect Date Receive Date 14751001; MW-2017-10 05/03/23 13:45 05/10/23

Groundwater 05/10/23

Matrix

Radium 226, Total Radium 228, Total Groundwater Same As Above

Groundwater

Same As Above

Test

Groundwater 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

05/03/23 11:40

14751002; MW-2017-11 05/03/23 11:40

14751003: MW-2017-12 05/03/23 9:37

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

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.

05/10/23

05/10/23

05/10/23

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

Report Approved By:

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

Page 1 of 10



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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

 Client:
 Minnesota Valley Testing Laboratories
 Report Date: 06/01/23

 Project:
 14751
 Collection Date: 05/03/23 13:45

 Lab ID:
 C23050455-001
 DateReceived: 05/10/23

 Client Sample ID:
 14751001; MW-2017-10
 Matrix: Groundwater

Est. 15	233.60	acro.	G. C. Harris	20	MCL/	40.00	237.2372
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	pCVL				E903.0	05/23/23 11:12 / kdk
Radium 228	0,5	pCi/L	U			RA-05	05/18/23 13:08 / trs
Radium 228 precision (±)	8.0	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)

Page 2 of 10

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.

Report Date: Friday, June 9, 2023 2:29:39 PM



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



Client: Minnesota Valley Testing Laboratories

 Project:
 14751

 Lab ID:
 C23050455-002

 Client Sample ID:
 14751002; MW-2017-11

Report Date: 06/01/23

Collection Date: 05/03/23 11:40

DateReceived: 05/10/23

Matrix: Groundwater

MCL/ QCL Analyses Result Units Qualifiers Method Analysis Date / By RADIONUCLIDES, TOTAL 0.2 pCi/L Ú E903.0 05/23/23 11:12 / kdk Radium 226 Radium 226 precision (±) 05/23/23 11:12 / kdk 0.2 pCi/L E903.0 Radium 226 MDC 0.2 pCVL 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 / 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 MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (R

Page 3 of 10

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.

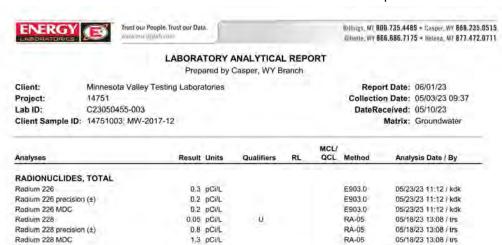
Report Date: Friday, June 9, 2023 2:29:39 PM



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 Client:



Report Definitions

RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 4 of 10

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.

Report Date: Friday, June 9, 2023 2:29:39 PM



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



Client: Basin Electric Power Cooperative Account #: 2040



Minnesota Valley Testing Laboratories 14751 Collection Date: 05/03/23 09:18 Project: C23050455-004 DateReceived: 05/10/23 Lab ID: Client Sample ID: 14751004; MW-2017-13 Matrix: Groundwater

				MCL/		
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	0,2 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

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 5 of 10

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.

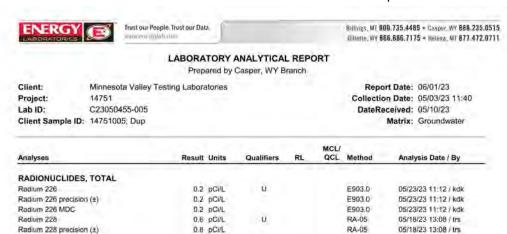
Report Date: Friday, June 9, 2023 2:29:39 PM



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 Client:



1,3 pCi/L

Report Definitions

Radium 228 MDC

RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

RA-05

05/18/23 13:08 / trs

Page 6 of 10

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.

Report Date: Friday, June 9, 2023 2:29:39 PM

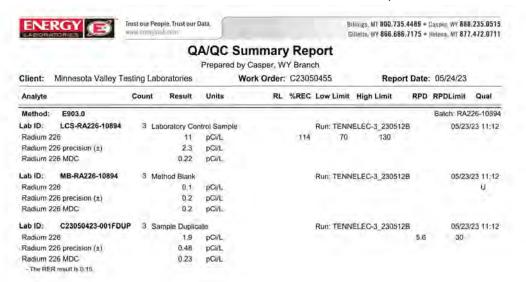


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 7 of 10

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.

Report Date: Friday, June 9, 2023 2:29:39 PM

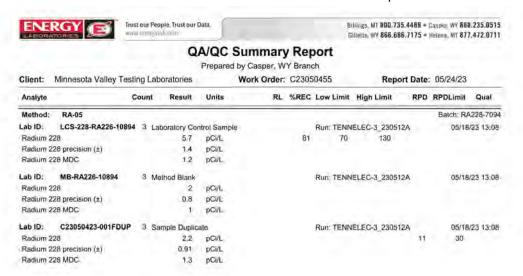


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers: RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Page B of 10

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.

Report Date: Friday, June 9, 2023 2:29:39 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Trust our People Trust our Dat	a,		Billings, MT 406.252.6325 + Casper, WY 307.235. Unietre, WY 307.686.7175 + Helena, MT 406.442.
Work Order Receipt Che	cklist		
Minnesota Valley Testing Lab	oratories	C	23050455
Login completed by: Manford E. Hurley		Dat	te 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 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 lest?	Yes 🔽	No 🖂	
All samples received within holding time? Exclude analyses that are considered field parameters such as pH, DD, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes 🗸	No 🗌	
remp Blank received in all shipping container(s)/cooler(s)?	Yes	No 🗸	Not Applicable
Container/Temp Blank temperature:	12.0°C No ice		
Containers requiring zero headspace have no headspace or ubble that is <6mm (1/4*).	Yes 🔲	No 🖂	No VOA ylals submitted ☑
Nater - pH acceptable upon recept?	Yes 🔽	No 🗌	Not Applicable
Standard Reporting Procedures:			
Lab measurement of analytes considered field p			
pH, Dissolved Oxygen and Residual Chlorine, a	ire qualified as b	eing analya	zed outside of recommended holding time.
Solid/soil samples are reported on a wet weight data units are typically noted as -dry. For agricu and ground prior to sample analysis.			
The reference date for Radon analysis is the sa analyses is the analysis date. Radiochemical pr			
Contact and Corrective Action Comm	ante:		
Contact and Corrective Action Comm	iciits.		

Page 9 of 10

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.

Report Date: Friday, June 9, 2023 2:29:39 PM





Account #: 2040 Client: Basin Electric Power Cooperative

2616 E Bra Bismarck,	2616 E Broadway Ave Bismarck, ND 58501								Page 1 of 1
Phone: (701) 258-9720 Toll Free: (800) 279-6885 Fax: (70	258-9720 Fax: (701) 258-9724								WO #14751
iii			Account #:						Phone #: 701-258-9720
MVTL 2616 E Broadway	L		Contact:	Claudette	tte		1		Fax #: For faxed report check box
Bismarck, ND 58501	VD 58501		Name of Sampler:	ampler:					E-mail: ccarroll@mvtl.com
PO Box 249	249		Quote Number	nper					Date Submitted: 8-May-23
New Ulm, MN 56073	IN 56073		Project Na	Project Name/Number:					Purchase Order #: BL6690
Š	Sample Information				-	Bottle Type	Ty	90	Analysis
MVTL Lab Number	Client Sample ID	Sample Type		Date Time Sampled Sampled	Untreated	Umpreserved VOC Vials 1000 ml HNO3	Glass Jar	Other	Analysis Required
14751001	MW-2017-10	GW	3-May-23	1345	.,	2			Ra226 & Ra228
14751002	MW-2017-11	GW	3-May-23	1140	. 4	2			Ra226 & Ra228
14751003	MW-2017-12	GW	3-May-23	0937		2			Ra226 & Ra228
14751004	MW-2017-13	GW	3-May-23	0918	- 4	2			Ra226 & Ra228
14751005	Dup	GW	3-May-23	1140		2			Ra226 & Ra228
									(23050455
					+				
	All results must be reported as a numerical value	ust be re	sported a	as a nun	eri	cal	/all	9	
Transferred by:	Date: Time:	Sample	Sample Condition:	Re	ceive	Received by:			Date: Temp:
8	8-May-23 1700	00		Shell	7	Richins	010	V	- Thoo

Page 10 of 10

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.

Report Date: Friday, June 9, 2023 2:29:39 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Bismarck, NE Phone: (701) 258-9 Toll Free: (800) 279-6885		24										I					
ompany Name and Address: illing Address (indicate if different	from above):			Nai		of S	Alu ampl	tz	enb mk	Jegg.	7	Ema	MV	1 zeu	Frut	ox beptil	7751 pc. com
								lun	nber:			- A			chase Or	5-5-	73
				10.0	Phi		05		ttle 1			والع			6	7526lo-	-04
Sample Information	on	Filtered	YorN				17	100	ttie	ype	,					Analysis	s
Lab Use Only Lab Number Sample ID	Sample Matrix PW- Potable Water GW - Groundwater WW - Wastewater SW - Surface Water S - Soll/Sludge O- Other	Date Sampled	Time Sampled	Untreated	Sterile	500 ml HNO3	1000 ml H2SO4	250 ml H2SO4	1000 ml NaOH Amber HCI	Amber Unpres.	VOC Vials HCI	Amber H2SO4	40 ml Vials H2SO4	Other:	A	nalysis Reg	uired
001 MW-2017-10	GW	15 3 23	1240	-	0)	X	Y	Ť				q	4	-0	B. C.	C F	SOIL
DZ MU-2017-11	Gly	5-3-13	1141)			X	X								5h. 1	15. Ba.	Be Ca
013 MW - 2017-12	GW	5 1 23	0137			X	X								Cr. (o, Pb.	Li, Ha
D- 111- 3017-13	GW	5.4-23	0918			X	X								Mo,	Se TI	
Dup.	GW	5-3-13	1140			X	X	+	+					11	Radius TD.	5 226	+ 228
omments:																	
Transferred by:	Date:	Time:	Sample C	ond	litio	n:			Rece	ived	by:				Date:	Time:	Temp:
Millebium Frivess	5.5.23							(77	VC	7-			2123	11005	4 8.6

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.

Report Date: Friday, June 9, 2023 2:29:39 PM



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 Workorder: 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:



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

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.

Report Date: Friday, July 21, 2023 12:27:13 PM





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.





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17869001
 Date Collected:
 06/06/2023 14:00
 Matrix:
 Groundwater

 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	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	

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.

Report Date: Friday, July 21, 2023 12:27:13 PM

Page 3 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17869002
 Date Collected:
 06/06/2023 12:45
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-11
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (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	

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.

Report Date: Friday, July 21, 2023 12:27:13 PM

Page 4 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17869003
 Date Collected:
 06/07/2023 10:45
 Matrix:
 Groundwater

 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	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	

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.

Report Date: Friday, July 21, 2023 12:27:13 PM

Page 5 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17869004
 Date Collected:
 06/07/2023 10:30
 Matrix:
 Groundwater

 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	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	

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.

Report Date: Friday, July 21, 2023 12:27:13 PM

Page 6 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17869005
 Date Collected:
 06/07/2023 08:45
 Matrix:
 Groundwater

 Sample ID:
 MW-2017-8D
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (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	

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.

Report Date: Friday, July 21, 2023 12:27:13 PM

Page 7 of 20





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 17869006
 Date Collected:
 06/06/2023 14:00
 Matrix:
 Groundwater

 Sample ID:
 Dup
 Date Received:
 06/08/2023 15:38
 Collector:
 Client

Temp @ Receipt (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	

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.

Report Date: Friday, July 21, 2023 12:27:13 PM

Page 8 of 20



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



Trust our People. Trust our Data

Billings, MT 406,252,6325 + Gasper, WY 307,235,0515 Gillette, WY 307,686,7175 + Holena, 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

Quote ID: C15480

Project Name: 17869

Energy Laboratories, Inc. Casper WY received the following 6 samples for Minnesota Valley Testing Laboratories on 6/15/2023 for analysis

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C23060624-001	17869001; MW-2017-10	06/06/23 14:00	06/15/23	Groundwater	Radium 226, Total Radium 228, Total
C23060624-002	17869002; MW-2017-11	06/06/23 12:45	6 06/15/23	Groundwater	Same As Above
C23060624-003	17869003; MW-2016-12	06/06/23 10:45	6 06/15/23	Groundwater	Same As Above
C23060624-004	17869004; MW-2016-13	06/06/23 10:30	06/15/23	Groundwater	Same As Above
C23060624-005	17869005; MW-2017-8D	06/06/23 8:45	06/15/23	Groundwater	Same As Above
C23060624-006	17869006; Dup	06/06/23 14:00	06/15/23	Groundwater	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:

Page 1 of 11



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



Client: Basin Electric Power Cooperative Account #: 2040

> Trust our People. Trust our Data. Billings, MI 406,252.6325 + Casper, WY 307,235.0515 Billette, WY 307.686.7175 > Helena, MI 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Report Date: 07/19/23 Client: Minnesota Valley Testing Laboratories 17869 Collection Date: 06/06/23 14:00 Project: DateReceived: 06/15/23 C23060624-001 Lab ID: Client Sample ID: 17869001; MW-2017-10 Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.1	pCi/L	0			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	Ü			RA-05	07/06/23 15:28 / trs
Radium 228 precision (±)	0.8	pCl/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

MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

Page 2 of 11



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



Client: Basin Electric Power Cooperative Account #: 2040

> Trust our People. Trust our Data. Billings, MI 406,252.6325 + Casper, WY 307,235.0515 Billette, WY 307.686.7175 > Helena, MI 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Report Date: 07/19/23 Client: Minnesota Valley Testing Laboratories 17869 Collection Date: 06/06/23 12:45 Project: DateReceived: 06/15/23 C23060624-002 Lab ID: Client Sample ID: 17869002; MW-2017-11 Matrix: Groundwater

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

Report Definitions

RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 3 of 11



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



Client: Basin Electric Power Cooperative Account #: 2040



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Report Date: 07/19/23 Client: Minnesota Valley Testing Laboratories 17869 Collection Date: 06/06/23 10:45 Project: DateReceived: 06/15/23 C23060624-003 Lab ID: Client Sample ID: 17869003; MW-2016-12 Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.07	pCi/L	0			E903.0	07/11/23 13:22 / kdk
Radium 226 precision (±)		pCI/L				E903.0	07/11/23 13:22 / kdk
Radium 226 MDC		pCi/L				E903.0	07/11/23 13:22 / kdk
Radium 228	-0.6	pCi/L	Ü			RA-05	07/06/23 15:28 / trs
Radium 228 precision (±)	0.7	pCl/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

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 4 of 11



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



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 10:30

 Lab ID:
 C23060624-004
 DateReceived:
 06/15/23

 Client Sample ID:
 17869004; MW-2016-13
 Matrix:
 Groundwater

Allegari.	Result Units	Qualifiers	RL	MCL/ QCL Method	Assessed Basic (Ba
Analyses	Result Units	Quaimers	RL	QCL Method	Analysis Date / By
RADIONUCLIDES, TOTAL					
Radium 226	0.03 pCi/L	0		E903.0	07/11/23 13:22 / kdk
Radium 226 precision (±)	0.1 pCI/L			E903.0	07/11/23 13:22 / kdk
Radium 226 MDC	0.2 pCl/L			E903.0	07/11/23 13:22 / kdk
Radium 228	0.04 pCi/L	Ü		RA-05	07/06/23 15:28 / trs
Radium 228 precision (±)	0.7 pCl/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)

Page 5 of 11



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



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 08:45

 Lab ID:
 C23060624-005
 DateReceived:
 06/15/23

 Client Sample ID:
 17869005; MW-2017-8D
 Matrix:
 Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL	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

MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

Control Limit ND - Not detected at the Reporting Limit

Page 6 of 11



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



Client: Basin Electric Power Cooperative Account #: 2040



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Report Date: 07/19/23 Client: Minnesota Valley Testing Laboratories 17869 Collection Date: 06/06/23 14:00 Project: DateReceived: 06/15/23 C23060624-006 Lab ID: Client Sample ID: 17869006; Dup Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ 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 (±)	0.2	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

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 7 of 11

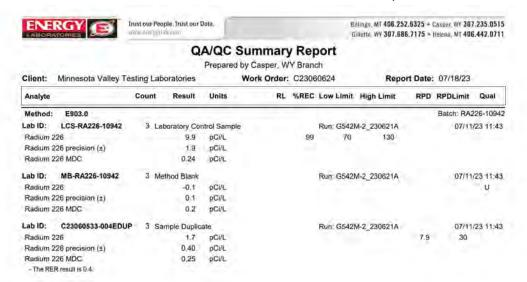


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 8 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.

Report Date: Friday, July 21, 2023 12:27:13 PM





Account #: 2040 Client: Basin Electric Power Cooperative

ENE			People, Trust o	ur Data,					llings, MT 406.25 illette, WY 307.68			
				QA/QC	Summa	ary	Rep	ort				
				Prepare	ed by Casper	.WY	Brand	:h				
Client:	Minnesota Valley Te	sting	Laboratories	3	Work Ord	ler: (22306	0624	Repo	rt Date	07/18/23	
Analyte		Cour	nt Resul	t Units	. == 1	RL %	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	RA-05										Batch: R/	228-7147
ab ID:	LCS-228-RA226-1096	2 3	Laboratory (Control Sam	ple			Run: TENN	ELEC-3_23071	1A	07/14	/23 16:47
Radium 2	28		7.	pC//L			108	70	130			
	28 precision (±)		1.6	64			N.S.C.		V-1			
Radium 2			1.3									
ab ID:	MB-RA226-10962	3	Method Blan	nk				Run TENN	ELEG-3 23071	1A	07/14	/23 16:47
Radium 2	Shareh mutilities in		-0.7					34-0. 38-171	2000	17.7	3117	U
	28 precision (±)		0.9	0.2								- 2
Radium 2				2 pCVL								
ab ID:	C23060522-011DDUP	3	Sample Dup	licate				Run: TENN	ELEC-3 23071	14	07/14	/23 16:47
Radium 2	28		1.0							180	30	UR
Radium 2	28 precision (±)		1.5									
Radium 2			2.3	100								
	e RPD is outside of the acce	eptance		1 00 00 00	ever, the RER is	tess th	an or e	qual to the limi	t of 3, the RER re	sult is 0.57		
ab ID:	C23060938-002ADUP	3	Sample Dup	licate				Run: TENN	ELEC-3_23071	1A	07/14	/23 16:47
Radium 2	28		0.089	pC/L						1700	30	UR
Radium 2	28 precision (±)		0.70) pCi/L								
Radium 2	28 MDC		13	pCi/L								
- Duplicat	e RPD is outside of the acce	eptance	e range for this a	analysis. How	ever, the RER is	less th	nan or e	qual to the limi	of 3, the RER re	sult ts 0.20	1;	
Method:	RA-05										Batch: RA	1228-7129
ab ID:	LCS-228-RA226-1094	2 3	Laboratory (Control Sam	ple			Run: TENN	ELEC-4_23062	1A	07/06	/23 13:52
Radium 2	28		7.3	3 pCVL			106	70	130			
Radium 2	28 precision (±)		1.7	PC/L								
Radium 2	28 MDC		0.9	PC/L								
Lab ID:	MB-RA226-10942	3	Method Blan	ik				Run: TENN	ELEC-4_23062	1A	07/06	/23 13:52
Radium 2	28		-0.5	pCi/L								U
Radium 2	28 precision (±)		0.8	pCi/L								
Radium 2	28 MDC			pC/L								
ab ID:	C23060533-004EDUP	3	Sample Dup	licate				Run: TENN	ELEC-4_23062	1A	07/06	/23 13:52
Radium 2	28		7.5	PC/L					-	8.2	30	
Radium 2	28 precision (±)		1.0	B pCi/L								
Radium 2	28 MDG		0.93	g pCI/L								
-The RE	R result is 0.26.											

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

R - Relative Percent Difference (RPD) exceeds advisory limit

U - Not detected at Minimum Detectable Concentration (MDC)

Page 9 of 11





Account #: 2040 Client: Basin Electric Power Cooperative

Work Order Receipt Chee	cklist						
Work Order Receipt Che	CKIISE						
Minnesota Valley Testing Lab	oratories	C	23060624				
Login completed by: Hannah R. Johnson		Dat	te 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 Cl, Sulfite, Ferrous Iron, etc.)	Yes 🗹	No 🗍					
Temp Blank received in all shipping container(s)/cooler(s)?	Yes 🔲	No 🗸	Not Applicable				
Container/Temp Blank lamperature:	19.8°C No los						
Containers requiring zero headspace have no headspace or pubble that is <6mm (1/4").	Yes 🗌	No 🏻	No VOA vials submitted ☑				
Water - pH acceptable upon receipt?	Yes 🔽	No 🗌	Not Applicable				
Standard Reporting Procedures:							
Lab measurement of analytes considered field p oH, Dissolved Oxygen and Residual Chlorine, a							
Solid/soil samples are reported on a wet weight data units are typically noted as -dry. For agricu and ground prior to sample analysis.							
The reference date for Radon analysis is the sar analyses is the analysis date. Radiochemical pre							

Page 10 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.

Report Date: Friday, July 21, 2023 12:27:13 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Page 11 of 11



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

Bismarck, ND 58501 Phone: (701) 258-9720 Toll Free: (800) 279-6885 Fax: (701) 258-9724																		
Company Name and Address:				Account #: Phone #: 745-7238 \$57-5488														
					17	ntac	1/	ten	. /	Mar K	b:	ble	Ema	-	he a be	or & bept.	COM	
Billing Address (indicate if different from above):				Nar	Name of Sampler: For e-mail report check box									,×				
				Quote Number								Da	Date Submitted: 6-8-23					
					Project Name/Number:								Pi	Purchase Order #:				
Sample Information						دی				ottle '	Гуре	e .		_	675266-04 Analysis			
Sample Information Sample Matrix		Filtered	5										Allalysis					
Lab Use Only Lab Number	Sample ID	PW- Potable Water GW - Groundwater WW - Wastewater SW - Surface Water S - Soil/Sludge O- Other	Date Sampled	Time Sampled	Untreated	Sterile	500 ml HNO3	1000 ml H2SO4	250 ml H2SO4	1000 ml NaOH	Amber Unpres.	VOC Vials HCI	Amber H2SO4	40 ml Vials H2SO4	Other:	nalysis Req	uired	
201	MW-2017-10	GW	6-6-23	1400		5	X			X					B, Ca	CI, F	504	
202	MW-2017-11		6-6-23	1245						X		L		+	Sb. 1	As, Ba, 1	Be, Cd	
003	MW-2016-12		6-7-23	1045	\vdash			-	_	X	+	H		+	Cr. C	o, Pb.	Li, Ha	
004	MN-2016-13		1107	1030	\vdash			-	-	\Diamond	+	+		-	110	De. 14,	KadiUM	
000	DUG 1- 60		1-1-23	14/1/5	H					V		-		+	0606	200		
CCQ	MW-2017-8		6-1-23	0955						Α.	t				BI	~ Cl.	F 5/21	
	MW-2017-7		6-7-23	1310							T	T			2,0	1	1, 24	
	MW-2017-4		6.7.23	1425			V						É	Ž.		V		
Comments	3:												TE.					
	Transferred by:	Date:	Time:	Sample (Conc	ditio	n:	,		Rece	ived	l by:		_	Date:	Time:	Temp:	
	nium Express	6-8-23						11	14	-	1			8	Junas	350	TM 815	

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.



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 Workorder: 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:



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

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.

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





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.



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

Analytical Results

 Lab ID:
 19634001
 Date Collected:
 06/26/2023 14:06
 Matrix:
 Groundwater

 Sample ID:
 LOS Pond MW-2017 Date Received:
 06/28/2023 16:24
 Collector:
 Client

10

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 08:04	08/07/2023 08:04	SUBv	
Radium 228	See Attached			1	08/07/2023 08:05	08/07/2023 08:05	SUBv	

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.

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



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

Analytical Results

 Lab ID:
 19634002
 Date Collected:
 06/26/2023 12:11
 Matrix:
 Groundwater

 Sample ID:
 LOS Pond MW-2017 Date Received:
 06/28/2023 16:24
 Collector:
 Client

11

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	

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.



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

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 @ 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	





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

Lab ID:19634004Date Collected:06/27/2023 08:40Matrix:GroundwaterSample ID:LOS Landfill MW-Date Received:06/28/2023 16:24Collector:Client

2016-12

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	

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.

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





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

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

2016-13

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	

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.



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



Trust our People. Trust our Data

Billings, MT 406.252.6325 + Gasper, WY 307,235,0515 Gillette, WY 307.686.7175 + Holena, MT 406,442,0711

ANALYTICAL SUMMARY REPORT

August 03, 2023

Minnesota Valley Testing Laboratories

C23070174

1126 N Front St

New Ulm, MN 56073-1176

Work Order:

Quote ID: C15480

Project Name: 19634

Energy Laboratories, Inc. Casper WY received the following 5 samples for Minnesota Valley Testing Laboratories on 7/7/2023 for analysis

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C23070174-001	19634001; LOS POND MW-2017-10	06/26/23 14:06	07/07/23	Groundwater	Radium 226, Total Radium 228, Total
C23070174-002	19634002; LOS POND MW-2017-11	06/26/23 12:11	07/07/23	Groundwater	Same As Above
C23070174-003	19634003; Dup	06/26/23 12:11	07/07/23	Groundwater	Same As Above
C23070174-004	19634004; LOS LANDFILL MW2016-12	06/26/23 8:40	07/07/23	Groundwater	Same As Above
C23070174-005	19634005; LOS LANDELL MW2016-13	06/26/23 7:50	07/07/23	Groundwater	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:

Page 1 of 13



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



Client: Basin Electric Power Cooperative Account #: 2040



Billings, MI 406,252.6325 + Casper, WY 307,235.0515 Billette, WY 307.686.7175 > Helena, MI 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Minnesota Valley Testing Laboratories 19634 Project: C23070174-001 Lab ID:

Client:

Client Sample ID: 19634001; LOS POND MW-2017-10

Report Date: 08/03/23 Collection Date: 06/26/23 14:06 DateReceived: 07/07/23

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ 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	Ü			RA-05	07/18/23 14:34 / trs
Radium 228 precision (±)	0.7	pCl/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

MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

Page 2 of 13



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



Client: Basin Electric Power Cooperative Account #: 2040

Trust our People. Trust our Data.

Billings, MI 406,252.6325 + Casper, WY 307.235.0515 Billette, WY 307.686.7175 > Helena, MI 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Minnesota Valley Testing Laboratories 19634 Project: C23070174-002 Lab ID:

Client Sample ID: 19634002; LOS POND MW-2017-11

Report Date: 08/03/23 Collection Date: 06/26/23 12:11 DateReceived: 07/07/23

Matrix: Groundwater

Analyses	Result U	nits	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.04 pl	CI/L	U.			E903.0	07/24/23 14:41 / kdk
Radium 226 precision (±)	0.1 pt	CIL				E903.0	07/24/23 14:41 / kdk
Radium 226 MDC	0.2 pt	CVL				E903.0	07/24/23 14:41 / kd/
Radium 228	-0.5 pt	Ci/L	U			RA-05	07/18/23 15:06 / trs
Radium 228 precision (±)	0.7 pl	CVL				RA-05	07/18/23 15:06 / trs
Radium 228 MDC	1.2 pl	Ci/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

MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

Page 3 of 13



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

Trust our People. Trust our Data.

Billings, MT 406,252,6325 + Casper, WY 307,235,0515 Billette, WY 307,686,7175 > Helena, MT 406,442,0711

LABORATORY ANALYTICAL REPORT

Qualifiers

U

U

RL

Prepared by Casper, WY Branch

Result Units

0.03 pCi/L

0.1 pCI/L

0.2 pCVL

-0.9 pCi/L

0.7 pCI/L

1.3 pCi/L

 Client:
 Minnesota Valley Testing Laboratories

 Project:
 19634

 Lab ID:
 C23070174-003

 Client Sample ID:
 19634003; Dup

RADIONUCLIDES, TOTAL

Analyses

Radium 226 Radium 226 precision (±)

Radium 228

Radium 226 MDC

Radium 228 MDC

Radium 228 precision (±)

Report Date: 08/03/23 Collection Date: 06/26/23 12:11 DateReceived: 07/07/23 Matrix: Groundwater

MCL/ QCL	Method	Analysis Date / By
	E903.0	07/24/23 14:41 / kdk
	E903.0	07/24/23 14:41 / kdk
	E903.0	07/24/23 14:41 / kdk
	RA-05	07/18/23 15:06 / trs
	RA-05	07/18/23 15:06 / trs

07/18/23 15:06 / trs

RA-05

Report Definitions RL - Analyte Reporting Limit

OCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

(MDC)

Page 4 of 13



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

Billings, MI 496,252.6325 + Casper, WY 307.235.0515 Billette: WY 307.686.7175 > Helena, MI 406.442.0711



Account #: 2040 Client: Basin Electric Power Cooperative

ENERGY

IN IN CONTROL TO THE CONTROL

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

 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

Analyses	Result	Units	Qualifiers	RL	MCL/ 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	pCl/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

antention

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 5 of 13



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



Client: Basin Electric Power Cooperative Account #: 2040

Trust our People. Trust our Data.

Billings, MI 406,252.6325 + Casper, WY 307,235.0515 Billette, WY 307.686.7175 > Helena, MI 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Minnesota Valley Testing Laboratories 19634 Project: C23070174-005 Lab ID:

Client Sample ID: 19634005; LOS LANDFILL MW2016-13

Report Date: 08/03/23 Collection Date: 06/26/23 07:50 DateReceived: 07/07/23

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/	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		pCI/L				E903.0	07/24/23 14:41 / kdl
Radium 228	0.1	pCi/L	Ü			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

MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

Page 6 of 13

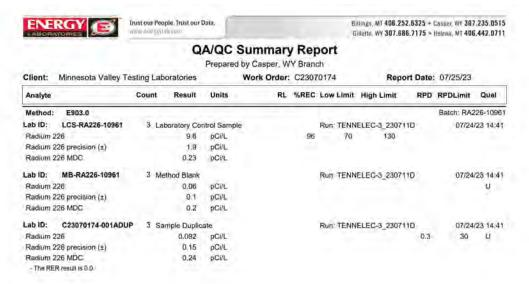


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 7 of 13

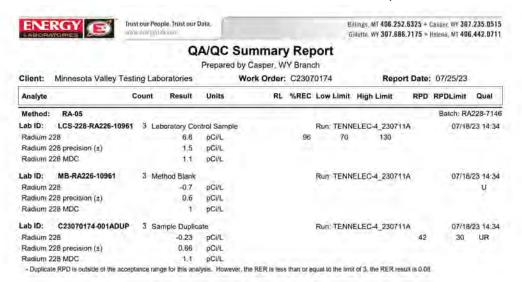


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



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





Account #: 2040 Client: Basin Electric Power Cooperative

FARISHANDER TO THE STREET OF T			Rillings, MT 406.252.6325 + Gasper, WY 307.235.0 Gilliotte, WY 307.686.7175 + Melena, MT 406.442.0						
Work Order Receipt Che	cklist								
Minnesota Valley Testing Lab	oratories	es C23070174							
Login completed by: Dakota R. Januska		Dat	e Received: 7/7/2023						
Reviewed by: cjohnson		Received by: gah							
Reviewed Date: 7/13/2023		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 Cl, Sulfite, Ferrous Iron, etc.)	Yes 🗸	No 🗍							
Femp Blank received in all shipping container(s)/cooler(s)?	Yes 🗌	No 🗸	Not Applicable						
Container/Temp Blank temperature:	14.5°C No los								
Containers requiring zero headspace have no headspace or subble that is <6mm (1/4°).	Yes 🗌	No 🗌	No VOA vials submitted						
Water - pH acceptable upon receipt?	Yes 🗸	No 🖂	Not Applicable						
Standard Reporting Procedures: ab measurement of analytes considered field post, Dissolved Oxygen and Residual Chlorine, a Solid/soil samples are reported on a wet weight	re qualified as basis (as recei	being analyz ved) unless	zed outside of recommended holding time, specifically indicated. If moisture corrected,						
data units are typically noted as -dry. For agricu and ground prior to sample analysis.									
The reference date for Radon analysis is the sal analyses is the analysis date. Radiochemical pro-									
Contact and Corrective Action Comm	ents:								
An additional cooler was received with a temp of	f 15.6°C								
Sample 19634005-1 were received at pH~6, 2	mLs of *added	per *mL to p	preserve to pH <2.						
BO#'s also included - 174743 and 173529.									
2011 2 3130 11 Made 2 11 71 TO MIN 17 0020									

Page 9 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.

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





count #:	2040		r		1 -	CI	lier	ıt:	Basin B	ΞΙε	ect	ric	Po	ow I	er C	oc	per	ative		1 1
	Page 1 of 1	19634	Phone #: 701-258-9720	Fax #: For faxed report check hox	E-mail: ccarroll@mvtl.com	For e-mail report check box Date Submitted:	Purchase Order #:	Analysis	Analysis Required	Ra228	Ra226 & Ra228	Ra226 & Ra228	Ra226 & Ra228	Ra226 & Ra228	6.5	100	2/48	Ra228 must be reported for all samples.	Date:	16/23
	ord	19	-	L.			Δ.	9	Other		H	H	-		+	+	+	-te	-	1
	So	25				-0		Typ	Glass Jar							+	+	- d		2
	ď	ler				2		Bottle Type	VOC Vials							1		9 2	5	2
	ģ	oro				0		Bo	1000 ml HNO3	-	2	2	2	2	+	+	+	t b	d be	Conner
	sto	Work Order #		ette		50	i.		Untreated							+	\Box	Snt	Received by:	Q
	Chain of Custody Record	3		Claudette	mpler:	Der C15430	ne/Numbe		Time	1406	1211	1211	0840	0220				Ra228 m	Re	Henry .
	Chain		Account #:	Contact:	Name of Sampler:	Quote Number	Project Name/Number:		Date Sampled	26-Jun-23	26-Jun-23	26-Jun-23	26-Jun-23	26-Jun-23				a226 & F	ondition:	
									Sample	GW	GW	GW						bined Ra	Sample Condition:	
	ES, Inc. y Ave	258-9724			91:		20	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 combined Ra226 &	Time:	1700
	LABORATORIES, Inc. 2616 E Broadway Ave Bismarck. ND 58501	258-9720 Fax: (701) 258-9724		MVTL 2616 E Broadway	different from above	PO Box 249	i, MN 56073	Sample I	Client	LOS PON	LOS PON		LOS LAND	LOS LAND				ults as	Date:	30-Jun-23
	LABO 2616 E Bisman	900) 279-6885 Fax: (701)	Company Name and Address:	2616 E	Bismarck, ND 58501 Billing Address (indicate if different from above):	PO	New Ulm		MVTL Lab Number	19634001	19634002	19634003	19634004	19634005				Comments: Individual results as well	ferred by:	
		Toll Free: (800)	Company Nam		Billing Address				Lab Number									Comments	Transferr	T. Olson

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.

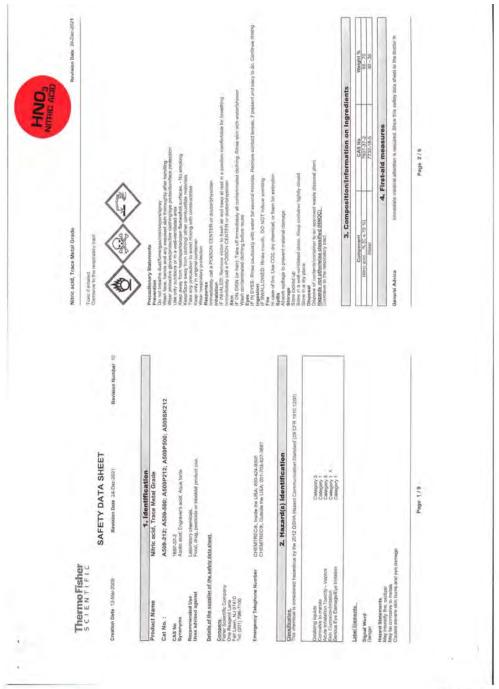
Page 10 of 13



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



Page 11 of 13





Account #: 2040 Client: Basin Electric Power Cooperative

Spotsition of the following process of the fol	Physical State	Linguist Contract Visite Contract	Irritation	Cisuses servere burns by all exposure mudes
Comparison Com	Appearance Odor Odor Threshold	Latent Lockman, Light yelowi Subang Audid Nac Information swellands	Sepailtration	No information available
Subjective to the picture of the pic	Metther Bolint/Barren	5 10 (D.14)	Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a cardinogen.
No femiliary No f	Boiling Point/Range Flash Point	Nort applicable Not applicable	- % jC s 70	NTP ACGIN Hat listed Not linked
No state available of the state	Evaporation Rate Flammability (solid.gas) Flammability or explosive limits	No information evallables Not applicables	4	or lates Not listed
See See See See See See See See See Se	Upper	No data eveliable No data eveniable	Reproductive Effects	No information available.
To chemical and the second sec	Vapor Pressure Vapor Density	CLB4 KPB (20°C) No information available	Developmental Effects	No information eventable.
To. Stability and reactivity To. Stability and reactivity and rea	Solubility	1,40 machie	Teratogenicity	No information evaluation.
To. Stability and reactivity Supplement of effects, both actors and playing and reactivity	Autoignition Temperature Decomposition Temperature	Nor dans weekliche No information werkliche No information westliche	STOT - single exposure STOT - reposted exposure	Name known Name known
10. Stability and reactivity The Control of the Co	Viscosity Molecular Formula Molecular Weight	No information evallable HMCs H3.01	Aspiration hazard	No informanion availabile
Ayes Contact with contractibility princing contractibility princing contractibility and the contractibility of the contraction of the contractibility of the contractibility of the contraction of the co		D. Stability and reactivity	delayed	perforation. Frankal is a corrective misselle. Use of gratific lavage or emede in careteriorizated. Possible perforation of stometh or neightigue, should be investigate.
Avoid included with contact with contraction making this consist the increase have Exposure to the increase increase. Convenient products, Contraction products and Displacement increase. Convenient products and the increase have Exposure to the increase and Displacement and			Endacrine Disruptor information	No intermenon evelleble
Accordance Controllation C		r. Confact with combastifishit/spanic malerial miley cause line.	Other Adverse Effects	The toxicological properties have not been fully investigated.
Attentials Controllation materials, Gloring beans, Reaching Algorith, Mariab, Frends powelered metals. Copyone materials, Algorithe, Cymichol. Companies of Maria and Maria an		attite products, Combustible material, Escess heat, Espassire to air or moisture over an evaluate		12. Ecological information
Organic materials, Albridget, Albridget, Carridget, Albridget, Carridget, Carridget, Albridget, Carridget, Albridget, Carridget, C		or princes. Utilde malerial. Strong basins. Reducing Aparol. Michilla. Frasty powdaned metalst.	Egotoxicity. Do not empty into drains. Large armou	nts will affect pH and harm aquatic organisms.
Principalities (Public National (Publi	Organ	materiats, Adenydes, Alcohols, Cyamidos, Armonia, Brong reducing agents	Persistence and Degradability	Missibile with water Persistence is unlikely based on information available.
Attached yeartestake Nature and social services are also services and services and services are also services and services are also services and services are also services ar	Hazardous Decomposition Products Nitrogrammes vapora	notides (NDA). Thermal decomposition can lead to release of inflating grees and	Bigaccumulation/ Accumulation	No information evalishin.
11. Toxicological information 11. Toxicological informatio		ous polymerization does not occur.	Mobility	Will likely be metall in the environment due to its water solubility.
11. Toxicological Information Waste Disposal Methods		nder normal processing	1 KIC	70-44
Rases on ATE data, the classification criticals we not must ATE > 2000 mg/kg. Rases on ATE data, the classification criticals we not must ATE > 2000 mg/kg. Rases of ATE data, the classification criticals we not must ATE > 2000 mg/kg. Rases of ATE data, the classification critical we not must ATE > 2000 mg/kg. Rases of ATE data, the classification critical we not must ATE > 20 mg/kg. Rases of ATE data, the classification critical we not must ATE > 20 mg/kg. Rases of ATE data, the classification critical we not must ATE > 20 mg/kg. Rases of ATE data, the classification critical we not must ATE > 20 mg/kg. Rases of ATE data, the classification critical we not must ATE > 20 mg/kg. Rases of ATE data, the classification we not must ATE > 20 mg/kg. Rases of ATE data, the classification critical we not must ATE > 20 mg/kg. Rases of ATE data, the classification critical we not must ATE > 20 mg/kg. Rases of ATE data, the classification critical we not must ATE > 20 mg/kg. Rases of ATE data, the classification critical was not attained. Rases of ATE data, the classification critical was not attained. Rases of ATE data, the classification critical was not attained. Rases of ATE data, the classification critical was not attained. Rases of ATE data, the classification critical was not attained. Rases of ATE data, the classification critical was not attained. Rases of ATE data, the classification critical was not attained. Rases of ATE data attained. Rases of ATE d		Toxicological information		43. Disposal considerations
Tables of a file of the the charges of the control of the charges	vation	on ATE data, the classification criteria are bot mat. ATE > 2000 mg/kg.	Waste Disposal Methods	Chemical waste presentate must determine whether a discusses chemical is classified as a restriction waste presentation and as well as the control to a consideration of the restriction waste chemical presentation of the control to the control to the control of the control o
Output O		on ATE data, the classification criterie are not met. ATE > 2000 mg/kg. y 3. ATE = 1 - 5 mg/L. Category 4.		14. Transport Information
Subsection Related Classe S. 4 Perchasing Natural Classe S. 4 Perchasing Classe S. 4 Perchasing Classe S. 4 Perchasing Relates MUTRIC ACIC Proper Shipping Relates	Information imponent	A time of the commence of the	DOT UN-No Proper Shipping Name	UNADD1 MITRIC ACID
TABA. UNBOY Proper Shipping Name NITING ACID	Mass pleatly Synorgistic		Subsidiary Hazard Class Packing Group	= 14
	Delayed and immediate effects as well as s	yonic affects from afted and losse-farm exposure.	TDA. UN-No Proper Shipping Name	LADDST NITRIG ACID
		Page 5/9		6/9 age4

Page 12 of 13





Account #:	2040	Client:	Basin Electric Power Cooperative	
		91 m 23		
		Revision Date 34-Dec-5021 formation and being at the grounding december of strongla- tion. The entremetion of the contribution with any stream		
		Revision Da Perusion and Just, per process combination		
		oneredge, into		
		nation		
		6. Other information Afternoon SES (Adjacementation com- SES (Adjacement	Page 9 (8)	
		16. Other Requires Vision of Part State Control of Part State Cont		
		24424		
		Minic acidi, Trace Melal Grade Prepared By Prepared By Social Data		
		Mitric acid, Trace Metal Prepared By Prepared By Prepared By Revision Date Revision Externancy Decision Externancy Decision Externancy Prevision Formancy Prevision F		
		Mitric acid, Prepared By Prepared By Prepared By Revision Dat Revision		
	144			
			Page 13 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.





Effective Date: 26 Aug 2022

Account #: 2040 Client: Basin Electric Power Cooperative

Toll Free: (80	2616 East Bro Bismarck, ND Phone: (701) 258-9	427333	ories, Inc.	Basin WO:	Electric 19634	Po	we		Page	of	tody			
Company Name	and Address	This warms		Account #				Phone #	ab Use Only					
		ctric Power Coop.		Contact	2040	_	_	Emails	701-745-7238 701-557-5488					
	3901	Highway 200A			Mark Dihle	3			utson@be	oc.com				
		ton, ND 58571		Name of S	ampler			jermey.h	ermey.hurshman@aecom.com					
illing Address	(indicate if different	from above)		mls					ason.lach@aecom.com					
				Quote Nui	mber				Date Submitted 6/28/2023					
				Project Na	me/Numb LOS CCI		ells	F	Purchase Orde					
Lab Use Only Lab	Sar	nple ID	Sample Matrix GW-Groundwater	Date Sampled	Time Sampled	Bottles	N/A		Analysis Re	equired				
001	LOS PONE	MW-2017-10	GW	6/26/2023	1406		10		SO ₄ , Sb, As, E Se, Tl, Ra226, F	-				
002	LOS POND	MW-2017-11	GW	6/26/2023	1211			B, Ca, CI, F,	SO ₄ , Sb, As, E Se, Tl, Ra226, I	la, Be, Cd,	Cr, Co,Pb,			
003		Dup	GW	6/26/2023	1211		F	B, Ca, Cl, F,	SO ₄ , Sb, As, E Se, Tl, Ra226, I	la, Be, Cd,	Cr, Co,Pb,			
004	LOS LANDFI	LL MW2016-12	GW	6/27/2023	840	3	M	13.7 Land 2 (10.20.5)	SO ₄ , Sb, As, E Se, TI <mark>, Ra226, I</mark>					
005	LOS LANDFII	CONTRACTOR OF THE PARTY OF THE	GW	6/27/2023	750			B, Ca, CI, F,	SO ₄ , Sb, As, E Se, Tl, Ra226, I	Ba, Be, Cd,	Cr, Co,Pb,			
Comments:							_							
	sferred by	Date	Time	Received	by		Dat		7	ROI	Therm.#			
MILLENNIUM E 2.	XPRESS		TIELL	AM	_	28	Ju	23 1624	5.6°C	YIN	TM 920			

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

See above for page number

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.

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

Form # 80-910005-1





Account #: 2040 Client: Basin Electric Power Cooperative

Toll Free:	2616 East Bro Bismarck, ND Phone: (701) 258-97		tories, Inc.	7.770	Electric 19634	Po	we	r Coop€	P		of Cust	1	
	me and Address	2011		Account #		111111	101 10	Phone	Lab Use #	Only			
	Lelan 3901	ctric Power Coop. d Olds Station Highway 200A on, ND 58571		Contact Name of S	Mark Dihle	0			@bepc.	com aki	701-557-54 nutson@bej		
Billing Addre	ss (indicate if different			mls Quote Nu		-	_		ney.hurshman@aecom.com on.lach@aecom.com Date Submitted 6/28/2023				
				Project Na	ame/Numb LOS CCI		ells		Purch	ase Ord			
Conly Lab	San	nple ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A		An	alysis R	equired		
001	LOS POND	MW-2017-10	GW	6/26/2023	1406	3		B, Ca, Cl, F Li, Hg, Mo,	Se, TI	Sb, As, E Ra226,	Ba, Be, Cd, Ra228, TDS	3	
002	LOS POND	MW-2017-11	GW	6/26/2023	1211	3	N	Li, Hg, Mo,	Se, TI,	Ra226,	Ba, Be, Cd, Ra228, TDS	3	
003	130	Dup	GW	6/26/2023	1211	3	N	B, Ca, Cl, F Li, Hg, Mo,			Ba, Be, Cd, Ra228, TDS		
004	LOS LANDFII	L MW2016-12	GW	6/27/2023	840	3	N	B, Ca, CI, F Li, Hg, Mo,	-				
005	LOS LANDFIL		GW	6/27/2023	1000			B, Ca, CI, F Li, Hg, Mo,	F, SO ₄ ,	Sb, As, I	Ba, Be, Cd,	Cr, Co,Pb,	
Comments:						1							
Tr MILLENNIUN 2.	ansferred by I EXPRESS	Date	Time Leu	Received	l by	28	Dat Ju	te Tim		Temp	ROI Y/N	Therm. #	

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

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.



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 Workorder: LOS CCR Wells (20727) 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:



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

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.

Report Date: Wednesday, August 16, 2023 11:23:25 AM





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.





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 20727001
 Date Collected:
 07/12/2023 09:30
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 07/12/2023 15:00
 Collector:
 Client

Temp @ Receipt (C): 4.7 Received on Ice: Yes

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See Attached			1	08/14/2023 16:11	08/14/2023 16:11	SUBv	
Radium 228	See Attached			1	08/14/2023 16:11	08/14/2023 16:11	SUBv	





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 20727002
 Date Collected:
 07/12/2023 09:30
 Matrix:
 Groundwater

 Sample ID:
 Dup
 Date Received:
 07/12/2023 15:00
 Collector:
 Client

Temp @ Receipt (C): 4.7 Received on Ice: Yes

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See Attached			1	08/14/2023 16:11	08/14/2023 16:11	SUBv	
Radium 228	See Attached			1	08/14/2023 16:11	08/14/2023 16:11	SUBv	



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 C

Client: Basin Electric Power Cooperative



Trust our People. Trust our Data

Billings, MT 406,252,6325 + Gasper, WY 307,235,0515 Gillette, WY 307,686,7175 + Holena, MT 406,442,0711

ANALYTICAL SUMMARY REPORT

August 14, 2023

Minnesota Valley Testing Laboratories 1126 N Front St

New Ulm, MN 56073-1176

Work Order: C23070519

Quote ID: C15480

Project Name: 20727

Energy Laboratories, Inc. Casper WY received the following 2 samples for Minnesota Valley Testing Laboratories on 7/17/2023 for analysis

 Lab ID
 Client Sample ID
 Collect Date
 Receive Date
 Matrix
 Test

 C23070519-001
 20727001; MW-2016-12
 07/12/23 9:30
 07/17/23
 Groundwater Radium 226 + Radium 228, Total Radium 228, Tot

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:

Page 1 of 7



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



Trust our People. Trust our Data.

Billings, MI 406,252,6325 + Casper, WY 307,235,0515 Billette, WY 307,686,7175 > Helena, MI 406,442,0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Minnesota Valley Testing Laboratories
Project: 20727

Project: 20727 Lab ID: C23070519-001 Client Sample ID: 20727001; MW-2016-12 Report Date: 08/14/23 Collection Date: 07/12/23 09:30 DateReceived: 07/17/23

Matrix: Groundwater

A. A	90000	tion.	Ourthurs		MCL/	West and	Assessed that (for
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.05	pCi/L	0			E903.0	08/01/23 12:25 / kdk
Radium 226 precision (±)	0.1	pCI/L				E903.0	08/01/23 12:25 / kdk
Radium 226 MDC	0.2	pCI/L				E903.0	08/01/23 12:25 / kdk
Radium 228	0.02	pCi/L	Ü			RA-05	07/25/23 16:56 / trs
Radium 228 precision (±)	0.8	pCl/L				RA-05	07/25/23 16:56 / trs
Radium 228 MDC	1.3	pCi/L				RA-05	07/25/23 16:56 / trs
Radium 226 + Radium 228	0.8	pCi/L	Q.			A7500-RA	08/02/23 14:45 / dmi
Radium 226 + Radium 228 precision (±)	8.0	pCi/L				A7500-RA	08/02/23 14:45 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	08/02/23 14:45 / dmi

Report Definitions RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 2 of 7



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



Client: Basin Electric Power Cooperative Account #: 2040

Trust our People. Trust our Data.

Billings, MI 406,252.6325 + Casper, WY 307,235.0515 Billette, WY 307.686.7175 > Helena, MI 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Minnesota Valley Testing Laboratories 20727 Project: Lab ID:

C23070519-002 Client Sample ID: 20727002; Dup

Report Date: 08/14/23 Collection Date: 07/12/23 09:30 DateReceived: 07/17/23

Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.1	pCi/L	0			E903.0	08/01/23 12:25 / kdk
Radium 226 precision (±)	0.1	pCI/L				E903.0	08/01/23 12:25 / kdk
Radium 226 MDC	0.2	pCI/L				E903.0	08/01/23 12:25 / kdk
Radium 228	0.4	pCi/L	Ü			RA-05	07/25/23 16:56 / trs
Radium 228 precision (±)	0.8	pCl/L				RA-05	07/25/23 16:56 / trs
Radium 228 MDC	1.4	pCi/L				RA-05	07/25/23 16:56 / trs
Radium 226 + Radium 228	0.8	pCi/L	U			A7500-RA	08/02/23 14:45 / dmf
Radium 226 + Radium 228 precision (±)	8.0	pCi/L				A7500-RA	08/02/23 14:45 / dmf
Radium 226 + Radium 228 MDC	1.4	pCi/L				A7500-RA	08/02/23 14:45 / dmf

Report Definitions

RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

Page 3 of 7

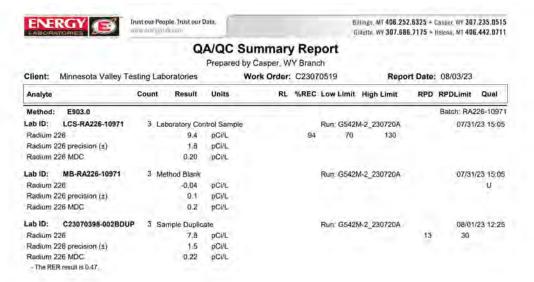


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 4 of 7

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.

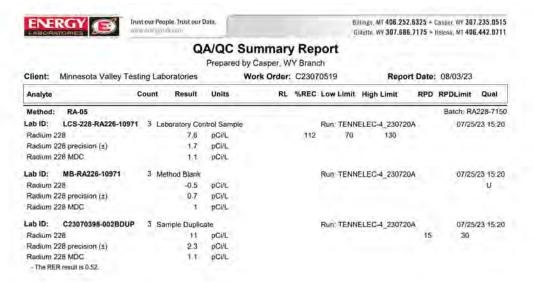


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 5 of 7





Account #: 2040 Client: Basin Electric Power Cooperative

Trust our People, Trust our Da	a.		Ritings, MT 496.252.6325 = Gasper, WY 307.235.05 Gittinte, WY 307.686.7175 = Helone, MT 496.442.07
Work Order Receipt Che	cklist		
Minnesota Valley Testing Lab	oratories	C	223070519
Login completed by: Selena J. Fowler		Dat	e Received: 7/17/2023
Reviewed by: cjohnson			Received by: cns
Reviewed Date: 7/19/2023			arrier 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 Cl, Sulfite, Ferrous Iron, etc.)	Yes 🗸	No 🔲	
Femp Blank received in all shipping container(s)/cooler(s)?	Yes 🗸	No 🗌	Not Applicable
Container/Temp Blank temperature:	25.9°C Blue loe		
Containers requiring zero headspace have no headspace or hubble that is <8mm (1/4°).	Yes 🗌	No 🗌	No VOA vials submitted
Water - pH acceptable upon receipt?	Yes 🔲	No 🗸	Not Applicable
Standard Reporting Procedures: Lab measurement of analytes considered field ppH, Dissolved Oxygen and Residual Chlorine, a Solid/soil samples are reported on a wet weight data units are typically noted as —dry. For agricular ground prior to sample analysis.	are qualified as b basis (as receiv ultural and minin	eing analy; ed) unless ig soil parar	zed outside of recommended holding time. specifically indicated. If moisture corrected, meters/characteristics, all samples are dried
ab measurement of analytes considered field in the Dissolved Oxygen and Residual Chlorine, a Solid/soil samples are reported on a wet weight lata units are typically noted as —dry. For agricated ground prior to sample analysis. The reference date for Radon analysis is the sa	are qualified as b basis (as receiv ultural and minin mple collection o	eeing analy; ed) unless g soil parar date. The re	zed outside of recommended holding time. specifically indicated. If moisture corrected, meters/characteristics, all samples are dried eference date for all other Radiochemical
ab measurement of analytes considered field job., Dissolved Oxygen and Residual Chlorine, a Solid/soil samples are reported on a wet weight data units are typically noted as —dry. For agricand ground prior to sample analysis. The reference date for Radon analysis is the samples is the analysis date. Radiochemical properties of the samples is the analysis date.	basis (as receively ultural and mining mple collection results re	eeing analy; ed) unless g soil parar date. The re	zed outside of recommended holding time. specifically indicated. If moisture corrected, meters/characteristics, all samples are dried eference date for all other Radiochemical
ab measurement of analytes considered field pH, Dissolved Oxygen and Residual Chlorine, a Solid/soil samples are reported on a wet weight data units are typically noted as —dry. For agric	basis (as received the basis (as received the basis (as received the basis (as received the basis of the basi	ed) unless g soil parai date. The re epresent a	zed outside of recommended holding time. specifically indicated. If moisture corrected, meters/characteristics, all samples are dried eference date for all other Radiochemical 2-sigma Total Measurement Uncertainty.

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.

Page 6 of 7

Report Date: Wednesday, August 16, 2023 11:23:25 AM



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

2040						lien		Basin E	ì	N					alive	np:	0
C13040519	20727	Phone #: 701-258-9720	Fax #: For faxed report check box	E-mail: ccarroll@mvtl.com	Date Submitted: 13-Jul-23	Purchase Order #: BL6728	Analysis	Analysis Required	Ra226 & Ra228	Ra226 & Ra228					Comments: Individual results as well as combined Ra226 & Ra228 must be reported for all samples.	Date: Temp:	1-11-33 98
p	207	<u>a</u>	ii.		0	4	9	Other			-			+	orte	1	3
00							yp	Glass Jar							de		
Re	# 10						tle	Umpreserved							- L	×	3
>	rde						Bottle Type	VOC Vials	2	2	+	-	-		- P	d be	#
00	N O		te					Untreated	.,		+	-		++	ns	eive	3
IST	Work Order #		idet			er:	Н				+		+		E	Received by:	3
Chain of Custody Record	>		Claudette	ampler:	nber	me/Numb		Time	0830	0830					Ra228		7
Chain		Account #:	Contact:	Name of Sampler:	Quote Number	Project Name/Number:		Date Sampled	12-Jul-23	12-Jul-23					Ra226 &	Sample Condition:	
								Sample	GW	GW					bined F	Sample (
LABORATORIES, Inc. 2616 E Broadway Ave Bismarck. ND 58501	158-9720 Fax: (701) 258-9724		<u>L</u>	VD 58501	249	IN 56073	Sample Information	Client Sample ID	MW-2016-12	Dup					ilts as well as com	Date: Time:	13-Jul-23 1700
LABORA 2616 E Bro Bismarck.	(701)		MVTL 2616 E Broadway	Billing Address (indicate if different from above):	PO Box 249	New Ulm, MN 56073	S	Lab Number MVTL Lab Number	20727001	20727002					:: Individual resu	Transferred by:	
	Toll Free: (800) 279-6885	Company Name and Address:		Rilling Address	September Similar			Lab Number							Comments	Trans	T. Olson

Page 7 of 7



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



Effective Date: 26 Aug 2022

Account #: 2040 Client: Basin Electric Power Cooperative

Minnesota Valley Testing Laboratories, Inc. 2616 East Broadway Avenue Bismarck, ND 58501 Phone: (701) 258-9720 Toll Free: (800) 279-6885 Fax: (701) 258-9724					Basin WO: 2	Electric 0727	Pov	wer	Coope	Chain of Custody Page1_ of1_ Work Order #			
Company Name and Address Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571 Billing Address (indicate if different from above)					Account # Phor					701-745-7238 701-557-5488			
				Nai	Mark Dihle mdii Name of Sampler jerm Myles Schettler jaso Quote Number				jermey.l	hle@bepc.com aknutson@bepc.com ney.hurshman@aecom.com			
				Qu						Date Submitted 87-12-23			
				Pro	oject Na	LOS CCI		ells		Purchase Order 79	# 0708-04		
Lab Use Only Lab	Sar	mple ID	Sample Mat GW - Groundwa	ater	Date ampled	Time Sampled	Bottles	Y/N		Analysis Required			
001	MW	-2016-12	GW	7/1	12/2023	930	3	-	Li. Ha. Mo.	a, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,F g, Mo, Se, Tl <mark>, Ra226, Ra228</mark> a, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,F			
002		Dup		7/1	12/2023	930	3	N		, 50 ₄ , 55, AS, BS Se, TI <mark>, Ra226, R</mark>	-	Cr, Co,Pb,	
												-	
Comments:													
1.	Transferred by	Date	Time	Tuo Re	eceived	by		Date			ROI W/N	Therm.#	

See above for page number

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

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.

Form # 80-910005-1



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 Workorder: LOS CCR Wells SP 143 (31096) 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:



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.

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.

Report Date: Wednesday, November 22, 2023 11:29:36 AM



Radium 228

MINNESOTA VALLEY TESTING LABORATORIES, INC.

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



11/15/2023 16:55

Account #: 2040 Client: Basin Electric Power Cooperative

See Attached

Analytical Results

 Lab ID:
 31096001
 Date Collected:
 10/11/2023 14:10
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 10/11/2023 15:55
 Collector:
 Client

Temp @ Receipt (C): 2.9 Received on Ice: Yes

remp @ Receipt (C). 2.9	Received 0						
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: Contracted Result							
Radium 226	See Attached			1	11/15/2023 16:55	11/15/2023 16:55	

1

11/15/2023 16:55



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



Trust our People. Trust our Data...

Billings, MT 406,252,6325 + Gasper, WY 307,235,0515 Gillette, WY 307.686.7175 - Holens, MT 406.442,8711

ANALYTICAL SUMMARY REPORT

November 14, 2023

Minnesota Valley Testing Laboratories 1126 N Front St

New Ulm, MN 56073-1176

Work Order:

Quote ID: C15480

Project Name: 31096

Energy Laboratories, Inc. Casper WY received the following 1 sample for Minnesota Valley Testing Laboratories on

10/17/2023 for analysis.

Lab ID Client Sample ID

C23100628

Collect Date Receive Date Matrix

C23100628-001 31096001; MW-2016-12 10/11/23 14:10 10/17/23

Radium 226 + Radium 228, Total Radium 226, Total

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:

Page 1 of 6



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



Client: Basin Electric Power Cooperative Account #: 2040

Trust our People. Trust our Data.

Billings, MI 406,252.6325 + Casper, WY 307,235.0515 Billette, WY 307.686.7175 > Helena, MI 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Minnesota Valley Testing Laboratories

31096 Project: C23100628-001 Lab ID: Client Sample ID: 31096001; MW-2016-12

Report Date: 11/14/23 Collection Date: 10/11/23 14:10 DateReceived: 10/17/23

Matrix: Groundwater

					MCL		
Analyses	Result	Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	-0.003	pCi/L	0			E903.0	10/30/23 16:43 / kdk
Radium 226 precision (±)	0.1	pCI/L				E903.0	10/30/23 16:43 / kdk
Radium 226 MDC	0.2	pCI/L				E903.0	10/30/23 16:43 / kdk
Radium 228	2.3	pCi/L				RA-05	10/24/23 13:01 / trs
Radium 228 precision (±)	1.1	pCl/L				RA-05	10/24/23 13:01 / trs
Radium 228 MDC	1.6	pCi/L				RA-05	10/24/23 13:01 / trs
Radium 226 + Radium 228	2.4	pCi/L				A7500-RA	11/01/23 11:59 / dmi
Radium 226 + Radium 228 precision (±)	1.1	pCi/L				A7500-RA	11/01/23 11:59 / dmi
Radium 226 + Radium 228 MDC	1.6	pCi/L				A7500-RA	11/01/23 11:59 / dmi

Report Definitions

RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

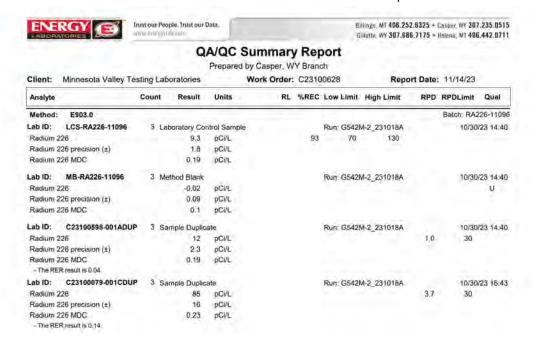
Page 2 of 6



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



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 3 of 6

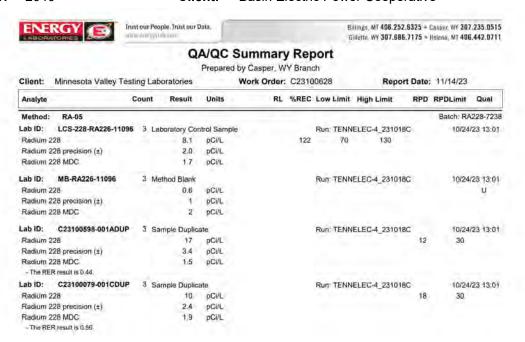


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 4 of 6

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.





Account #: 2040 Client: Basin Electric Power Cooperative

ENERGY Further Trust our People, Trust our Data			Rillings, MT 406.252.6325 * Casper, WY 307.235 Cillette, WY 307.686.7175 * Helona, MT 406.442
Work Order Receipt Chee	cklist		
Minnesota Valley Testing Lab	oratories	C	223100628
ogin completed by: Manford E, Hurley		Dat	te Received; 10/17/2023
Reviewed by: cjohnson		F	Received by: slr
Reviewed Date: 10/18/2023		C	arrier 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 🗌	
emp Blank received in all shipping container(s)/cooler(s)?	Yes 🗌	No 🗸	Not Applicable
ontainer/Temp Blank temperature:	12.7°C No los		
containers requiring zero headspace have no headspace or ubble that is <6mm (1/4°).	Yes 🗌	No 🗌	No VOA vials submitted
Vater - pH acceptable upon receipt?	Yes 🔽	No 🔲	Not Applicable
Standard Reporting Procedures: ab measurement of analytes considered field ports. Jr. Dissolved Oxygen and Residual Chlorine, a			
Solid/soil samples are reported on a wet weight lata units are typically noted as –dry. For agricu and ground prior to sample analysis.			
he reference date for Radon analysis is the sai malyses is the analysis date. Radiochemical pre-			
or methods that require zero headspace or req nterference, the pH is verified at analysis. Non- ncluded in the sample analysis comments.			
Contact and Corrective Action Comm	ents:		

Page 5 of 6



Account #:

MINNESOTA VALLEY TESTING LABORATORIES, INC.



2040					CI	ien	t:	Basin E	Ele	ctric	Pov	/er	Coc	pera	tive	Г	Т
Page 1 of 1	31096	Phone #:	Fax #:	E-mail: ccarroll@mvtl.com	Date Submitted:	Purchase Order #:	Analysis	Analysis Required	Ra226 & Ra228	(231006,48					Comments: Individual results as well as combined Ra226 & Ra228 must be reported for all samples.	Date: Temp:	17.73
ord	310	<u>a</u>	iii.	-	۵	ā	9	Other			H	-		++	rtec	+	1
90	*						Bottle Type	Glass Jar							g		0
œ	e						ttle	Nubleselved				1			2	į.	-
ð	Work Order #						Bo	Gallon HNO3	-	-	++			++	- p	Received by:	10
sto	¥		ette		0 43			Untreated			T			11	Sn	ceiv	
Chain of Custody Record	×		Claudette	ımpler:	ber C15480 v3	ne/Number		Time Sampled	1410						ta228 m	Re	J. 10 11 11 11 1
Chain		Account #:	Contact:	Name of Sampler:	Quote Number	Project Name/Number:		Date Sampled	11-Oct-23						a226 & F	ondition:	
								Sample Type	GW						bined Ra	Sample Condition:	
ES, Inc. Ave	58-9724			::			Sample Information	Client Sample ID	MW-2016-12						vell as com	Time:	0000
LABORATORIES, Inc. 2616 E Broadway Ave Bismarck. ND 58501	258-9720 Fax: (701) 258-9724		MVTL 2616 E Broadway	Bismarck, ND 58501 different from above	PO Box 249	New Ulm, MN 56073	Sample Ir		MW						sults as v	Date:	20 100 01
LABO 2616 E Bisman	Phone: (701) 258-9720 Toll Free: (800) 279-6885 Fax: (70	Company Name and Address:	2616 E	Bismarck, ND 58501 Billing Address (indicate if different from above):	PO	New Uln		MVTL Lab Number	31096001						: Individual res	Transferred by:	
TA NOTE OF THE PARTY OF THE PAR	Toll Free: (8)	Company Nam		Billing Address				Lab Number							Comments	Transi	Oleon

Page 6 of 6





Effective Date: 26 Aug 2022

Account #: 2040 Client: Basin Electric Power Cooperative

MVT			tories, Inc.	W0:	Electric 31096					Chain o	2_of_	
	ame and Address			Account #			IIII II	Phone	Lab L	rk Order # Jse Only		
	Lelai 3901 Stan	ectric Power Coop. nd Olds Station Highway 200A aton, ND 58571		Contact Name of S	2040 Mark Dihle ampler				s e@bep	c.com akn	utson@be	
Billing Addr	ress (indicate if different	from above)		mls Quote Nun				jason.		aecom.com Submitted	/11/2023	
				Project Na LO	me/Numbe S CCR We		SP	143	Pur	chase Orde 79	r# 0708-04	
Lab Use Only Lab	Sa	mple ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Sottles	N.			Analysis Re	quired	
001 005 30433	MW -	- 2016 - 12	GW	10/11/2023	1410	3	B, Ca, Cl, F, SO ₄ , Sb, As, Ba, Be, Cd, Cr N Li, Hg, Mo, Se, Tl, Ra226, Ra228, TDS					
30423	e											
Comments:						()						
	Transferred by Date Time									Therm. #		

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

See above for page number

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.

Report Date: Wednesday, November 22, 2023 11:29:36 AM

Form # 80-910005-1



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 Workorder: LOS CCR Wells (22235) 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:



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

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.

Report Date: Friday, September 8, 2023 4:15:34 PM



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

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.





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 22235001
 Date Collected:
 07/26/2023 08:15
 Matrix:
 Groundwater

 Sample ID:
 MW-2016-12
 Date Received:
 07/27/2023 15:09
 Collector:
 Client

Temp @ Receipt (C): 5.3

Contract Lab

Method: Contracted Result

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Radium 226	See Attached			1	09/08/2023 12:31	09/08/2023 12:31	SUBv	
Radium 228	See Attached			1	09/08/2023 12:31	09/08/2023 12:31	SUBv	



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



Trust our People. Trust our Data...

Billings, MT 406,252,6325 + Gasper, WY 307,235,0515 Gillette, WY 307.686.7175 - Holens, MT 406.442,0711

ANALYTICAL SUMMARY REPORT

September 08, 2023

Minnesota Valley Testing Laboratories

C23080495

1126 N Front St

New Ulm, MN 56073-1176

Work Order.

Quote ID: C15480

Project Name: 22235

Energy Laboratories, Inc., Casper WY received the following 1 sample for Minnesota Valley Testing Laboratories on 8/9/2023

Lab ID

Client Sample ID C23080495-001 22235001; MW-2016-12 07/27/23 8:15

Collect Date Receive Date Matrix 08/09/23

Radium 226 + Radium 228, Total Radium 226, Total

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:

Page I of 6



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

Trust our People, Trust our Data,

Billings, MT 406,252,6325 + Casper, WY 307,235,0515 Billette, WY 307,686,7175 > Helena, MT 406,442,0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

 Client:
 Minnesota Valley Testing Laboratories

 Project:
 22235

 Lab ID:
 C23080495-001

 Client Sample ID:
 22235001; MW-2016-12

Report Date: 09/08/23 Collection Date: 07/27/23 08:15 DateReceived: 08/09/23 Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL							
Radium 226	0.07	pCi/L	0.			E903.0	08/28/23 12:52 / kdk
Radium 226 precision (±)	0.1	pCI/L				E903.0	08/28/23 12:52 / kdk
Radium 226 MDC	0.2	pCI/L				E903.0	08/28/23 12:52 / kdk
Radium 228	1.8	pCi/L				RA-05	08/22/23 14:31 / trs
Radium 228 precision (±)	0.7	pCl/L				RA-05	08/22/23 14:31 / trs
Radium 228 MDC	1	pCi/L				RA-05	08/22/23 14:31 / trs
Radium 226 + Radium 228	1.9	pCi/L				A7500-RA	08/29/23 11:36 / dmi
Radium 226 + Radium 228 precision (±)	8.0	pCi/L				A7500-RA	08/29/23 11:36 / dmi
Radium 226 + Radium 228 MDC	1.0	pCi/L				A7500-RA	08/29/23 11:36 / 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)

Page 2 of 6

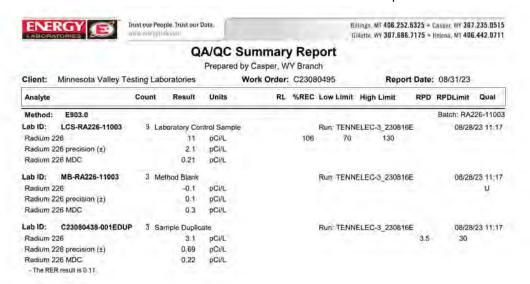


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 3 of 6

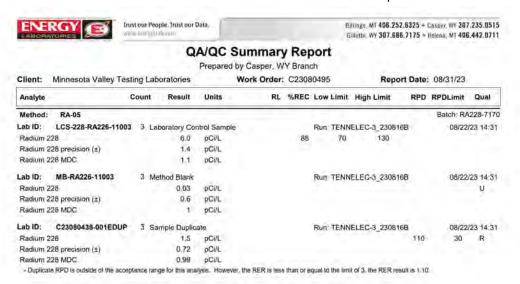


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



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 4 of 6





Account #: 2040 Client: Basin Electric Power Cooperative

in and the second	See 30, 42.		Gil/mite, WY 307.686,7175 = Helcons, M1 406,442
ork Order Receipt Che	ecklist		
linnesota Valley Testing La	boratories	C	23080495
gin completed by: Manford E. Hurley		Dat	te Received: 8/9/2023
eviewed by: cjohnson		F	Received by: dmf
viewed Date: 8/14/2023		C	arrier name: UPS
ppling container/cooler in good condition?	Yes 🗸	No 🗆	Not Present
stody-seals intact on all shipping container(s)/cooler(s)?	Yes 🔲	No 🖂	Not Present ✓
stody seals intact on all sample bottles?	Yes 🗌	No 🗀	Not Present ☑
ain of custody present?	Yes 🗹	No 🔲	
ain of custody signed when relinquished and received?	Yes 🔽	No 🗌	
ain of custody agrees with sample labels?	Yes 🔽	No. 🗆	
mples in proper container/bottle?	Yes 🗸	No 🗌	
mple containers intact?	Yes 🗹	No 🖂	
ficient sample volume for indicated test?	Yes 🗹	No 🖂	
samples received within holding time? clude analyses that are considered field parameters thas pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes 🗸	No 🗍	
np Blank received in all shipping container(s)/cooler(s)?	Yes 🔽	No 🗆	Not Applicable
ntainer/Temp Blank temperature:	15.2°C No los		
ntainers requiring zero headspace have no headspace or obje that is <6mm (1/4°).	Yes 🗌	No 🗌	No VOA vials submitted
ter - pH acceptable upon receipt?	Yes 🗹	No 🗌	Not Applicable
andard Reporting Procedures:			
	d narameters that	ramiira ans	alysis within 15 minutes of sampling such as
			zed outside of recommended holding time.
			specifically indicated. If moisture corrected meters/characteristics, all samples are dried
e reference date for Radon analysis is the salyses is the analysis date. Radiochemical			
	1-2-1		2.4.7.0

Page 5 of 6

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.





Account #: 2040 Client: Basin Electric Power Cooperative

		LABORATORIES, Inc. 2616 E Broadway Ave Bismarck, ND 58501	S, Inc. Ave		Chair	Chain of Custody Record	sto	d d	Re	20.	Page 1	of 1
Toll Free: (Phone: (701) 258-9720 Toll Free: (800) 279-6885 Fax: (70	258-9720 Fax: (701) 258-9724	58-9724			3	Y.	Work Order #	#	2	22235	
ompany Nan	Company Name and Address:				Account #:						Phone #: 701-258-9720	
	2616 €	MVTL 2616 E Broadway			Contact:	Claudette	ette				Fax #: For faxed report check box	×
lling Addres	Billing Address (indicate if different from above):	Bismarck, ND 58501 different from above			Name of Sampler:	ampler:					E-mail: ccarroll@mvtl.com	nvtl.com
	O	PO Box 249			Quote Number	nber					Date Submitted: 7-Aug-23	
	New Ulr	New Ulm, MN 56073			Project Na	Project Name/Number:	e				Purchase Order #: BL6734	
		Sample Information	formation					Bot	Bottle Type	/pe	Analysis	
ab Number	Lab Number MVTL Lab Number		Client Sample ID	Sample Type	Date Sampled	Time	Untreated	VOC Vials VOC Vials	Umpreserved	Glass Jar Other	Analysis Required	nired
	22235001	MW-	MW-2016-12	GW	27-Jul-23	08:15					Ra226 & Ra228	228
									+		(23080,495	
								++	++			
								+	+			
omment	s: Individual re	sults as w	vell as com	bined F	ta226 &	Ra228 r	uns	t be	re	200	Comments: Individual results as well as combined Ra226 & Ra228 must be reported for all samples.	
Tran	Transferred by:	Date:	Time:	Sample	Sample Condition:	R	ceiv	Received by:			Date:	Temp:
T. Olson		7-Aug-23	1700			The Car	1.	The paper of	U	Ī	8,422 Min	

Page 6 of 6





Effective Date: 26 Aug 2022

Account #: 2040 Client: Basin Electric Power Cooperative

Toll Free: (80	2616 East Bro Bismarck, ND Phone: (701) 258-97		tories, Inc.	WO: 2				r Coope	Page	of Cus	
Company Name		1 ax. (701) 256-5724		Account #	ic have			Phone	Work Order Lab Use Only #	*#	
	Lelan	ctric Power Coop. d Olds Station Highway 200A		Contact	2040 Mark Dihl		_	Emails	701-745-7238		
illing Address		on, ND 58571		Name of S Myles Sch Quote Nur	ampler ettler			jermey.	hurshman@ae ch@aecom.co	com.com	pc.com
				Project Na			ells		Purchase Ord		
Lab Use Only Lab	Sam	nple ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Sottles	N)		Analysis F	Required	
201	MW-	2016-12	GW	7/26/2023	815			B, Ca, CI, F Li, Hg, Mo,	Analysis Required FI, F, SO ₄ , Sb, As, Ba, Be, Cd, G Mo, Se, TI, Ra226, Ra228 * 1		Cr, Co,Pb,
Comments:				7.1							
Trans	ferred by	Date	Time	Received			Dat		e Temp	ROI Y/AP	Therm.#

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

See above for page number

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.

Report Date: Friday, September 8, 2023 4:15:34 PM

Form # 80-910005-1



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 Workorder: LOS CCR Wells (25641) 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:



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.

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.

Report Date: Monday, October 16, 2023 3:34:48 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 25641001
 Date Collected:
 08/23/2023 08:10
 Matrix:
 Groundwater

 Sample ID:
 LOS LANDFILL MW
 Date Received:
 08/23/2023 15:49
 Collector:
 Client

2016-12

Temp @ Receipt (C): 6.1 Received on Ice: Yes

Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: Contracted Result								
Method. Contracted Result								
Radium 226	See Attached			1	10/04/2023 17:53	10/04/2023 17:53	SUBv	
Radium 228	See Attached			1	10/04/2023 17:53	10/04/2023 17:53	SUBv	



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

ENERGY (S)

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

ANALYTICAL SUMMARY REPORT

September 24, 2023

Minnesota Valley Testing Laboratories 1126 N Front St

C23081143

New Ulm, MN 56073-1176

Work Order:

Quote ID: C15480

Project Name: 25641

Energy Laboratories, Inc. Casper WY received the following 1 sample for Minnesota Vailey Testing Laboratories on 8/28/2023 for analysis

 Lab ID
 Cflient Sample ID
 Collect Date
 Receive Date
 Matrix
 Test

 C23081143-001
 25641001; LOS LANDFILL MW 2016-12
 08/23/23 8:10
 08/28/23
 Groundwater Radium 228, Total
 Radium 226, Total Radium 228, Total

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:

Page 1 of 6



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

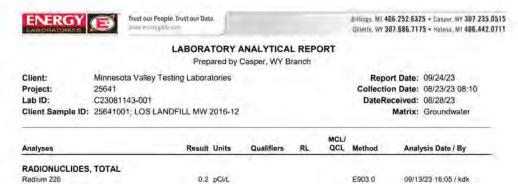
0.1 pCVL

0.2 pCi/L

1.1 pCI/L

0.7 pCI/L

1.1 pCUL



Report RL - Analyte Reporting Limit

Definitions: QCL - Quality Control Limit

Radium 226 precision (±)

Radium 228 precision (±)

Radium 226 MDC

Radium 228 MDC

Radium 228

MCL - Maximum Contaminant Level ND - Not detected at the Reporting Limit (RL)

E903.0

E903.0

RA-05

RA-05

RA-05

09/13/23 16:05 / kdk

09/13/23 16:05 / kdk

09/07/23 16:40 / trs

09/07/23 16:40 / trs 09/07/23 16:40 / trs

Page 2 of 6



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



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 3 of 6

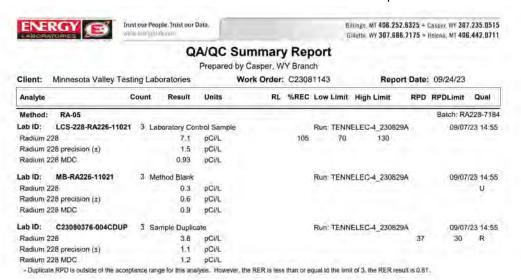


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



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 4 of 6





Account #: 2040 Client: Basin Electric Power Cooperative

Work Order Receipt Che	cklist		
Work Order Receipt Ones	CKIISC		
Minnesota Valley Testing Lab	oratories	C	23081143
ogin completed by: Selena J. Fowler		Dat	te Received: 8/28/2023
Reviewed by: cjohnson		F	Received by: drj
Reviewed Date: 8/31/2023		C	arrier 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 🔽
sustody seals intact on all sample bottles?	Yes	No 🗆	Not Present ✓
hain of custody present?	Yes 🗸	No 🔲	
hain of custody signed when relinquished and received?	Yes 🔽	No. 🗆	
hain of custody agrees with sample labels?	Yes 🗸	No 🗌	
amples in proper container/bottle?	Yes 🔽	No 🗔	
ample containers intact?	Yes 🔽	No 🖂	
ufficient sample volume for indicated test?	Yes 🗸	No 🗌	
ill samples received within holding time? Exclude analyses that are considered field parameters uch as pH, DO, Res Cl. Sulfite, Ferrous Iron, etc.)	Yes 🔽	No 🗌	
emp Blank received in all shipping container(s)/cooler(s)?	Yes 🔲	No 🔽	Not Applicable
ontainer/Temp Blank temperature	21.7°C No Ice		
ontainers requiring zero headspace have no headspace or ubble that is <6mm (1/4°).	Yes 🔲	No 🗀	No VOA vials submitted
/ater - pH acceptable upon receipt?	Yes 🔽	No 🔲	Not Applicable
ater - pH acceptable upon receipt?	Yes 🔽	No 🔲	Not Applicable
Standard Reporting Procedures:			
ab measurement of analytes considered field p hH, Dissolved Oxygen and Residual Chlorine, a			
olid/soil samples are reported on a wet weight lata units are typically noted as –dry, For agricund ground prior to sample analysis.			
The reference date for Radon analysis is the sal			eference date for all other Radiochemical 2-sigma Total Measurement Uncertainty.

Page 5 of 6

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.



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



2040 Client: Account #:

2040			C	lien	t:	Basin E	Electri	c Power	Cooperat	tive	
Page 1 of 1	Phone #: 701-258-9720	Fax #: For faxed report check box C-mail:	For e-mail report check box Date Submitted: 24-Aug-23	Purchase Order #: BL6739	Analysis	Analysis Required	Ra226 & Ra228			Comments: Individual results as well as combined Ra226 & Ra228 must be reported for all samples.	8/38/23 40-35 21.76
C 7208114 Sustody Record	ld ld	IL I	0	<u>a</u>	90	Other				orte	
60 00 I	#				Ty	Glass Jar				rep	
OR !	der				Bottle Type	VOC Vials				pe	
C po	Work Order #	0			8	Untreated Gallon HNO3	-			ust	Kecelved by
Ost I	Nor	Claudette er:		per:	H					E	¥ \$
of CL		Clat	per	ne/Num		Time	0810			Ra228	7304
CJ208\\ ^A Chain of Custody Record	Account #:	Contact: Cla	Quote Number	Project Name/Number:		Date	23-Aug-23			ka226 &	Sample Condition:
						Sample	GW			bined R	
S, Inc. Ave 01 8-9724		258-9724 1		NX 249 MN 56073 Sample Information		Client Sample ID	LOS LANDFILL MW 2016-12 GW			well as com	Time: 1700
ATORII roadway k, ND 58	Fax: (701) 258-9724	MVTL 2616 E Broadway Bismarck, ND 58501	po Box 249	New Ulm, MN 56073	Sample	Clien	LOS LAND			sults as	Date: 24-Aug-23
LABORATORIES, Inc. 2616 E Broadway Ave Bismarck, ND 58501		A 2616 E E Bismarck	Billing Address (indicate if different from above):	New Ulm,		Lab Number MVTL Lab Number				s: Individual res	Transferred by:
	Toll Free: (800) 279-6885 Company Name and Address:		Billing Address			Lab Number				Comments	Trans T. Olson

Page 6 of 6





Account #: 2040 Client: Basin Electric Power Cooperative

Toll Free: (8	2616 East Broa Bismarck, ND Phone: (701) 258-972	58501	tories, Inc.	Basin I WO: 25	Electric F 5641	Pow	er			of Cus	
	Leland 3901 Hi	ric Power Coop. Olds Station ghway 200A n, ND 58571 om above)		Account # Contact Name of S mls Quote Nu	2040 Mark Dihl Sampler	er	ells	Emails mdihle@ jermey.h jason.la	# 701-745-7238 @bepc.com almurshman@aech@aecom.co Date Submitte	knutson@becom.com m ed 8/23/2023	
Lab Use Only Lab	Samp	le ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A		Analysis R	Required	
001	LOS LANDFILL	MW 2016-12	GW	8/23/2023	810	3	N	1. C. S. S. S. S. S. S. S. S.	, SO ₄ , Sb, As, Se, Tl, Ra226,		
Comments:	nsferred by	Data	The state of the s	2.0/2.1						l no	I at a
MILLENNIUM 2.		Date	Time	Received	БУ	_	Dat			ROI Ø/N Y/N	TM920

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

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.



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 Workorder: LOS CCR Wells (28211) 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:



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.

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.

Report Date: Tuesday, October 24, 2023 9:15:51 AM



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

Analytical Results

Lab ID:28211001Date Collected:09/14/2023 08:00Matrix:GroundwaterSample ID:LOS Landfill MWDate Received:09/14/2023 16:12Collector:Client

2016-12

Temp @ Receipt (C): 5.4 Received on Ice: Yes

1 0 1117								
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Ву	Qual
Method: Contracted Result								
Radium 226	See Attached			1	10/23/2023 08:32	10/23/2023 08:32	SUBv	
Radium 228	See Attached			1	10/23/2023 08:32	10/23/2023 08:32	SUBv	



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



Trust our People. Trust our Data.

Billings, MT 406,252,6325 + Gasper, WY 307,235,0515 Gillette, WY 307,686,7175 + Holena, MT 406,442,0711

ANALYTICAL SUMMARY REPORT

October 17, 2023

Minnesota Valley Testing Laboratories

C23090703

1126 N Front St

New Ulm, MN 56073-1176

Work Order

Quote ID: C15480

Project Name: 28211

Energy Laboratories, Inc. Casper WY received the following 1 sample for Minnesota Valley Testing Laboratories on 9/19/2023 for analysis

 Lab ID
 Client Sample ID
 Collect Date
 Receive Date
 Matrix
 Test

 C23090703-001
 28211001; LOS Landfill MW 2016-1
 09/14/23 8:00
 09/19/23
 Groundwater Radium 226, Total Radium 228, Total

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:

Page I of 8



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



Client: Basin Electric Power Cooperative Account #: 2040

> Trust our People. Trust our Data. Billings, MI 406,252.6325 + Casper, WY 307,235.0515 Billette, WY 307.686.7175 > Helena, MI 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Minnesota Valley Testing Laboratories 28211 Project: C23090703-001 Lab ID:

Client Sample ID: 28211001; LOS Landfill MW 2016-1

Report Date: 10/17/23 Collection Date: 09/14/23 08:00 DateReceived: 09/19/23

Matrix: Groundwater

				MCL		
Analyses	Result Units	Qualifiers	RL	QCL	Method	Analysis Date / By
RADIONUCLIDES, TOTAL						
Radium 226	0.2 pCi/L	0			E903.0	10/09/23 15:07 / trs
Radium 226 precision (±)	0.1 pCI/L				E903.0	10/09/23 15:07 / trs
Radium 226 MDC	0.2 pC//L				E903.0	10/09/23 15:07 / trs
Radium 228	1.0 pCi/L	U			RA-05	10/04/23 14:30 / trs
Radium 228 precision (±)	0.9 pC//L				RA-05	10/04/23 14:30 / trs
Radium 228 MDC	1.4 pCi/L				RA-05	10/04/23 14:30 / trs

Report Definitions

RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 2 of 6

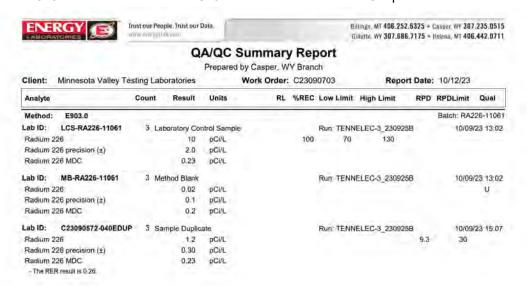


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 3 of 6

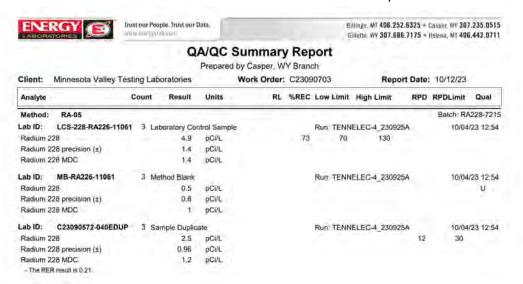


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 4 of 6

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.





Account #: 2040 Client: Basin Electric Power Cooperative

First our People, Trust our Dat	1		RUHINGS, MT 496.252.6325 * Casper, WY 307.235.05 Gillette, VY 307.686.7175 * Nelcon, MT 406.442.07
Work Order Receipt Che	cklist		
Minnesota Valley Testing Lab	oratories	C	23090703
Login completed by: Taylor K, Jones		Dat	te Received: 9/19/2023
Reviewed by: adegnan		F	Received by: DF
Reviewed Date: 9/21/2023		С	arrier 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 tabels?	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 Cl, Sulfite, Ferrous Iron, etc.)	Yes 🗸	No 🔲	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes 🗌	No 🗸	Not Applicable
Container/Temp Blank temperature:	21.1°C No los		
Containers requiring zero headspace have no headspace or bubble that is <8mm (1/4°).	Yes 🗌	No 🗌	No VOA vials submitted
Water - pH acceptable upon receipt?	Yes 🗸	No 🗌	Not Applicable
Standard Reporting Procedures: .ab measurement of analytes considered field poly. J.H., Dissolved Oxygen and Residual Chlorine, a Solid/soil samples are reported on a wet weight that units are typically noted as —dry. For agricu	re qualified as basis (as rece	being analy, ived) unless	zed outside of recommended holding time. specifically indicated. If moisture corrected,
and ground prior to sample analysis.			
Radiochemical precision results represent a 2-s	igma Lotal Me	asurement L	incertainty.
For methods that require zero headspace or req interference, the pH is verified at analysis. Non- included in the sample analysis comments.			
Contact and Corrective Action Comm	ents:		to constitution in the
The samples for radionuclides were received at samples below pH 2. This was done within the method. tj 9/20/23			

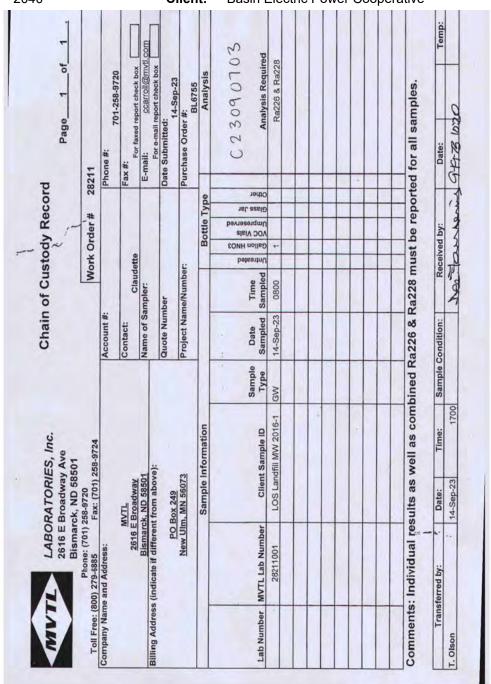
Page 5 of 6

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.





Account #: 2040 Client: Basin Electric Power Cooperative



Page 6 of 6





Effective Date: 26 Aug 2022

Account #: 2040 Client: Basin Electric Power Cooperative

MVTL	Minnesota Valley Testing Laboratories, Inc. 2616 East Broadway Avenue Bismarck, ND 58501 Phone: (701) 258-9720 Toll Free: (800) 279-6885 Fax: (701) 258-9724				W0:	Electric 28211			Chain of Custody Page of				
Toll Free: (8	300) 279-6885 Fa	x: (701) 258-9724			1 (00)(0)		Ш			We Lab	ork Order # Use Only		
mpany Nam	e and Address	ic Power Coop.			Account #	2040			Phone		1-745-7238 7	04 557 5	400
Leland Olds Station 3901 Highway 200A					Contact Ema					3	pc.com aknu		
		, ND 58571			Name of S	ampler					shman@aecor	n.com	
Iling Addres	s (indicate if different fro	m above)			mls Quote Nur	mber		_	jason.l		te Submitted	4/2023	
					Project Na	me/Numb		ells		Pu	rchase Order		
Lab Use Only Lab	Sampl	e ID	Sample M GW - Ground		Date Sampled	Time Sampled	Bottles	N/N			Analysis Rec	uired	
100	LOS LANDFILL	MW 2016 - 12	GW	1	9/14/2023	800	3	N		F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co o, Se, Tl <mark>, Ra226, Ra228</mark> , TDS			
omments:			-				_			_			
-	nafamad bu	Doto	There		Dodin-1	bu	1	Dat	a min		Tomir	ROI	Thorn #
Tra ILLENNIUM	nsferred by EXPRESS	Date 9/14/2023	NOON 1	Ter	Received 4	БУ	14	Dat Sep	e Tin	ک ک	5.4°C	ON	Therm. #
				-								YIN	100

See above for page number

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.

Report Date: Tuesday, October 24, 2023 9:15:51 AM

Form # 80-910005-1



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 Workorder: LOS CCR Wells SP 143 (32040) 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:



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.

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.

Report Date: Wednesday, November 29, 2023 5:10:56 PM





Account #: 2040 Client: Basin Electric Power Cooperative

Analytical Results

 Lab ID:
 32040001
 Date Collected:
 10/24/2023 08:24
 Matrix:
 Groundwater

 Sample ID:
 MW - 2016 - 12
 Date Received:
 10/24/2023 16:45
 Collector:
 Client

Temp @ Receipt (C): 28 Received on Ice: Yes

remp @ Receipt (C). 2.0	Received of	ilce. 165					
Parameter	Results	Units	RDL	DF	Prepared	Analyzed	Qual
Method: Contracted Result							
Radium 226	See Attached			1	11/29/2023 13:05	11/29/2023 13:05	
Radium 228	See Attached			1	11/29/2023 13:05	11/29/2023 13:05	



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



Trust our People. Trust our Data.

Billings, MT 406,252,6325 + Gasper, WY 307,235,0515 Gillette, WY 307.686.7175 - Holens, MT 406.442,0711

ANALYTICAL SUMMARY REPORT

November 28, 2023

Minnesota Valley Testing Laboratories 1126 N Front St

New Ulm, MN 56073-1176

Work Order.

Quote ID: C15480

Project Name: 32040

C23101039

Energy Laboratories, Inc. Casper WY received the following 1 sample for Minnesota Valley Testing Laboratories on 10/30/2023 for analysis.

Lab ID Client Sample ID

Collect Date Receive Date Matrix

Radium 226 + Radium 228, Total

C23101039-001 32040001; MW-2016-12 10/24/23 8:24

Radium 226, Total

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.

10/30/23

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:

Page I of 6



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

Trust our People. Trust our Data.

Billings, MT 406,252,6325 + Casper, WY 307,235,0515 Billette: WY 307.686.7175 > Helena, MI 406.442.0711

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Minnesota Valley Testing Laboratories 32040 Project: C23101039-001 Lab ID:

Client Sample ID: 32040001; MW-2016-12

Report Date: 11/28/23 Collection Date: 10/24/23 08:24 DateReceived: 10/30/23 Matrix: Groundwater

MCL/ QCL Method Analyses Result Units Qualifiers RL Analysis Date / By RADIONUCLIDES, TOTAL 11/14/23 14:52 / kdk 0.2 pCi/L Ü E903.0 Radium 226 11/14/23 14:52 / kdk Radium 226 precision (±) 0.1 pCI/L E903.0 Radium 226 MDC 0.2 pCI/L E903.0 11/14/23 14:52 / kdk Radium 228 0.6 pCi/L RA-05 11/10/23 13:59 / trs Radium 228 precision (±) 0.6 pCVL RA-05 11/10/23 13:59 / trs Radium 228 MDC 1 pCi/L RA-05 11/10/23 13:59 / trs 0.6 pCi/L A7500-RA U 11/15/23 17:01 / dmf Radium 226 + Radium 228 A7500-RA Radium 226 + Radium 228 precision (±) 0.6 pCi/L 11/15/23 17:01 / dmf Radium 226 + Radium 228 MDC A7500-RA 1 pCi/L 11/15/23 17:01 / dmf

Report Definitions

RL - Analyte Reporting Limit QCL - Quality Control Limit

U - Not detected at Minimum Detectable Concentration

MCL - Maximum Contaminant Level

ND - Not detected at the Reporting Limit (RL)

Page 2 of 6

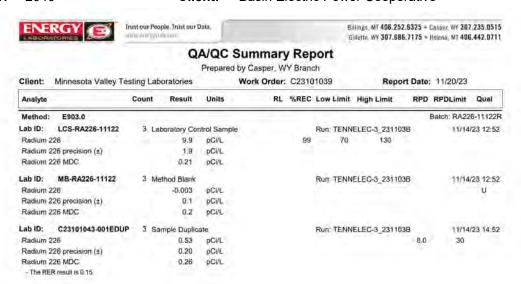


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



Qualifiers:

RL - Analyte Reporting Limit

U - Not detected at Minimum Detectable Concentration (MDC)

ND - Not detected at the Reporting Limit (RL)

Page 3 of 6

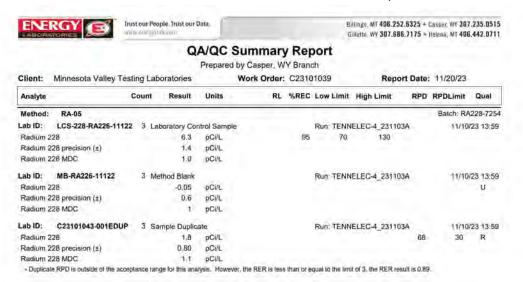


1126 North Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890
2616 East Broadway Ave. ~ Bismarck, ND 58501 ~ 800-279-6885 ~ Fax 701-258-9724
1201 Lincoln Hwy. ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885

www.MVTL.com



Account #: 2040 Client: Basin Electric Power Cooperative



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 4 of 6





Account #: 2040 Client: Basin Electric Power Cooperative

Trust our People, Trust our Date of People, Trust our Date of People our Date our Date of People our Date our Dat	i.		Rillings, MT 406.252.6325 = Gasper, WY 307.235 Gilliette, WY 307.688,7175 = Helcon, MT 406.442
Work Order Receipt Che	cklist		
Minnesota Valley Testing Lab	oratories	C	223101039
Login completed by: Dakota R. Sawyer		Dat	te Received: 10/30/2023
Reviewed by: cjohnson		F	Received by: dmf
Reviewed Date: 10/31/2023		C	arrier 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 Cl, Sulfite, Ferrous Iron, etc.)	Yes 🗸	No 🔲	
Femp Blank received in all shipping container(s)/cooler(s)?	Yes 🗌	No 🗸	Not Applicable
Container/Temp Blank temperature:	1.7°C On Ice		
Containers requiring zero headspace have no headspace or subble that is <8mm (1/4°).	Yes 🗌	No 🗌	No VOA vials submitted
Water - pH acceptable upon receipt?	Yes 🗸	No 🗌	Not Applicable
Containers requiring zero headspace have no headspace or bubble that is <8mm (1/4*). Watar - pH acceptable upon receipt? Standard Reporting Procedures:			
ab measurement of analytes considered field port. Dissolved Oxygen and Residual Chlorine, a			
Solid/soil samples are reported on a wet weight data units are typically noted as –dry. For agric and ground prior to sample analysis.			
The reference date for Radon analysis is the sa analyses is the analysis date. Radiochemical pr			
For methods that require zero headspace or rec nterference, the pH is verified at analysis. Non ncluded in the sample analysis comments.			
Contact and Corrective Action Comm	nents:		

Page 5 of 6





Account #: 2040

Client: Basin Electric Power Cooperative

Page 6 of 6





ROI Therm. #

Y/N

Account #: 2040 Client: Basin Electric Power Cooperative

Company Nar	Minnesota Valley Testing Laborato 2616 East Broadway Avenue Bismarck, ND 58501 Phone: (701) 258-9720 800) 279-6885 Fax: (701) 258-9724 me and Address Basin Electric Power Coop. Leland Olds Station 3901 Highway 200A Stanton, ND 58571 ss (indicate if different from above)	ries, Inc.	W0: 320 Account # Contact	2040 Mark Dihle) We	er (Phone Emails mdihle(c) jermey, jason.la	Chain of Custody Page of Work Order # Lab Use Only # 701-745-7238 701-557-5488 @bepc.com aknutson@bepc.com hurshman@aecom.com ch@aecom.com Date Submitted 10/24/2023
			Project Nar LO	me/Numbe S CCR We	r IIs	SP	143	Purchase Order # 790708-04
Lab Use Only Lab	Sample ID	Sample Matrix GW - Groundwater	Date Sampled	Time Sampled	Bottles	N/A		Analysis Required
001	MW - 2016 - 12	GW	10/24/2023	824				F, SO ₄ , Sb, As, Ba, Be, Cd, Cr, Co,Pb, Se, TI, Ra226, Ra228, TDS
	pH & 7.88			,				a ,
Comments:								

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

Time

Received by

Matherfuse

Date

Time

Temp

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.

Date

10/24/2023

Transferred by

MILLENNIUM EXPRESS

Attachment B Data Input and Output Files for Calculation of Upper and Lower Prediction Limits

Attachment B
Data Input Files for Calculation of Upper and Lower Prediction Limits
Background wells: MW-2016-3, MW-2016-4, MW-2016-5, MW-2016-6, MW-2016-8
CCR Landfill, Leland Olds Station, Stanton, ND

									r			1			
sys_loc_code	sample_date sample_type_code	Boron	D_Boron		D_Calciun		D_Chlorid		D_Fluorid		D_pH		D_Sulfate		D_TDS
MW-2016-3	9/29/2016 N	0.27	1	23	1	35	1	0.5	0	7.42	1	100	1	1400	1
MW-2016-3	2/16/2017 N	0.22	1	22	1	37	1	0.5	1		1	74	1	1500	1
MW-2016-3	3/17/2017 N	0.26	1	15	1	36	1	0.56	1	7.00	1	59	1	1500	1
MW-2016-3	4/12/2017 N	0.29	1	12	1	39	1	0.57	1		1	59	1	1500	1
MW-2016-3	5/19/2017 N	0.26	1	13	1	33	1	0.5	0		1	78	1	1800	1
MW-2016-3	6/22/2017 N	0.25	1	10	1					7.63	1			1500	1
MW-2016-3	7/20/2017 N	0.24	1	9.7	1					7.54	1			1600	1
MW-2016-3	8/23/2017 N	0.25	1	8.4	1	37	1	0.6	1	7.41	1	· • • • • • • • • • • • • • • • • • • •	1	1400	1
MW-2016-3	10/9/2017 N					41	1	0.54	1	7.54	1	47	1		
MW-2016-3	10/12/2017 N					40	1	0.58	1	7.54	1	50	1		
MW-2016-3	4/19/2018 N	0.28	1	7.3	1	37	1	0.64	1	7.89	1	34	1	1500	1
MW-2016-3	10/11/2018 N	0.257	1	6.53	1	37.6	1	0.548	1	8.24	1	33.5	1	1490	1
MW-2016-3	5/20/2019 N	0.244	1	5.6	1	37.3	1	0.314	1	7.66	1	47.6	1	1510	1
MW-2016-3	10/8/2019 N	0.263	1	5.38	1	36.7	1	0.622	1	8	1	47.2	1	1520	1
MW-2016-3	6/10/2020 N	0.246	1	5.41	1	29.8	1	0.512	1	7.9	1	31.6	1	1510	1
MW-2016-3	10/1/2020 N	0.254	1	5	1	31.6	1	0.5	0		1	42.2	1	1590	1
MW-2016-4	9/29/2016 N	0.24	1	11	1	18	1	0.58	1	7.49	1	370	1	1700	1
MW-2016-4	2/15/2017 N	0.23	1	9.9	1	19	1	0.63	1	7.61	1	370	1	1700	1
MW-2016-4	3/16/2017 N	0.22	1	10	1	20	1	0.58	1		1	360	1	1700	1
MW-2016-4	4/12/2017 N	0.25	1	9.5	1	20	1	0.6	1		1	370	1	1700	
MW-2016-4	5/19/2017 N	0.23	1	8.5	1	17	1	0.54	1	7.41	- '	350	1	1700	<u>_</u>
			1			17	l l	0.54	I						
MW-2016-4	6/21/2017 N	0.24	1	8.1	1					7.31	1			1700	1
MW-2016-4	7/20/2017 N	0.22	1	10	1				ļ .	7.27	1			1700	1
MW-2016-4	8/23/2017 N	0.25	1	9.7	1	19		0.58	1	7.24			1	1600	1
MW-2016-4	10/9/2017 N					18		0.56	1	7.61	1	360	1		
MW-2016-4	10/12/2017 N					18	1	0.57	1	7.69	1	320	1		
MW-2016-4	4/18/2018 N	0.25	1	7.6	1	20	1	0.62	1	8.14	1		1	1700	1
MW-2016-4	10/11/2018 N	0.248	1	6.67	1	20.9	1	0.567	1		1		1	1730	1
MW-2016-4	5/20/2019 N	0.237	1	5.8	1	20.2	1	0.31	1		1		1	1770	1
MW-2016-4	10/8/2019 N	0.232	1	5.36	1	20.5	1	0.641	1		1		1	1760	1
MW-2016-4	6/9/2020 N	0.234	1	5.37	1	13.2	1	0.516	1	8.13	1	366	1	1710	1
MW-2016-4	9/30/2020 N	0.246	1	5.39	1	30	0		0		1	363	1	1860	1
MW-2016-4	10/1/2020 N	0.246	1	5.39	1	30	0	0.5	0			368	1	1650	1
MW-2016-5	9/28/2016 N	0.24	1	23	1	7.9	1	0.5	0	7.93	1	600	1	1700	1
MW-2016-5	2/14/2017 N	0.24	1	18	1	8.8	1	0.52	1	7.51	1	600	1	1900	1
MW-2016-5	3/16/2017 N	0.25	1	13	1	8.2	1	0.5	0	7.53	1	590	1	1800	1
MW-2016-5	4/12/2017 N	0.25	1	12	1	7.9	1	0.55	1		1	610	1	1700	1
MW-2016-5	5/18/2017 N	0.25	1	11	1	6.2	1	0.5	0		1	590	1	1900	1
MW-2016-5	6/21/2017 N	0.25	1	9.9	1	0.2	·	0.0		7.32	1		·	1900	1
MW-2016-5	7/19/2017 N	0.23	1	9.8	1					7.36	1			1900	1
MW-2016-5	8/23/2017 N	0.24	1	9.9	1	7.3	1	0.56	1	7.45	1	630	1	1700	1
MW-2016-5	10/9/2017 N	0.21		0.0	· ·	7.2	1	0.5	0		1	620	1	1700	
MW-2016-5	10/12/2017 N	+				6.5	1	0.54	1	7.44	1		1		
MW-2016-5	4/19/2018 N	0.27	1	7.8	1	6.7	1		1		1		1	1900	1
	10/11/2018 N	0.265		9.58	1	8.4	1		1			+	1	1900	
MW-2016-5			1		1			0.518			1				
MW-2016-5	5/20/2019 N	0.246	1	9.09	1	8.35	1	2.5	0		1	607	1	1890	
MW-2016-5	10/8/2019 N	0.255	1	7.35	1	7.28	1	0.584	1	7.69	1	615	1	1890	1
MW-2016-5	6/9/2020 N									7.01	1				
MW-2016-5	6/10/2020 N	0.237	1	6.5	1	5.31	1	0.451	1	7.91	1	623	1	1890	1
MW-2016-5	10/1/2020 N	0.263	1	6.8	1	30	0		0		1	588	1	1860	1
MW-2016-6	9/28/2016 N	0.21	1	43	1	9.1	1	0.5	0		1	520	1	1500	1
MW-2016-6	2/15/2017 N	0.27	1	16	1	6.3	1	0.5	0		1	730	1	2100	1
MW-2016-6	3/16/2017 N	0.29	1	13	1	15			0		1	740	1	2100	1
MW-2016-6	4/12/2017 N	0.29	1	12	1	5.8	1	0.5	0		1	770	1	2200	1
MW-2016-6	5/19/2017 N	0.27	1	13	1	4.7	1	0.5	0		1	730	1	2100	1
MW-2016-6	6/22/2017 N	0.27	1	12	1					7.52	1			2100	1
MW-2016-6	7/20/2017 N	0.24	1	11	1					7.53	1			2100	1
MW-2016-6	8/23/2017 N	0.27	1	11	1	5.9	1	0.5	0	7.49	1	750	1	2000	1
MW-2016-6	10/10/2017 N					5.9	1	0.5	0		1	710	1		
MW-2016-6	10/11/2017 N					5.1	1	0.5	0	7.51	1	720	1		
MW-2016-6	4/19/2018 N	0.27	1	9.6	1	5.6	1	0.48	1		1	710	1	2100	1
MW-2016-6	10/11/2018 N	0.287	1	9.78	1	6.03		0.401	1		1		1	1890	1
MW-2016-6	5/20/2019 N	0.27	1		1	6.77	1		0		1		1	2030	1
MW-2016-6	10/8/2019 N	0.266	1	7.93	1	6.38	1	0.428	1	7.87	1	688	1	2040	1
MW-2016-6	6/9/2020 N									8.05	1				
MW-2016-6	6/10/2020 N	0.265	1	8.35	1	4.85	1	0.325	1	7.93	1	667	1	2040	1
MW-2016-6	10/1/2020 N	0.279	1	8.37	1	30	0		1	7.9	1	659	1	2100	1
MW-2016-8	9/27/2016 N	0.279	1	20	1	9	1	0.004	0		1	700	1	2200	
MW-2016-8	2/13/2017 N	0.26	1	22	1	9.2		0.5	0		1		1	2200	1
MW-2016-8	3/16/2017 N	0.20	1	15	1	8.7	1	0.5	0		1		1	2200	1
MW-2016-8	4/11/2017 N	0.27	1	14	1	8.7	1	0.5	0		1	+	1	2200	1
MW-2016-8	5/18/2017 N	0.27	1	13	1	<u>0.7</u> 8		0.5	0		1	740	1	2200	1
MW-2016-8	6/22/2017 N	0.25	1	13	1	0		0.5	0	7.51			- 1	2200	<u>I</u>
MW-2016-8	7/19/2017 N	0.25	1	13	1				-	7.36	1			2300	1
					1	0.7		0.5	^		1		4		1
MW-2016-8	8/22/2017 N	0.26	1	16	1	8.7	1	0.5	0		1	720	1	2100	1
MW-2016-8	10/9/2017 N					8.8	1	0.5	0		1	700	1		
MW-2016-8	10/12/2017 N					7.9	1	0.5	0		1	700	1		
MW-2016-8	4/18/2018 N	0.26	1		1	8.2	1	0.41	1		1		1	2200	1
MW-2016-8	10/11/2018 N	0.267	1		1	8.22	1	0.372	1		1		1	2320	1
MW-2016-8	5/20/2019 N	0.254	1	12.4	1	9.6	1	2.5	0		1	742	1	1910	1
MW-2016-8	10/8/2019 N	0.259	1	12.2	1	9.13	1	0.353	1	8.08	1	691	1	2200	1
							i		I	7.93	1				
MW-2016-8	6/9/2020 N														
	6/9/2020 N 6/10/2020 N 9/30/2020 N	0.23 0.266	1	12.1		6.67	1 0	0.221	1	7.9 7.92	1	678 675	1	2180 2090	1

1	А	В	С	D Background	E I Statistics fo	F r Data Sets	G with Non-Detec	H cts	I	J	K	L
2		User Selec	cted Options									
3	Date	/Time of C	omputation	1/11/2022 9	:50:18 PM							
4			From File	LOS Landfil	I ProUCL Inp	out Oct 2021	b.xls					
5		Fu	II Precision	OFF	<u> </u>							
	С	onfidence	Coefficient	95%								
6			Coverage	95%								
7	Different or F	uture K Oh		1								
8	Number of			2000								
9	Trainbor or	Dootoliap		2000								
10	Boron											
11	Bolon											
12	General Statis	otico										
13	General Statis	Sucs	Tatal	Ni. mahawat C)h = = = := ti = = =	71			Niconala	f Di-+	in at Ohaam ration	- 25
14			Total	Number of C	Doservations	71					inct Observation	
15					h.4: ·	0.01			Numb	er of iviiss	sing Observation	
16					Minimum						First Quartile	
17				Sec	cond Largest						Media	
18					Maximum						Third Quartile	
19					Mean	0.253					SI	
20				Coefficient	t of Variation	0.0687					Skewnes	s 5.2405E-4
21				Mean of	logged Data	-1.376				5	SD of logged Data	a 0.0691
22												
23				Crit	ical Values fo	or Backgroui	nd Threshold V	alues (BT	Vs)			
24			Tole	rance Factor	K (For UTL)	1.983					d2max (for USL	3.089
25												-
26						Normal (GOF Test					
27			S	Shapiro Wilk	Γest Statistic	0.972			Norma	GOF Te	est	
28				5% Shapiro \	Wilk P Value	0.303		Data app	ear Normal	at 5% Si	gnificance Level	
29				Lilliefors 7	Test Statistic	0.108			Lilliefor	s GOF Te	est	
30			5	% Lilliefors C	Critical Value	0.105		Data No	ot Normal a	t 5% Sigr	nificance Level	
31				Data	appear App	roximate No	mal at 5% Sigr	nificance L	_evel			
32												
				В	ackground S	tatistics Ass	uming Normal I	Distributio	n			
33			95% l	UTL with 95	•					g	00% Percentile (z) 0.275
34					95% UPL (t)						95% Percentile (z	´
35					95% USL	0.307					99% Percentile (z	´
36					00 /0 OOL	0.007						/ 0.204
37						Gamma	GOF Test					
38				۸ ٦٦	Test Statistic		GO1 1691	Anda	reon-Dodin	a Gamma	a GOF Test	
39					Critical Value		Dotostod -				ed at 5% Significa	neo Lovel
40							Detected (_	IICE LEVEI
41					Test Statistic		D-4- ' '				na GOF Test	
42					Critical Value					Distribute	ed at 5% Significa	nce Level
43				Detected	data appear	Gamma Dis	tributed at 5%	Significan	ice Level			
44							O. 11 -1					
45							Statistics					N 00:
46					k hat (MLE)					•	as corrected MLE	
47					ta hat (MLE)				Theta	•	as corrected MLE	*
48					nu hat (MLE)						ar (bias corrected	*
49			M	LE Mean (bia	as corrected)	0.253				MLE S	d (bias corrected	0.0177
50												
51				Ва	ackground S	tatistics Assi	ıming Gamma	Distribution	on			
52		95% Wilso	on Hilferty (W	VH) Approx. (Gamma UPL	0.283					90% Percentile	e 0.276
						l .	I.					

95% WH Approx. Gamma UTL with 95% Coverage 0.289 95% Percentile 0.296	53	A B C D E 95% Hawkins Wixley (HW) Approx. Gamma UPL	F 0.283	G	Н	I	J K 95% Percentile	L 0.283
		95% WH Approx. Gamma UTL with 95% Coverage	0.289				99% Percentile	0.296
		95% HW Approx. Gamma UTL with 95% Coverage	0.289					
		95% WH USL	0.311				95% HW USL	0.311
Shapiro Wilk Test Statistic			ı	1			-	
1985			Lognormal	GOF Test				
	59	Shapiro Wilk Test Statistic	0.972		Shapiro	Wilk Log	normal GOF Test	
	60	5% Shapiro Wilk P Value	0.29		Data appear l	_ognormal	at 5% Significance Level	
Data appear Lognormal at 5% Significance Level	61	Lilliefors Test Statistic	0.0945		Lillie	fors Logno	rmal GOF Test	
Background Statistics assuming Lognormal Distribution	62	5% Lilliefors Critical Value	0.105		Data appear l	_ognormal	at 5% Significance Level	
Second S	63	Data appear	Lognormal a	at 5% Signific	cance Level			
Second S		Background Sta	itistics assun	ning Lognorn	nal Distribution	<u> </u>		
Second S		95% UTL with 95% Coverage	0.29				90% Percentile (z)	0.276
Second		95% UPL (t)	0.284				95% Percentile (z)	0.283
Nonparametric Distribution Free Background Statistics Pata appear Approximate Normal et 5% Significance Level		95% USL	0.313				99% Percentile (z)	0.297
Nonparametric Distribution Free Background Statistics To Data appear Approximate Normal et 5% Significance Level				<u>I</u>				
Data appear Approximate Normal at 5% Significance Level		Nonparametric	Distribution I	Free Backgro	ound Statistics			
Nonparametric Upper Limits for Background Threshold Values		Data appear Appr	roximate Nor	mal at 5% Si	gnificance Lev	el		
Approximate								
Approximate f 1.842 Confidence Coefficient (CC) achieved by UTL 0.876 95% Percentile Bootstrap UTL with 95% Coverage 0.29 95% BCA Bootstrap UTL with 95% BCA Bootstrap UTL with 95% Coverage 0.29 95% BCA Bootstrap UTL with 95% BCA Bootstrap UTL with 95% Coverage 0.29 95% BCA Bootstrap UTL with 95% BCA Bootstrap UTL with 95% Coverage 0.29 95% BCA Bootstrap UTL with 95% BCA Bootstrap UTL with 95% Coverage 0.29 95% BCA Bootstrap UTL with 95% BCA Bootstrap UTL with 95% BCA Bootstrap UTL with 95% Coverage 0.29 95% BCA Bootstrap UTL with 95% BCA Bootstrap UTL with 95% BCA Bootstrap UTL with 95% Coverage 0.29 95% BCA Bootstrap UTL with 95% BCA Bootstra	73	Nonparametric Upp	er Limits for	Background	Threshold Val	ues		
95% Percentile Bootstrap UTL with 95% Coverage 95% BCA Bootstrap UTL with 95% Coverage 0.29 95% BCA Bootstrap UTL with 95% Coverage 0.29 95% BCA Bootstrap UTL with 95% Coverage 0.27 95% UPL 0.288 90% Percentile 0.27 95% UPL 0.306 95% Percentile 0.284 95% Chebyshev UPL 0.306 95% Percentile 0.284 95% Chebyshev UPL 0.303 99% Percentile 0.29 95% USL 0.29 95%	74	Order of Statistic, r	70			95% l	JTL with 95% Coverage	0.29
1	75				Confidence	e Coefficie	ent (CC) achieved by UTL	0.876
10.284	76	95% Percentile Bootstrap UTL with 95% Coverage	0.29		95% BCA E	Bootstrap (JTL with 95% Coverage	0.29
Page	77	95% UPL	0.288					0.27
80 95% USL 0.29 81 Note: The use of USL to estimate a BTV is recommended only when the data set represents a background 83 data set free of outliers and consists of observations collected from clean unimpacted locations. 84 The use of USL tends to provide a balance between false positives and false negatives provided the data 85 represents a background data set and when many onsite observations need to be compared with the BTV. 86 Calcium 87 Calcium 88 General Statistics 90 Total Number of Observations 70 Number of Distinct Observations 14 91 Number of Missing Observations 14 92 Minimum 5 Number of Missing Observations 14 93 Second Largest 23 Median 9.95 94 Maximum 43 Third Quartile 13 95 Mean 11.33 SD 5.767 96 Coefficient of Variation 0.509 Skewness 2.796 97 Mean of logged Data 2.334 SD of logged Data 0.417 98 Critical Values for Background Threshold Values (BTVs) 100 Tolerance Factor K (For UTL) 1.985 Mormal GOF Test Normal GOF Test	78	90% Chebyshev UPL	0.306				95% Percentile	0.284
Note: The use of USL to estimate a BTV is recommended 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. Calcium Total Number of Observations Total Number of Observations Number of Missing Observations Number of Missing Observations Number of Missing Observations First Quartile Second Largest Median Second Largest Median Second Largest Median Second Largest Coefficient of Variation Mean of logged Data Mean of logged Data Coefficient of Variation Mean of logged Data Critical Values for Background Threshold Values (BTVs) Tolerance Factor K (For UTL) Normal GOF Test Normal GOF Test Normal GOF Test	79	95% Chebyshev UPL					99% Percentile	0.29
Note: The use of USL to estimate a BTV is recommended 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. Reference to the provided the data represents a background data set and when many onsite observations need to be compared with the BTV. Reference to the provided the data represents a background data set and when many onsite observations need to be compared with the BTV. Reference to the provided the data represents a background data set and when many onsite observations need to be compared with the BTV. Reference to the provided the data represents a background the BTV. Reference to the provided the data represents a background the BTV. Reference to the provided the data represents a background the BTV. Reference to the provided the data represents a background the data represents a background the BTV. Reference to the provided the data represents a background the positives and false negatives provided the data represents a background the BTV. Reference to the provided the data represents a background the BTV. Reference to the advantage of Observations and false negatives provided the data represents a background the BTV. Reference to the BTV. Reference to the advantage of Observations need to be compared with the BTV. Reference to the advantage of Observations need to be compared with the BTV. Reference to the data set and when many onsite observations need to be compared with the BTV. Reference to the advantage of Observations need to be compared with the BTV. Reference to the advantage of Observations need to be compared with the BTV. Reference to the advantage of Observations need to be compared with the BTV. Reference to the advantage of Observations need to be compared with the BTV. Refer	80	95% USL	0.29					
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. Reference of Calcium Total Number of Observations	81							
The use of USL tends to provide a balance between false positives and false negatives provided the data Figure Fig	82			•				
Total Number of Distinct Observations 14 14 15 15 15 16 16 16 16 16	83					•		
Calcium Calc	84	·						
Statistics	85	represents a background data set and w	hen many or	nsite observa	tions need to l	oe compar	ed with the BTV.	
Second Largest 23 Median 9.95	_							
Separal Statistics Total Number of Observations 70	87	Calcium						
Total Number of Observations 70								
Number of Missing Observations 14	89		70	1			(5) ::	47
Second Largest Seco	90	l otal number of Observations	70					
Second Largest 23 Median 9.95		Minimum	E			Number	_	
Maximum 43								
95								
95								
97								
98 99								
100 Tolerance Factor K (For UTL) 1.985 d2max (for USL) 3.084		wear or rogged Data	2.004				OD OF TOUSTED DATA	0.417
Tolerance Factor K (For UTL) 1.985 d2max (for USL) 3.084		Critical Values for	or Backgroun	nd Threehold	Values (RT\/e)		
Normal GOF Test Shapiro Wilk Test Statistic 0.782 Normal GOF Test For Chapira Wilk D Value 2.7095 14				TIII GƏHULU	7 GIGGG (DT V5	,	d2max (for LISL)	3 084
Normal GOF Test Shapiro Wilk Test Statistic 0.782 Normal GOF Test Fig. Chapira Wilk D. Valve 2.7095, 14	100	rolerance raciol in (10101L)	1.303				uziliax (IUI USL)	5.004
Shapiro Wilk Test Statistic 0.782 Normal GOF Test 50 Shapiro Wilk P. Valve 2.7085 14			Normal G	OF Teet				
103	102	Shaniro Wilk Test Statistic		JOI 1631		Normal (GOF Test	
104 Data Not Normal at 376 dignificance Level		1			Data Not N			
	104	570 Onapilo Wilk I- Value	5.700L-14		Data NOUT	.omarat	570 Organication Level	

105	Α	В		С		D Lilliefo	ors Te	E est Stat	tistic	F 0.2		G			Н		l Lilliefe	ors G	OF	J Test		K	Ι	L	-
106					5% I	_illiefor	rs Cr	itical V	alue	0.1	06			[Data N	lot N	lormal	at 5	% Si	gnifica	nce I	_evel			1
107								Data	a Not	Norma	l at 5	% Sign	ificanc	e Le	evel										
108																									
109							Ba	ckgrou	nd S	tatistics	Assı	uming l	Normal	Dis	tributio	on									
110				95%	6 UTI	with	95%	6 Cove	rage	22.7	78									90%	Perce	entile (z)	18.72	
111							9	5% UP	PL (t)	21.0)1									95%	Perce	entile (z)	20.81	1
112								95% L	JSL	29.1	1									99%	Perce	entile (z)	24.74	
113																									
114										Gan	nma (GOF To	est												
115						A-	-D Te	est Stat	tistic	1.0	24				Ande	erso	n-Darl	ing C	Gamn	na GO	F Te	st			
116						5% A-	D Cr	itical V	'alue	0.7	54		Da	ta N	lot Ga	mma	a Distr	ibute	ed at	5% Si	gnific	ance L	eve	l	
117						K-	-S Te	est Stat	tistic	0.1						_				ıma G					
118						5% K-		itical V		0.1							a Distr	ibute	ed at	5% Si	gnific	ance L	eve	l	
119							Dat	a Not G	Gamn	na Disti	ibute	ed at 59	Signi	fica	nce Le	evel									
120																									
121												Statisti	cs												
122								k hat (N		5.5												ed MLI		5.284	
123						7		a hat (M		2.0							The	eta s				ed MLI		2.144	
124								u hat (M	ĺ	771.6										•		rrecte		739.8	
125					MLE	Mean	(bias	correc	cted)	11.3	33								MLE	Sd (bi	as co	rrecte	d)	4.928	
126																									
127								ckgrour				ıming (amma	Dis	stributi	ion									
128		95% Wils								20.4												ercenti		17.92	
129		95% Hawl								20.5												ercenti		20.46	
130		% WH App								22.7										99	9% P	ercenti	le	25.8	
131	95	% HW App	orox. C	Samma	a UTI	_ with				22.9															
132							95	% WH	USL	32.3	34									9	95% I	HW US	iL	33.25	
133										1															4
134					Ol	-: \A/:	T	1 01 - 1	.:: _			GOF	est		01-		VA CIII -			1005	-				
135								est Stat		0.9				D-4-						al GOF					_
136						-		/ilk P V		0.06				Data			•			GOF T		ce Lev	eı		4
137								itical V		0.1				Dot				•				ce Lev	rol .		4
138					J /0 I	IIIIEIOI		Data ap				o+ E0/ C			• •		ognoi	IIIai d	al 3 /	o Sigili	licari	ce Lev	EI		4
139								раца ар	pear	Lognoi	mai a	al 5% c	olgrillica	ance	e Leve	7 1									4
140							Rad	kground	d Sta	tictice c	ecun	nina I o	anorm	al D	ietribu	ition									_
141				95%	6 LITI			6 Cove		23.6		illing Lo	gnonn	ai D	istibu	luOII				90% I	Dorce	entile (7)	17.61	-
142				33 /	0 0 11	_ WILLI		5% UP														entile (1	20.5	4
143							3	95%		37.3												entile (1	27.24	\dashv
144								30 /0	JUL	07.0	•									JJ /0 I	. 5.00	(-/	_/. <u>_</u> _	\dashv
145							Non	param	etric	Distribi	ıtion I	Free R	ckaro	und	Static	tics									\dashv
146)ata ap																	\dashv
147								up					.go			•									\dashv
148						Nor	npara	ametric	: Unn	er Limi	s for	Backo	ound 7	Thre	shold	Valı	Jes								\dashv
149							•	f Statis		69			u		J. 1014	. 410		5% LJ	ITL w	ith 9!	5% C	overag	зe	23	\dashv
150								proxima		1.8	16			(Confide	ence						l by U7	-	0.871	\dashv
151	95	% Percent	tile Bo	otstrar	p UTI	_ with				23	• •											overag		23	\dashv
		., . 0.00110	20	J.5.10	, , , ,		557	95%		22.4	15					J. N D	25.011	ں م۔	**			ercenti		16.2	\dashv
152						90% (Cheh	yshev		28.7												ercenti		22	\dashv
153								, 5												50			-		
153 154							Cheh	vshev	UPI I	36 6	04									go)% P	ercenti	le	29.2	
153							Cheb	yshev 95%		36.6	04									99)% P	ercenti	le	29.2	4

	Α	В		С		D	E		F	G		Н		ı		J	\Box	K		L
157					4															
158		N							is recomm					•				ıd		
159									ts of observ					•						
160									nce betwee											
161		r	eprese	ents a b	oackgr	ound da	ata set a	and w	hen many o	nsite obse	rvatio	ns need	to be	compa	ared v	vith the	ŧ BT\	/ .		
162																				
163	Chloride																			
164									0	04-41-41										
165							21			Statistics							01			40
166						ber of (Numbe	er of I	/lissing	J Obs	serva	tions	13
167				Numbe	er of D	istinct (53						NI	mber c	- C N I -	- D-		
168					la considerate		er of De							Niconolo						6
169				IN	Numbe	er of Dis								Numb		Distino				2
170							imum D									Minimu				15 30
171							imum D		139.8							/laximu Percer				8.451%
172																Percer				
173				N4	- f D -		ean Det							0.0) - (D	-44-		Dete		11.82
174				iviean	i ot De	etected	Loggea	Data	2.513					SL	ט זס ט	etected	J LO	ggea	Data	0.697
175						O-14	ilaal Mal	f	au Daaleana	ad Thursh	ald \/a	lues (DI	T\ /=\							
176				T-1-					or Backgrou	na i nresno	old va	iues (Bi	ı vs)			-10		· /\$ - · · I	11017	2.000
177				1016	erance	Factor	K (For	UIL)	1.983							Q2	max	(for	USL)	3.089
178								Name	nal GOF Te	nt on Datos	-t- O-1	L.								
179		 			Chanin	o Wilk				si on Detec		mal GO	E Too	t on Do	ato oto	d Obo	<u> </u>	liono	Only	
180		 							1.518E-13		IVOI	Data N								
181		 				lliefors						Dala N		illiefors			ance	LEV	EI	
182						liefors (Data N						2 L 0) (ol.	
183					3 /0 LIII	lielois C			Normal at	5% Signific	onoo l		IOL NO	IIIIai ai	. 5 /0 3	signinic	ance	LEV	EI	
184							Dai	ia 1401	. Homilai at	J /o Olgrillo	ance	LOVOI								
185					Kan	lan Mei	er (KM)	\ Rack	ground Sta	tietice Aeeı	ımina	Normal	Dietri	hution						
186					Кар	idii ivici		Mean	-	1300371330	g	Monna	Distri	bullon					SD	11.45
187					95%	UTL95										QF		(M UF		34.6
188						% KM F		-							q	5% KM			` ,	34.21
189						% KM F		` '								J 70 TXIV		6 KM	` '	50.75
190						, o i vivi i	0.00110	(2)	12.01									J 1 (1VI	JJL	
191					DI 4	/2 Suhs	titution	Back	ground Stat	istics Assu	mina M	Normal F	Distrih	ution						
192								Mean	-		9 1	···········							SD	11.35
193					95%	UTL95											95	5% UF		34.74
194							Percenti									95%		centi		34.36
195							Percenti											95%		50.75
196				DL/2 is	not a i			. ,	od. DL/2 pro	vided for c	compa	risons a	nd his	storical	reaso	ons				
197									• •		•									
198						G	amma	GOF	Tests on D	etected Ob	servat	tions On	nly							
199							Test Sta						•	son-Da	arling	GOF T	Γest			
200 201					59	% A-D (Critical \	Value	0.762		Data	Not Gar						ficanc	e Leve	el
201							Test Sta							nogrov-						
202					59	% K-S (Critical \	Value			Data	Not Gar						ficanc	ce Leve	el
									∣ na Distribut	ued at 5% S										
204 205																				
205							Ga	mma	Statistics o	n Detected	Data	Only								
							k hat (-		k	star	(bias c	orre	cted I	MLE)	2.055
207 208						The	ta hat (tbias c			´	7.72
∠ U0							`												,	

209	Α	В		С	D	nu hat (MLE)	F 278.7	G	Н		I	J nu star (bia	K as corrected)	L 267.1
210				М	LE Mean (b	oias corrected)	15.86							
211					MLE Sd (b	oias corrected)	11.07				95% P	ercentile of Ch	nisquare (2k)	9.665
212	-				-		П	l	-				Į.	
213						Gamma ROS	Statistics us	ing Imputed	Non-Dete	ects				
214				GROS may	y not be use	ed when data s	set has > 50%	6 NDs with r	nany tied	obser	vations a	t multiple DLs	i	
215					GROS ma	y not be used	when kstar	of detected of	lata is sma	all suc	ch as < 0	.1		
216				For	such situa	tions, GROS r	nethod tends	to yield infla	ated value	s of U	ICLs and	BTVs		
217		For	r gan	nma distribu	ited detecte	d data, BTVs	and UCLs ma	ay be compu	ıted using	gamn	na distrib	oution on KM e	estimates	
218						Minimum	4.391						Mean	15.42
219						Maximum							Median	8.8
220						SD							CV	0.744
221						k hat (MLE)						star (bias cor	•	2.119
222					Th ———	eta hat (MLE)					Theta	star (bias cor		7.28
223						nu hat (MLE)						`	s corrected)	300.8
224					•	oias corrected)						MLE Sd (bia	,	10.6
225				95% Pe		Chisquare (2k)							% Percentile	29.59
226						5% Percentile							6 Percentile	49.92
227					-	atistics are cor	-				-			
228					Jpper Limit	s using Wilsor) and Hawki	ins Wixley	(HW)) Method	S		1.04/
229	050/ 4			LITE STATE OF	F0/ O	WH	HW			050/	<u> </u>	O	WH	HW
230	95% App	prox. Gan	nma	UTL with 95			42.85			95%	Approx.	Gamma UPL	36.03	36.41
231				95%	Gamma US	SL 68.84	73.75							
232				The	• following s	tatistics are c	omputed usir	a aamma di	istribution	and k	(M. octim	atos		
233					-	s using Wilsor	-							
234				<u>'</u>	opper cirilia	k hat (KM)		i) and Hawki	IIIS VVIXICY	(1144)	/ Metriou		nu hat (KM)	255.9
235						WH	HW						WH	HW
236	95% Δη	nrov Gan	nma	UTL with 95	5% Covera		42.53			95%	Δnnrov	Gamma UPL	35.8	36.14
237	- 30 % App	prox. Gan	ııııa		Gamma US		73.13				, дрргох.	Garrina Or L	33.0	
238						00.00	70.10							
239						Lognormal GC	OF Test on De	etected Obs	ervations /	Only				
240						Test Statistic					Lilliefors	GOF Test		
241				5		Critical Value			Data N	lot Lo		at 5% Significa	ance Level	
242							_ognormal at	5% Significa				<u> </u>		
243														
244245			В	ackground L	_ognormal i	ROS Statistics	Assuming L	ognormal Di	stribution	Using	Imputed	Non-Detects		
246					Mean in	Original Scale	15.4				-	Mean	in Log Scale	2.493
247					SD in	Original Scale	11.46					SD	in Log Scale	0.677
248					95% UTLS	95% Coverage	46.33				95%	% BCA UTL95	% Coverage	39.5
249			9	5% Bootstra	ip (%) UTLS	95% Coverage	40						95% UPL (t)	37.71
250					90%	Percentile (z)	28.82					95% P	Percentile (z)	36.86
251					99%	Percentile (z)	58.48						95% USL	98.02
252							1	I						
253					Baci	kground DL/2	Statistics Ass	suming Logn	ormal Dis	tributi	ion			
254					Mean in	Original Scale	15.68				-	Mean	in Log Scale	2.52
255					SD in	Original Scale	11.35					SD	in Log Scale	0.671
256					95% UTLS	95% Coverage	47.01				-		95% UPL (t)	38.33
257					90%	Percentile (z)	29.37					95% P	Percentile (z)	37.47
258						Percentile (z)							95% USL	98.79
259				DL/2 is n	ot a Recom	mended Meth	od. DL/2 pro	vided for cor	nparisons	and I	historical	reasons.		
260														

261	Α	В		С		D 1	Nonpa	E arametri	c Dist	F ribution	G Free Ba	ckgrou	H und Stat	istics	- 1		J		K	(L	
262]						Data	a do not	follov	v a Disc	ernible C	istribu	ıtion (0.	05)								1
263	 [•	•								-
	 [Nonpa	rametri	ic Upp	er Lim	nits for E	3TVs(no distir	ction ma	de be	tween o	letects	and no	ondete	ects)					-
264				•				statistic,		70							L with	95%	Cove	erage	40	-
265]							oximate		1.842			Conf	idence			CC) ac			_	0.876	1
266								95% UP		38.16						(/			6 USL	41	-
267	ĺ				95%	KM C		hev UP		65.64												-
268							,-															-
269	<u> </u>		Note	e: The us	se of U	SI to e	estima	ite a BT	V is re	ecomme	nded on	lv whe	en the d	ata set	repres	sents a	a backo	ารดบท	ıd			\dashv
270]										ations co											-
271]		The	use of																		-
272				esents a			-				-				_	-						_
273			ТСРІ	0301113 0	Dacky	iouna	uata	oct and	WIICII	ilially 0	i i i i i i i i i i i i i i i i i i i	oci vati	0113 1100	o to b	Comp	aica	74101 010					-
274	Fluoride																					4
2/3	riuoliue																					_
276	 									2000001	Ctatiatia											_
277	 			т.	aal Ni		f Ob -	ervation		Jenerai 70	Statistic	5			Nivers		Mississ	- Ob		_4:		4
278	 														Numi	per or	Missing	J Obs	serva	ations	13	_
279	<u> </u>			Num	ber of L			ervation		32												
280	ļ							f Detect		41							ımber o				29	
281					Numb			t Detect		31					Num		Distin				2	
282	<u> </u>							m Detec		0.221							Minimu				0.5	
283	<u> </u>							m Detec		0.884							Maximu				2.5	
284	<u></u>							Detecte		0.0137							Percer				41.43%	1
285								Detecte		0.523										tected	0.117	
286	<u> </u>			Mea	an of D	etecte	d Log	ged Dat	:a -(0.677					S	D of E	etecte	d Loç	gged	l Data	0.252	
287	<u> </u>																					
288	1					С	ritical	Values	for Ba	ackgrou	nd Thres	hold \	/alues (BTVs)								
289				To	oleranc	e Fact	tor K (For UTL	_)	1.985							d2	2max	(for	·USL)	3.084	
290																						
291								Nor	mal G	OF Tes	t on Det	ects O	nly									
292					Shapi	iro Will	k Test	Statisti	С	0.917				Sh	apiro \	Wilk G	OF Te	st				
293				5%	Shapi	ro Wilk	k Critic	cal Valu	е	0.941			Data	Not N	ormal a	at 5%	Signific	ance	Lev	vel		
294	1				L	illiefors	s Test	Statisti	С	0.17					Lilliefo	rs GO	F Test	-				
295]				5% Li	illiefors	s Critic	cal Valu	е	0.138			Data	Not N	ormal a	at 5%	Signific	ance	Lev	vel		
296]							Data No	ot Nor	mal at 5	% Signi	icance	e Level									
297																						
298					Kaj	plan M	leier (l	KM) Bad	ckgrou	und Stat	istics As	sumin	g Norm	al Disti	ibutior)						
299								Mea	n	0.465										SD	0.125	1
300					95%	6 UTL	95% C	Coverag	е	0.714							9!	5% K	M U	JPL (t)	0.675	1
301					90	0% KN	/I Perc	entile (z	<u>z</u>)	0.626						9	5% KN	/I Per	cent	tile (z)	0.671	1
302					99	9% KN	/I Perc	entile (z	<u>z</u>)	0.757								95%	6 KM	/I USL	0.852	1
302								•			1											1
	- 				DL	_/2 Sul	bstitut	ion Bac	kgrou	nd Statis	stics Ass	uming	Norma	l Distri	bution							1
304								Mea		0.467										SD	0.25	\dashv
305]				95%	6 UTL	95% C	Coverag		0.963								95	% U	JPL (t)	0.886	\exists
306]							entile (z		0.787							95%			tile (z)	0.878	\dashv
307								entile (z	<u> </u>	1.048										6 USL	1.237	\exists
308	<u> </u>			DI /2 i	s not a			•			vided fo	. CUmr	arisons	and h	istorics	ıl reas	ons			. 552		\dashv
309				E I	.5 1.0t d	. 55011		IIIGU	u. L	piu		South	150115	wiid II			J. 10					\dashv
310							Com	ma GO	F Tec	te on Da	etected C)heer	ations ()nlv								\dashv
311						۸ ٦		Statisti		2.067	, coleu C	,naci V	auons (reon F)arlina	GOF 1	Test				\dashv
312						A-L	J TEST	Jausti	·	2.00/				Ailue	:: 3UI I-L	zarılı iğ	GUF	ı C Sl				

	Α		В		С	50	D % A-D (E Critical Valu	ıe	F 0.747	G	Dat	H ta Not G	Samm	l a Distri	ibute		J 5% Sig	K nificance Lev	L /el
313								Test Statist		0.203					olmogra			_		
314						5'		Critical Valu		0.138		Dat	ta Not G						nificance Lev	/el
315								ata Not Gar			ed at 5%							9	,	
316																				
317								Gamm	na Sta	atistics on	Detecte	d Dat	a Only							
318								k hat (MLE		17.94						k s	tar (b	ias cor	rected MLE)	16.64
319							The	eta hat (MLE	·	0.0291					The		•		rected MLE)	0.0314
320								nu hat (MLE		471							•		as corrected)	1365
321					N	ILE M		as correcte	´	0.523										
322								as corrected	•	0.128					95%	Per	centile	e of Ch	nisquare (2k)	47.75
323									- /										()	
324								Gamma RC)S Sta	atistics us	sina Impu	ited N	lon-Dete	ects						
325				(GROS ma	v not		l when data							rvations	s at r	multip	ole DLs	.	
326								not be use												
327					Fo		_	ons, GROS												
328			For a	amı				data, BTVs										n KM e	estimates	
329								Minimu		0.221				, J -					Mean	0.469
330								Maximu		0.884									Median	0.458
331								S		0.119									CV	0.253
332								k hat (MLE	E)	15.44						k s	tar (b	ias cor	rected MLE)	14.78
333							The	eta hat (MLE		0.0304					The				rected MLE)	0.0317
334								nu hat (MLE		161									as corrected)	2070
335					N	1LE M		as correcte		0.469								•	as corrected)	0.122
336							•	hisquare (2	1	43.25								•	% Percentile	0.63
337								% Percenti	•	0.686									% Percentile	0.798
338					The	follow	ing stat	istics are c	ompu	ited using	Gamma	ROS	Statist	ics or	Impute	ed D	ata			
339								using Wilso												
340 341								WH	-	HW				•					WH	HW
342	95% Ap	prox.	Gamm	na l	JTL with 9	5% C	overage	0.736		0.742				95%	6 Appro	ox. G	Gamm	na UPL	0.688	0.691
343		-					na USL			0.948										
344																				
345					The	e follo	wing sta	atistics are	comp	outed usir	ng gamm	a dist	ribution	and I	KM esti	imate	es			
346						Uppei	Limits	using Wilso	on Hil	lferty (WH	l) and Ha	wkins	s Wixley	/ (HW) Metho	ods				
347								k hat (KN	/ I)	13.73				•					nu hat (KM)	1922
348								WH		HW									WH	HW
349	95% Ap	prox.	Gamm	na l	JTL with 9	5% C	overage	0.754		0.762				95%	6 Appro	ox. G	amm	na UPL	0.701	0.706
350					95%	Gamı	na USL	0.967		0.991										
351																				
352							L	ognormal G	OF T	Test on D	etected C	Obser	vations	Only						
353					(Shapii	o Wilk	Test Statist	ic	0.871					Shapiro	Wilk	k GOF	F Test		
354					5% S	Shapir	o Wilk (Critical Valu	ıe	0.941			Data N						ance Level	
355						Li	lliefors	Test Statist	ic	0.219					Lilliefo	ors C	GOF T	Γest		
356					į	5% Lil	liefors (Critical Valu	ıe	0.138			Data N	Not Lo	gnorma	al at	5% S	Signific	ance Level	
357								Data Not	t Logr	normal at	5% Sign	ifican	ce Leve	el						
358																				
359				Ba	ckground l	Logno	rmal R	OS Statistic	s Ass	suming L	ognorma	l Disti	ribution	Using	Imput	ted N	Non-D	etects		
360								riginal Sca		0.466					-				in Log Scale	-0.797
361							SD in C	riginal Sca	le	0.12								SD	in Log Scale	0.264
362								5% Coverag		0.761					9	95%	BCA I		% Coverage	0.641
363				95	% Bootstra	ap (%)	UTL95	5% Coveraç	ge	0.641									95% UPL (t)	0.702
364							90% I	Percentile (z)	0.632								95% F	Percentile (z)	0.696
											1								.,	

365	Α		В	С			D 99% I	Percen	E ntile (z)	F 0.833	G	Н		I		J			K % USL	L 1.018	3
366									l												
367							Back	ground	DL/2 S	Statistics Ass	suming Logr	ormal D	Distribu	tion							
368						Mea	ın in C	Original	Scale	0.467								_	g Scale	-0.879	
369	1					SI	D in C	Original	Scale	0.25							SD in	n Log	g Scale	0.474	ļ
370	1				9			5% Cov	•	1.065									UPL (t)	0.921	
371								Percen	` ′	0.763						95	% Pe	ercen	ntile (z)	0.906	;
372								Percen	` '	1.251								95°	% USL	1.792	<u>'</u>
373				DL/2 is	s not	a Re	ecomn	nended	d Metho	od. DL/2 pro	vided for co	mpariso	ns and	historic	al rea	asons.					
374																					
375								•		Distribution	•			\$							
376								Data d	lo not fo	ollow a Disce	ernible Distri	bution (0.05)								
377																					
378				Nonpa	aram					Vs(no distin	ction made	betweer	n detec								
379						(of Stat		69									verage	2.5	
380							Α	Approxi		1.816		Со	ntideno	e Coeff	icient	(CC) a	ıchie		-	0.871	_
381						-0/ 1/	M C'		% UPL	2.5								959	% USL	2.5	_
382					95	o% Kl	IVI Che	ebyshe	ev UPL	1.016											_
383									D.T. /												
384										is recomme								ınd			_
385										s of observa											_
386										nce between											_
387			ı	represents a	а рас	ckgro	una a	ata set	and w	hen many o	isite observ	ations n	eea to	be com	parec	ı Witti ti	е в і	I V.			_
388	nU																				
389	<u>рп</u>																				
390	General :	Statist	ice																		_
391		Jianot	.100	To	otal N	Jumh	er of (Observ	ations	83				Num	her o	of Distir	nct Oh	hsen	vations	50	_
392									duono										vations	1	_
393								Mir	nimum	7.01							•		Quartile	7.46	-
394							Se	cond L		8.43									Median	7.59	-
395									ximum	8.43							Th	nird C	Quartile	7.915	5
396									Mean	7.684									SD	0.308	
397						Coe	fficien	nt of Va	riation	0.0401								Ske	wness	0.498	
398								flogge		2.038						SI			d Data	0.039	
399 400	·										<u> </u>										\dashv
400							Cri	tical Va	alues fo	or Backgrour	nd Threshold	l Values	(BTVs	s)			-				\dashv
401 402		-		Т	olera	ance l			r UTL)	1.954			-			(d2ma	ax (fo	or USL)	3.145	<u>;</u>
402	·							-	ŕ	<u> </u>	<u> </u>										\dashv
404										Normal C	OF Test						-				\dashv
405	·				Sh	apiro	Wilk	Test St	tatistic	0.95				Norm	al GC	OF Tes	t				\dashv
406					59	% Sh	apiro	Wilk P	Value	0.00715		Da	ta Not	Normal	at 5%	6 Signit	ficand	ce Le	evel		\exists
407	<u> </u>					Lilli	efors	Test St	tatistic	0.138				Lilliefo	ors G	OF Tes	it				\exists
408	<u> </u>				5%	6 Lillie	efors (Critical	Value	0.0973		Da	ta Not	Normal	at 5%	6 Signit	ficano	ce Le	vel		\exists
409	·							Da	ata Not	Normal at 5	% Significar	ce Leve	əl								\exists
410																					
411							E	Backgro	ound S	tatistics Ass	uming Norm	al Distri	bution								
412				95	5% U⁻	TL wi	th 95	5% Cov	verage	8.285						90	% Pε	ercer	ntile (z)	8.078	;
413	·							95% L	JPL (t)	8.199						95	% Pε	ercer	ntile (z)	8.19	
414	·							95%	6 USL	8.652						99	% Pε	ercer	ntile (z)	8.4	\exists
415										1	1										\exists
416	: 									Gamma (GOF Test								-	-	\exists

417	A B C D E A-D Test Statistic	F 1.345	G	H J K Anderson-Darling Gamma GOF Test	L									
418	5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level											
419	K-S Test Statistic	0.135	Kolmogrov-Smirnoff Gamma GOF Test											
420	5% K-S Critical Value	0.0977	Data Not Gamma Distributed at 5% Significance Level											
421	Data Not Gamm	na Distribute	d at 5% Signif	ficance Level										
422														
423		Gamma	Statistics											
424	k hat (MLE)	638.2		k star (bias corrected MLE)	615.1									
425	Theta hat (MLE)	0.012		Theta star (bias corrected MLE)	0.0125									
426	nu hat (MLE)	105938		nu star (bias corrected)	102110									
427	MLE Mean (bias corrected)	7.684		MLE Sd (bias corrected)	0.31									
428														
429	Background Sta		ıming Gamma											
430	95% Wilson Hilferty (WH) Approx. Gamma UPL	8.203		90% Percentile	8.083									
431	95% Hawkins Wixley (HW) Approx. Gamma UPL	8.204		95% Percentile	8.2									
432	95% WH Approx. Gamma UTL with 95% Coverage	8.293		99% Percentile	8.423									
433	95% HW Approx. Gamma UTL with 95% Coverage	8.294												
434	95% WH USL	8.683		95% HW USL	8.687									
435	Logramus COT Took													
436	Chamina Wills Tast Chatistia O OFF Chamina Wills I amanual COF Tast													
437	·			· · · · · · · · · · · · · · · · · · ·										
438	5% Shapiro Wilk P Value	0.0181		Data Not Lognormal at 5% Significance Level										
439	Lilliefors Test Statistic	0.132	Lilliefors Lognormal GOF Test											
440	5% Lilliefors Critical Value 0.0973 Data Not Lognormal at 5% Significance Level													
441														
442	Bookers and Statistics accoming Lagranged Distribution													
443	95% UTL with 95% Coverage	8.297	ling Lognomi	90% Percentile (z)	8.079									
444	95% UPL (t)	8.206		95% Percentile (z)	8.196									
445	95% USL	8.699		99% Percentile (z)	8.421									
446				(-)										
447	Nonparametric l	Distribution I	Free Backgrou	und Statistics										
448	Nonparametric Distribution Free Background Statistics Data do not follow a Discernible Distribution (0.05)													
449 450				· · ·										
450 451	Nonparametric Uppe	er Limits for	Background 1	Threshold Values										
452	Order of Statistic, r	81	-	95% UTL with 95% Coverage	8.39									
453	Approximate f	1.421		Confidence Coefficient (CC) achieved by UTL	0.791									
454	95% Percentile Bootstrap UTL with 95% Coverage	8.39		95% BCA Bootstrap UTL with 95% Coverage	8.39									
455	95% UPL	8.236		90% Percentile	8.12									
456	90% Chebyshev UPL	8.613		95% Percentile	8.216									
457	95% Chebyshev UPL	9.033		99% Percentile	8.43									
458	95% USL	8.43		-										
459														
460	Note: The use of USL to estimate a BTV	is recomme	nded only whe	en the data set represents a background										
461	data set free of outliers and consists	s of observa	tions collected	d from clean unimpacted locations.										
462	The use of USL tends to provide a balan	nce between	false positive	s and false negatives provided the data										
463	represents a background data set and wh	hen many or	nsite observati	ions need to be compared with the BTV.										
464														
	Sulfate													
466														
467	General Statistics													
468	Total Number of Observations	71		Number of Distinct Observations	51									

400	Α	В	С	;	D		Е	F	G		Н		l Numbe	er of M	J issina (K Observa		13		
469							Minimum	31.6										354		
470 471					5	Secon	d Largest											606		
							Maximum	770							Т	hird Qu	artile	705		
472 473							Mean	484.8									SD	253.2		
474					Coeffici	ient of	Variation	0.522		Skewness -0.721								-0.721		
475					Mean	of log	ged Data	5.868							SD of	logged	Data	1.01		
476																				
477					C	Critica	l Values fo	or Backgrour	nd Thresho	old Val	ues (BT	Vs)								
478				Tolera	ance Fac	tor K	(For UTL)	1.983							d2n	nax (for	USL)	3.089		
479																				
480								Normal (GOF Test											
481				Sh	napiro Wi	ilk Tes	t Statistic	0.811	Normal GOF Test											
482				5	% Shapii	ro Wil	k P Value	2.033E-12	Data Not Normal at 5% Significance Level											
483					Lilliefor	rs Tes	t Statistic	0.236				ı	illiefors	GOF	Test					
484				5%	% Lilliefor	rs Criti	ical Value	0.105			Data N	ot No	ormal at	: 5% Si	ignifica	nce Lev	el			
485	Pote Net Neural et 50/ Cignificance Level																			
486																				
487		Background Statistics Assuming Normal Distribution																		
488			g	95% U	JTL with		Coverage		-						90% F	Percenti	ile (z)	809.3		
489			909.8							95% F	Percenti	ile (z)	901.3							
490			1267							99% F	Percenti	ile (z)	1074							
491																				
492	Commo COC Took																			
493			7.522			Ande	erson	-Darling	Gamı	ma GO	F Test									
494			0.766		Data I	Not Gar	nma	Distribu	ıted at	5% Sig	gnificano	ce Lev	əl							
495		5% A-D Critical Value 0.766 Data Not Gamma Distributed at 5% Significance Level K-S Test Statistic 0.274 Kolmogrov-Smirnoff Gamma GOF Test																		
496					5% K-9	S Criti	ical Value	0.107		Data I	Not Gar	nma	Distribu	ıted at	5% Sig	gnificano	ce Lev	əl		
497						Data	Not Gami	na Distribute	d at 5% Si	ignifica	nce Le	vel								
498																				
499								Gamma	Statistics											
500						k l	nat (MLE)	1.733	k star (bias corrected MI								MLE)	1.669		
501					Т	Theta I	hat (MLE)	279.8					Theta	star (l	bias co	rrected I	MLE)	290.5		
502						nu l	hat (MLE)	246.1		nu star (bias corrected)							cted)	237		
503				ML	.E Mean ((bias d	corrected)	484.8						MLE	Sd (bia	as corre	cted)	375.2		
504								1	1											
505						Back	ground S	tatistics Assu	ıming Gam	nma Di	stribution	on								
506		95% Wils	on Hilfer	rty (WI	H) Approx	x. Gai	mma UPL	1235							90	% Perce	entile	984.4		
507		95% Hawk	ins Wixle	ey (HV	N) Approx	x. Gar	mma UPL	1334							95	% Perce	entile	1219		
508	95	% WH Appr	rox. Gan	nma U	JTL with	95%	Coverage	1454							99	% Perce	entile	1745		
509	95	5% HW Appr	rox. Gan	nma U	JTL with	95%	Coverage	1606												
510						95%	WH USL	2467							9	5% HW	USL	2959		
511								1	1											
512								Lognorma	GOF Test	t										
513				Sh	napiro Wi	0.693			Sha	piro	Wilk Lo	gnorm	al GOF	Test						
514				5	% Shapii	ro Wil	k P Value	0		D	ata Not	Log	normal	at 5%	Signific	ance Le	evel			
515					Lilliefor	rs Tes	t Statistic	0.271	Lilliefors Lognormal GOF Test											
516				5%	% Lilliefor	s Criti	ical Value	0.105	Data Not Lognormal at 5% Significance Level											
517							Data Not L	ognormal at	5% Signific						-					
518								-												
					-	Backo	round Sta	ntistics assur	ning Logno	ormal [Distribut	tion								
519 520			ç	95% U			Coverage								90% F	Percenti	ile (z)	1291		
J2U																				

521	A	E	3		С			E 95% UPL (t) 19	F 128		G	Н			ı		J 95%	K % Percenti		L 1863
522								95% US	L 80	14								99%	% Percenti	le (z)	3708
523									ı												
524	Nonparametric Distribution Free Background Statistics Data do not follow a Discernible Distribution (0.05)																				
525							[Data do not	follov	v a Disce	ernible	Distrib	oution (0.05)							
526																					
527						١	Nonpa	rametric Up	per L	imits for	Back	ground	Thresh	old V	'alue	s					
528						C	Order	of Statistic,	r 7	70						95%	UTL	with	95% Cove	erage	750
529							Α	pproximate	f	1.842			Coi	nfiden	nce (Coeffic	ient (CC) ac	chieved by	UTL	0.876
530		95% Per	rcentil	le Boo	e 75	50			95%	BCA	A Bo	otstrap	UTL		95% Cove	-	745				
531								95% UP	L 74	40.8		90% Percentile								entile	730
532					:50								!	95% Perce	entile	740					
533					L 15	96								!	99% Perce	entile	756				
534					L 77	70															
535																					
536	data and from of outliers and consists of absencetions collected from close unimported locations																				
537	data set free of outliers and consists of observations collected from clean unimpacted locations.																				
538																					
539	represents a hadrary and data get and when many analts absorbetions need to be compared with the DTV																				
540																					
541	TOO																				
542																					
	General Statistics																				
544	Total Number of Observations 71 Number of Distinct Observation										tions	28									
545	Number of Missing Observations											tions	13								
546	Minimum									.00		First Quartile								1700	
547	Second Largest								st 23	00		Median 1									1890
548	Maximum								n 23	20		Third Quartile									2100
549	Mean								n 18	56		SD								253.3	
550	Coefficient of Variation								n	0.136		Skewness							-0.0015		
551						Me	ean of	logged Dat	а	7.517								SD	of logged	Data	0.138
552																					
553							Crit	ical Values	for Ba	ackgrour	nd Thi	eshold	Values	(BTV	/s)						
554					Toler	rance F	actor	K (For UTL	_)	1.983								d	2max (for	USL)	3.089
555																					
556										Normal C	GOF 1	est				Norma					
557	<u> </u>					-		est Statisti		0.928											
558	<u> </u>				Ę		•	Nilk P Valu					Da	ta Not					cance Lev	el	
559								est Statisti		0.118								F Test			
560					5	% Lillie	efors C	ritical Valu		0.105					t No	rmal a	t 5%	Signific	cance Lev	el	
561								Data No	ot Nor	mal at 5	% Sig	nifican	ce Leve	el							
562															_						
563								ackground			uming	Norma	al Distri	oution	1						
564	95% UTL with 95% Coverage									58										2181	
565								95% UPL (% Percenti	. ,	2273
566	<u> </u>							95% USL	_ 26	39								99%	% Percenti	le (z)	2445
567																					
568									(3amma (GOF	Гest									
569							A-D 7	est Statisti	С	1.296			-	nder	son-	Darlin	g Gar	nma G	OF Test		
570						5%	A-D C	critical Valu	е	0.749		Da	ata Not	Gam	ma l	Distrib	uted a	at 5% S	Significand	e Lev	el
571							K-S T	est Statisti	С	0.12			Ko	olmog	rov-	Smirn	off Ga	amma	GOF Test		
572						5%	K-S C	Critical Valu	е	0.105		D	ata Not	Gam	ma I	Distrib	uted a	at 5% \$	Significand	e Lev	['] el
~ , <u>L</u>									I		1										

	Α	В		С	D	Data Not		F na Dietributo	G d at 5% Sign	H oificance Leve		J	K	L	
573															
574		Gamma Statistics													
575						k hat (MI E)	53.67	Jiausucs) 51.41					
576					Т	Theta hat (· '	34.59) 36.1					
577						nu hat (. ,	7621		,					
578				MLI	E Mean	(bias corre	· '	1856				•	as corrected as corrected	, i	
579 500															
580 581						Backgrou	und St	atistics Assu	ming Gamm	na Distributior	n				
582		95% Wil	Ison Hilf	erty (Wł	H) Appro	x. Gamma		2305				90	% Percentile	2195	
583		95% Haw						2308				95	% Percentile	2301	
584		95% WH App	prox. Ga	ımma U	TL with	95% Cov	erage	2396				99	% Percentile	e 2511	
585		95% HW App	prox. Ga	mma U	TL with	95% Cov	erage	2401							
586						95% WH	USL	2746				9	5% HW USL	2763	
587															
588	Lognormal GOF Test														
589				Sh	apiro Wi	ilk Test St	atistic	0.927		Shap	iro Wilk Log	normal GOF	Test		
590				5'	% Shapi	ro Wilk P	√alue	4.1511E-4		Data Not I	_ognormal a	t 5% Signific	ance Level		
591					Lilliefo	rs Test Sta	atistic	0.118		Lilli	iefors Logno	ormal GOF T	est		
592				5%	6 Lilliefor	rs Critical	√alue	0.105							
593	Data Not Lognormal at 5% Significance Level														
594															
595									ning Lognorn	mal Distribution	on				
596				95% U	TL with	95% Cov							Percentile (z Percentile (z	<i>'</i>	
597						95% U	` '			, and a second s					
598						95%	USL	2819	<u> </u>) 2537					
599															
600	Nonparametric Distribution Free Background Statistics Data do not follow a Discernible Distribution (0.05)														
601						Data do	not fo	ollow a Disce	rnible Distrib	oution (0.05)					
602															
603									Background	Threshold V		UT. :: 05	-0/ 0		
604					Ord	ler of Stati		70	<u> </u>				5% Coverage		
605		0E0/ Daiii	stile De l'	totra = 1 !	TIial-	Approxir		1.842				. ,	ieved by UTL		
606		95% Percen	Itile Boot	istrap U	I L WITH		erage 5 UPL		<u> </u>	95% BCA	A Bootstrap		5% Coverage		
607					000/ 0			2200	<u> </u>				9% Percentile		
608						Chebyshev		2621 2968					% Percentile % Percentile		
609					30% C		USL	2320				99	70 FEICEIIIIE	, 2300	
610						95%	USL	<u> </u>	<u> </u>						
611		1	Note: Th	ie lise o	f USL to	estimate :	a RTV	is recomme	nded only wi	hen the data	set renrese	nts a hackgro	ound		
612		I								ed from clean			Zariu		
613										es and false	•		lata		
614										ations need to					
615			. sp. 5001		g. 5 a. i c										
616															



