

2025 Annual Groundwater Monitoring and Corrective Action Report

Nelson Dewey Generating Station Slag Pond
Cassville, Wisconsin

Prepared for:

Alliant Energy



SCS ENGINEERS

25225071.00 | January 30, 2026

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OVERVIEW OF CURRENT STATUS

Nelson Dewey Generating Station, Slag Pond 2025 Annual Report

In accordance with §257.90(e)(6), this section at the beginning of the annual report provides an overview of the current status of groundwater monitoring and corrective action programs for the coal combustion residual (CCR) units. Supporting information is provided in the text of the annual report.

Category	Rule Requirement	Site Status
Monitoring Status – Start of Year	(i) At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95;	Detection
Monitoring Status – End of Year	(ii) At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95;	Detection
Statistically Significant Increases (SSIs)	(iii) If it was determined that there was an SSI over background for one or more constituents listed in Appendix III to this part pursuant to §257.94(e):	
	(A) Identify those constituents listed in Appendix III to this part and the names of the monitoring wells associated with such an increase; and	<p><u>October 2024</u> Boron: B-7R, B-11A, B-11B, B-11R, B-31A, B-31R Calcium: B-11B, B-11R, B-31R Field pH: B-11A, B-31A Sulfate: B-7R, B-11A, B-11B, B-11R, B-31R Total Dissolved Solids (TDS): B-11B, B-11R, B-31R</p> <p><u>April 2025</u> Boron: B-7R, B-11R, B-11B, B-11A, B-31R, B-31A Calcium: B-11R, B-11B Field pH: B-11A, B-11B, B-31A Sulfate: B-11R, B-11A, B-11B, B-31R TDS: B-11R, B-11B</p>

Category	Rule Requirement	Site Status
	(B) Provide the date when the assessment monitoring program was initiated for the CCR unit.	Alternative Source Demonstrations prepared October 2024 and April 2025 events Assessment monitoring not required.
Statistically Significant Levels (SSL) Above Groundwater Protection Standard (GPS)	(iv) If it was determined that there was an SSL above the GPS for one or more constituents listed in appendix IV to this part pursuant to §257.95(g) include all of the following:	Not applicable In detection monitoring
	(A) Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase;	
	(B) Provide the date when the assessment of corrective measures was initiated for the CCR unit;	
	(C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and	
	(D) Provide the date when the assessment of corrective measures was completed for the CCR unit.	
Selection of Remedy	(v) Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of remedy selection; and	Not applicable In detection monitoring
Corrective Action	(vi) Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.	Not applicable In detection monitoring

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1.0 INTRODUCTION

This 2025 Annual Groundwater Monitoring and Corrective Action Report was prepared to support compliance with the groundwater monitoring requirements of the Coal Combustion Residuals (CCR) Rule [40 CFR 257.50-107]. Specifically, this report was prepared to fulfill the requirements of 40 CFR 257.90(e). The applicable sections of the Rule are provided below in *italics*, followed by applicable information relative to the 2025 Annual Groundwater Monitoring and Corrective Action Report for the CCR Unit. The site location is shown on **Figure 1**.

This report covers the period of groundwater monitoring from January 1, 2025, through December 31, 2025.

The groundwater monitoring system for the Nelson Dewey Generating Station (NED) Slag Pond monitors a single CCR unit:

- NED Slag Pond (existing surface impoundment – closed January 2018)

The system is designed to detect monitored constituents at the waste boundary of the Slag Pond as required by 40 CFR 257.91(d). The groundwater monitoring system consists of one background well and six downgradient monitoring wells (**Table 1** and **Figure 2**).

During 2017 and early 2018, the Slag Pond CCR unit was closed by leaving the CCR in place and installing a final cover system, in accordance with §257.102(d). Closure certification was completed on January 31, 2018.

The closed CCR landfill adjacent to the Slag Pond is being evaluated for potential regulation under the CCR rule and is regulated by the Wisconsin Department of Natural Resources. The CCR landfill was initially licensed in 1976 and received fly ash from NED until it was closed in phases between 1996 and 2001.

2.0 BACKGROUND

To provide context for the annual report, the following background information is provided in this section of the report, prior to the annual report requirements sections:

- Geologic and hydrogeologic setting
- CCR Rule monitoring system

2.1 GEOLOGIC AND HYDROGEOLOGIC SETTING

2.1.1 Regional Information

The uppermost geologic formation beneath the NED plant that meets the definition of the “uppermost aquifer,” as defined by section 257.53 of the CCR Rule, is the surficial alluvial aquifer. The alluvial aquifer consists of Mississippi River valley sand and gravel deposits. This deposit is prevalent along the edges of the entire Mississippi River valley in southwestern Wisconsin. A map of the regional glacial geology in the area is included in **Appendix A**.

The alluvial aquifer is underlain by dolomitic bedrock of the Prairie du Chien Group. A bedrock geology map of the area is provided in **Appendix A**. The dolomite bedrock is also an aquifer and is likely hydraulically connected to the alluvial aquifer above.

Regionally, groundwater flow is generally to the southwest and discharges to the Mississippi River.

2.1.2 Site Information

Soil boring logs for monitoring wells installed at the site also generally indicate sand and gravel soils within the monitored depths. During drilling of CCR well B-7R, the unconsolidated materials were identified as consisting primarily of poorly graded, medium to coarse grained sand, and silty sand. The boring log for the previously installed background monitoring well B-26 shows silt and poorly graded sand as the primary unconsolidated materials at this location. The boring logs for the CCR monitoring wells are provided in **Appendix B**. All CCR monitoring wells are screened within the unconsolidated glacial aquifer.

The groundwater flow direction in the vicinity of the former plant area is generally southwest toward the Mississippi River. Historically, infiltration at the former Slag Pond, former fly ash basin, and the former Wisconsin Pollutant Discharge Elimination System (WPDES) ponds caused groundwater mounding to be present around these features; however, these ponds have now all been closed and are no longer sources of infiltration.

Although historic site water level measurements have generally indicated that groundwater flow is toward the Mississippi River, groundwater flow in the Slag Pond area is influenced by variations in river water levels. During periods of high river water levels, the flow temporarily reverses and the river discharges to the shallow sand and gravel aquifer. The water table map for the April 2025 monitoring event (**Figure 3**) shows groundwater flow to the east/southwest towards the river. The water table map for the October 2025 monitoring event (**Figure 4**) shows flow to the south/southwest towards the river. The groundwater elevations for the CCR monitoring wells and additional wells in the state monitoring program for the closed CCR landfill are provided in **Table 3**. Calculated horizontal gradients and flow velocities for 2025 are provided in **Table 4A**. Vertical gradients are provided in **Table 4B**.

2.2 CCR MONITORING SYSTEM

The groundwater monitoring system established in accordance with the CCR Rule consists of one upgradient (background) monitoring well and six downgradient monitoring wells (**Table 1** and **Figure 3**). The background well is B-26. The downgradient wells include B-7R, B-11A, B-11B, B-11R, B-31A, and B-31R. The CCR Rule wells are installed within the surficial alluvium aquifer. Well depths range from approximately 23 to 114 feet, measured from the top of the well casing.

3.0 § 257.90(E) ANNUAL REPORT REQUIREMENTS

Annual groundwater monitoring and corrective action report. For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For CCR management units, the owner or operator must prepare the initial annual groundwater monitoring

and corrective action report no later than January 31, 2029, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by §257.105(h)(1). At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

3.1 § 257.90(E)(1) SITE MAP

A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

A map showing the site location is provided on **Figure 1**. A map showing the CCR unit and all background (or upgradient) and downgradient monitoring wells with identification numbers for the groundwater monitoring program is provided on **Figure 2**. The Slag Pond CCR unit is closed, and the map shows the post-closure conditions.

3.2 § 257.90(E)(2) MONITORING SYSTEM CHANGES

Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

No new monitoring wells were installed and no wells were decommissioned as part of the groundwater monitoring program for the CCR unit in 2025.

3.3 § 257.90(E)(3) SUMMARY OF SAMPLING EVENTS

In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

Two groundwater sampling events were completed in 2025 at the NED Slag Pond as part of ongoing detection monitoring.

Groundwater samples collected during the semiannual events, in April and October 2025, were analyzed for the Appendix III constituents. A summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring program is included in **Table 2**.

The validation and evaluation of the October 2024 monitoring event data was completed and transmitted to WPL on February 6, 2025. The validation and evaluation of the April 2025 monitoring event data was completed and transmitted to WPL on August 6, 2025. The validation and evaluation of the October 2025 monitoring event data was in progress at the end of 2025 and will be transmitted to WPL in 2026; therefore, the October 2025 monitoring results will be included in the 2026 annual report. The October 2025 groundwater elevation data are included in this report.

The sampling results for Appendix III parameters in October 2024 and April 2025 are summarized in **Tables 5A** and **5B**. Field parameter results for the October 2024 and April 2025 sampling events are provided in **Table 6**. The analytical laboratory reports for sampling events are provided in **Appendix C**. Historical results for each monitoring well through April 2025 are summarized in **Appendix D**.

3.4 § 257.90(E)(4) MONITORING TRANSITION NARRATIVE

A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels);

There was no monitoring program transition in 2025. The NED Slag Pond remained in the detection monitoring program.

In 2025, the monitoring results for the October 2024 and April 2025 monitoring events were evaluated for SSIs in detection monitoring parameters relative to background. The comparison to background was based on a prediction limit approach, comparing the results to interwell upper prediction limits (UPLs) based on background monitoring results from the upgradient well (B-26). The interwell UPLs were updated in July 2023 using background data collected through April 2023. The Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at Resource Conservation and Recovery Act (RCRA) Facilities (U.S. EPA, 2009; Section 5.3.1) recommends periodic updating of background for both intrawell and interwell analyses. For semiannual monitoring, an update interval of 2 to 3 years is recommended. The next update for UPLs is planned for 2026.

For the October 2024 and April 2025 events, SSIs were identified at one or more wells for boron, calcium, fluoride, field pH, sulfate, and total dissolved solids (TDS) (**Tables 5A** and **5B**).

Alternative source demonstrations (ASDs) were completed in 2025 for SSIs identified in the October 2024 and April 2025 events. The ASDs demonstrate that the SSIs are primarily due to sources other than the closed Slag Pond, such as the historical ash disposal into the closed CCR landfill. The ASD reports are provided in **Appendix E**. Based on the findings of the ASDs, the NED Slag Pond remained in detection monitoring.

3.5 § 257.90(E)(5) OTHER REQUIREMENTS

Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.

Additional potentially applicable requirements for the annual report, and the location of the requirement within the Rule, are provided in the following sections. For each cited section of the Rule, the portion referencing the annual report requirement is provided below in italics, followed by applicable information relative to the 2025 Annual Groundwater Monitoring and Corrective Action Report for the NED Slag Pond CCR unit.

3.5.1 § 257.90(e) General Requirements

For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year.

Status of Groundwater Monitoring and Corrective Action Program. The groundwater monitoring and corrective action program was in detection monitoring throughout 2025.

Summary of Key Actions Completed.

- Two semiannual groundwater sampling and analysis events (April and October 2025).
- Statistical evaluation and determination of SSIs for the October 2024 and April 2025 monitoring events.
- ASD reports for the SSIs identified from the October 2024 and April 2025 monitoring events.

Description of Any Problems Encountered. No issues were encountered in 2025.

Discussion of Actions to Resolve the Problems. Not applicable. No issues were encountered in 2025.

Projection of Key Activities for the Upcoming Year (2026).

- Two semiannual groundwater sampling and analysis events (April and October 2026).
- Statistical evaluation and determination of any SSIs for the October 2025 and April 2026 monitoring events.
- If an SSI is determined, then within 90 days either:
 - Complete ASD (if applicable), or
 - Establish an assessment monitoring program.

3.5.2 § 257.94(d) Alternative Detection Monitoring Frequency

The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer in the annual groundwater monitoring and corrective action report required by § 257.90(e).

Not applicable. No alternative detection monitoring frequency has been proposed.

3.5.3 § 257.94(e)(2) Alternative Source Demonstration for Detection Monitoring

The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

The ASD reports prepared to address the SSIs observed for the October 2024 and April 2025 sampling events are provided in **Appendix E**. The ASD reports are certified by a qualified professional engineer.

3.5.4 § 257.95(c) Alternative Assessment Monitoring Frequency

The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer in the annual groundwater monitoring and corrective action report required by § 257.90(e).

Not applicable. Assessment monitoring has not been initiated.

3.5.5 § 257.95(d)(3) Assessment Monitoring Results and Standards

Include the recorded concentrations required by paragraph (d)(1) of this section, identify the background concentrations established under § 257.94(b), and identify the groundwater protection standards established under paragraph (d)(2) of this section in the annual groundwater monitoring and corrective action report required by § 257.90(e).

Not applicable. Assessment monitoring has not been initiated.

3.5.6 § 257.95(g)(3)(ii) Alternative Source Demonstration for Assessment Monitoring

The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

Not applicable. Assessment monitoring has not been initiated.

3.5.7 § 257.96(a) Extension of Time for Corrective Measures Assessment

The assessment of corrective measures must be completed within 90 days, unless the owner or operator demonstrates the need for additional time to complete the assessment of corrective measure due to site-specific conditions or circumstances. The owner or operator must obtain a certification from a qualified professional engineer attesting that the demonstration is accurate. The 90-day deadline to complete the assessment of corrective measures may be extended for longer than 60 days. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

Not applicable. Corrective measures assessment has not been initiated.

3.6 257.90(E)(6) OVERVIEW

A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit.

The specific requirements for the overview under §257.90(e)(6) are listed and the information is provided at the beginning of this report, before the Table of Contents.

4.0 REFERENCES

U.S. Environmental Protection Agency (U.S. EPA), 2009, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance, EPA 530-R-09-007, March 2009.

Tables

- 1 Groundwater Monitoring Well Network
- 2 CCR Rule Groundwater Samples Summary
- 3 Water Level Summary
- 4A Horizontal Gradients and Flow Velocity
- 4B Summary of Vertical Hydraulic Gradients
- 5A Groundwater Analytical Results Summary – October 2024
- 5B Groundwater Analytical Results Summary – April 2025
- 6 Groundwater Field Data Summary

**Table 1. Groundwater Monitoring Well Network
Nelson Dewey Closed Ash Disposal Facility / SCS Engineers Project #25225071.00**

Monitoring Well	Location in Monitoring Network	Role in Monitoring Network
B-26	Upgradient / Sidegradient	Background
B-7R	Downgradient	Compliance
B-11R	Downgradient	Compliance
B-11A	Downgradient	Compliance
B-11B	Downgradient	Compliance
B-31R	Downgradient	Compliance
B-31A	Downgradient	Compliance

Last revision by: NLB 11/14/2025
 Checked by: RM 11/24/2025

**Table 2. CCR Rule Groundwater Samples Summary
Nelson Dewey Closed Ash Disposal Facility / SCS Engineers Project #25225071.00**

Sample Dates	Downgradient Wells						Upgradient Well
	B-7R	B-11R	B-11A	B-11B	B-31R	B-31A	B-26
April 14-15, 2025	D	D	D	D	D	D	D
October 6-7, 2025	D	D	D	D	D	D	D
Total Samples	2	2	2	2	2	2	2

Abbreviations:

D = Required by Detection Monitoring Program

Last revision by: NLB

Date: 11/14/2025

Checked by: RM

Date: 12/1/2025

Table 3. Water Level Summary
Nelson Dewey Closed Ash Disposal Facility / SCS Engineers Project #25225071.00

Well Number	B-7R	B-8R	B-11R	B-11A	B-11B	B-21R**#	B-26	B-26A	B-28	B-30R	B-30AR	B-31R	B-31A	B-32	B-32A	B-35	B-35A*	B-36	B-36A	B-37	B-37A	B-39	B-40	Barge Gauge (SG-12)^^	Pond Gauge (SG-13)^
Top of Casing Elevation (feet amsl) - OLD	623.35	627.51	622.62	622.12	621.89	623.31	626.40	626.40	616.81	621.81	622.4	622.42	622.69	614.18	614.4	620.78	621.09	621.11	621.33	614.85	614.85	626.48	623.84	622.34	See notes
Top of Casing Elevation (feet amsl)*	622.75	626.85	622.00	621.47	621.27	AB	625.79	625.87	616.25	621.26	621.86	621.79	622.09	613.66	613.84	620.14	620.48	620.90	621.12	AB	AB	625.88	623.55	622.35	See notes
Screen Length (ft)	10	10	10	5	5	10	10	5	10	10	5	10	5	10	5	10	5	9	4.5	10	5	10	10		
Total Depth (ft from top of casing)	23.05	27.25	24.15	52.00	113.90	22.78	31.67	45.78	16.70	22.20	46.90	22.82	35.52	14.79	52.00	16.60	47.00	20.5	50	19.95	48.20	26.90	27.00		
Top of Well Screen Elevation (ft)	610.30	610.26	608.47	575.12	512.99	610.53	604.73	585.62	610.11	609.61	580.50	609.60	592.17	609.39	567.40	614.18	579.20	609.60	575.50	604.90	571.65	609.58	606.84		
Measurement Date																		--	--						
April 2, 2013	607.04	608.01	606.15	607.20	607.17	606.30	605.60	605.64	605.90	605.91	605.93	607.13	607.13	606.11	606.14	606.13	606.25	--	--	606.99	607.02				
October 16-17, 2013	604.51	605.89	604.17	603.90	603.87	604.11	604.31	604.32	604.36	604.08	604.06	604.87	604.00	604.53	604.56	604.46	604.44	--	--	604.05	604.04				
April 10, 2014	607.42	608.97	607.45	607.28	607.26	--	607.22	607.23	--	--	--	607.37	607.28	--	--	607.46	607.39	--	--	607.25	607.26				
October 14-15, 2014	605.67	606.82	605.17	604.90	604.91	614.92	605.00	605.01	605.13	604.92	604.92	606.36	605.54	605.41	605.45	605.36	605.33	--	--	604.94	604.99				
April 16, 2015	607.26	608.50	607.11	607.15	607.05	--	606.40	606.41	--	--	--	607.37	607.09	--	--	606.73	606.78	--	--	606.99	606.88				
October 1-2, 2015	605.14	604.66	604.53	604.42	604.38	604.36	604.43	604.50	604.54	604.34	604.32	605.13	604.38	604.76	604.82	604.76	604.75	--	--	604.30	604.39				
December 8, 2015	606.69	--	606.71	606.30	606.26	--	606.80	--	--	--	--	607.40	606.39	--	--	--	--	--	--	--	--	607.54			
April 12, 2016	609.32	609.36	609.32	608.71	608.68	--	609.81	609.72	--	--	--	609.34	609.01	--	--	609.73	609.65	--	--	608.79	608.79	610.23			
July 18-19, 2016	606.54	--	606.14	606.76	606.74	--	606.09	--	--	--	--	606.55	606.73	--	--	--	--	--	--	--	--	606.28			
October 19-20, 2016	608.59	608.46	608.35	608.21	608.19	608.37	608.84	608.76	608.63	608.45	608.46	608.51	608.20	608.69	608.73	608.78	608.74	--	--	608.20	608.18	609.09			
January 11-12, 2017	608.02		607.96	607.83	607.78		608.56					607.90	607.84					--	--			608.92			
April 17, 2017	609.08	608.82	608.34	609.05	608.99	--	608.59	608.54	609.94	608.57	608.64	607.20	608.98	608.96	608.98	609.00	609.02	--	--	609.02	609.02	610.23			
June 8, 2017	610.74	--	610.42	609.81	610.08	--	611.25	--	--	--	--	609.63	610.50	--	--	--	--	--	--	--	--	611.53			
August 1-2, 2017	607.02	--	606.73	605.57	605.50	--	607.39	--	--	--	--	606.84	605.69	--	--	--	--	--	--	--	--	608.71			
October 9-10, 2017	606.93	606.51	606.25	607.01	606.94	--	606.22	606.13	606.33	606.44	606.45	606.68	606.93	606.57	606.61	606.65	606.71	--	--	--	--	--			
October 19, 2017	609.60	--	609.42	609.58	609.65	--	608.84	--	--	--	--	609.47	609.43	--	--	--	--	--	--	609.40	609.40	608.55			
November 17, 2017	--	--	--	--	--	606.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
December 19, 2017	--	--	--	--	--	604.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
February 7, 2018	605.37	--	605.33	604.96	604.92	--	--	--	616.81	--	--	605.31	605.01	--	--	--	--	--	--	--	--	606.19			
March 16, 2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
April 20, 2018 **	604.82	606.61	606.27	606.63	606.55	606.52	606.49	606.37	606.39	606.46	606.43	604.44	606.46	606.58	606.66	606.68	606.70	--	--	606.77	606.83	606.19			
May 23, 2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
October 8-10, 2018	610.76	610.68	610.67	610.28	610.24	610.02	610.34	610.28	610.83	610.09	610.05	610.39	610.27	611.05	610.94	610.72	610.54	--	--	--	--	611.44			
November 11, 2018	--	--	--	--	609.14	--	--	--	--	--	--	609.11	--	--	--	--	--	--	--	--	--	--			
April 22-23, 2019	615.28	615.66	615.28	615.29	615.28	614.98	615.49	615.31	615.40	615.36	615.35	615.01	615.33	--	--	615.87	615.98	--	--	--	--	615.40		615.17	<615.06
October 14-16, 2019	613.43	613.11	613.06	613.29	613.18	612.47	613.10	613.10	612.71	612.83	612.78	612.50	613.20	613.10	613.00	613.10	613.15	--	--	--	--	613.35		612.33	<615.06
April 13-14, 2020	614.12	613.76	614.39	613.88	613.86	613.22	613.76	613.73	613.68	613.60	613.56	613.80	613.79	--	--	614.04	614.00	--	--	--	--	613.71		612.89	613.10
October 12-13, 2020	605.09	604.88	604.57	604.54	604.44	604.92	604.83	604.86	604.72	604.72	604.66	604.54	605.07	605.06	605.00	605.08	--	--	--	--	605.06		603.89	DRY	
April 19-21, 2021	608.83	608.66	608.57	608.72	608.67	607.93	608.55	608.49	608.27	608.38	608.35	608.66	608.63	608.68	608.74	608.86	608.85	608.40	608.39	608.74	608.75	608.48		608.15	<609.00
October 6-8, 2021	604.05	604.04	603.85	603.79	603.74	603.56	604.21	604.13	604.11	604.00	603.97	603.98	603.84	604.32	604.38	604.35	604.34	603.93	603.92	NM	NM	604.23		602.90	<609.00
April 25-26, 2022	609.84	610.25	609.75	610.00	609.98	609.70	610.12	610.08	609.99	610.11	610.09	610.27	609.95	610.26	610.40	610.44	610.32	609.94	609.90	AB	AB	610.22		NM	609.25
October 18-19, 2022	603.81	603.82	603.59	603.63	603.57	603.39	603.99	603.81	603.84	603.78	603.77	603.69	603.61	604.07	604.09	604.12	604.05	603.64	603.65	AB	AB	603.91		601.29	<609.00
April 3-5, 2023	607.51	607.58	607.83	607.92	607.90	--	607.36	607.34	607.19	607.38	607.41	607.88	607.85	607.40	607.40	607.67	607.71	607.34	607.34	AB	AB	606.92		606.24	<609.00
October 2-3, 2023	604.39	604.06	603.93	603.97	603.91	--	604.20	604.15	604.12	604.07	604.05	603.98	603.95	604.23	604.29	604.34	599.49	603.81	603.86	AB	AB	604.04		603.29	<609.00
April 23-24, 2024	606.66	606.80	606.72	606.86	606.66	AB	606.51	606.41	DRY	606.44	606.45	606.61	606.63	606.56	606.62	606.71	606.73	606.31	606.36	AB	AB	606.25	606.22	605.34	--
October 7-8, 2024	604.02	603.79	603.54	603.52	603.46	AB	603.93	603.85	603.91	603.75	603.72	603.72	603.59	604.13	604.16	DRY	604.07	603.66	603.66	AB	AB	604.15	603.43	601.05	DRY
April 14-15, 2025	606.13	606.39	606.20	605.79	605.80	AB	606.80	606.81	606.97	606.72	606.70	606.34	606.00	605.66	606.85	606.87	606.82	606.78	606.78	AB	AB	606.79	606.64	603.75	DRY
October 6-7, 2025	603.60	603.81	603.50	603.63	603.47	AB	604.04	603.25	603.91	603.80	603.83	603.61	603.57	604.17	604.17	603.71	604.06	604.90	604.06	AB	AB	604.37	603.72	605.21	DRY

Notes:
-- = not measured
*The PVC casing at B-35A was cut down on June 28, 2018 to allow the protective cover to close. Groundwater elevations prior to 6/28/18 are calculated using the old top of casing (TOC) elevation of 621.20 ft amsl. Groundwater elevations after 6/28/18 are calculated using the new TOC elevation (621.09 ft amsl).
** The PVC casing at B-21R was extended in 2018 following well rehabilitation. The well was resurveyed on April 22, 2019. The old top of casing elevation was 621.03 ft. The new TOC elevation is 623.31 ft.
^ One pond staff gauge was installed on April 22, 2019. The base of the gauge (0 reading) is at 615.056 ft amsl. Two additional gauges were installed on March 24, 2020. These gauge bases are at 609' and 612' amsl.
^^SG-12 re-established in 2022 following barge slip construction work. Previous elevation (applies to measurements before October 2022) was 616.60. New elevation (top of metal pipe) is 622.34'
#B-21R was found knocked over during the April 2023 sampling event and was subsequently abandoned.
AB = well abandoned
amsl = above mean sea level

Last revision by: LH Date: 11/24/2025
Checked by: NLB Date: 12/9/2025

**Table 4A. Horizontal Gradients and Flow Velocity
Nelson Dewey Generating Station / SCS Engineers Project #25225071.00**

Flowpath A - North/Northeast					
Sampling Dates	h1 (ft)	h2 (ft)	Δl (ft)	Δh/Δl (ft/ft)	V (ft/d)
April 14-15, 2025	606.80	606.20	425	0.001	0.03

Flowpath B - Southwest					
Sampling Dates	h1 (ft)	h2 (ft)	Δl (ft)	Δh/Δl (ft/ft)	V (ft/d)
October 6-7, 2025	604.00	603.61	430	0.001	0.02

Wells	K Values (cm/sec)	K Values (ft/d)	Assumed Porosity, n
Geometric Mean	2.9E-03	8.2	0.40

Note: K value derived from averaging previous slug tests

Groundwater flow velocity equation: $V = [K*(\Delta h/\Delta l)] / n$

ft = feet

ft/d = feet per day

K = hydraulic conductivity

n = effective porosity

V = groundwater flow velocity

h1, h2 = point interpreted groundwater elevation at locations 1 and 2

Δl = distance between location 1 and 2

Δh/Δl = hydraulic gradient

Last revision by: NLB
Checked by: LH

Date: 11/20/2025
Date: 11/24/2025

Table 4B. Summary of Vertical Hydraulic Gradients
Nelson Dewey Closed Ash Disposal Facility / SCS Engineers Project #25225071.00

Well Nest Location	Well Type	Top of Screen Elevation (ft amsl)	Bottom of Screen Elevation (ft amsl)	April 2025					October 2025					
				Groundwater Elevation (h) (ft amsl)	Reference Point (L) ⁽¹⁾ (ft amsl)	Delta h ⁽²⁾ (ft)	Delta L ⁽³⁾ (ft)	Vertical Hydraulic Gradient (ft/ft)	Groundwater Elevation (h) (ft amsl)	Reference Point (L) ⁽¹⁾ (ft amsl)	Delta h ⁽²⁾ (ft)	Delta L ⁽³⁾ (ft)	Vertical Hydraulic Gradient (ft/ft)	
B-11R	WT	608.5	598.5	606.20	602.3	0.41	33.10	0.012	603.50	601.0	-0.13	30.40	-0.004	
B-11A	P	575.1	571.0	605.79	573.1				603.63	573.1				
B-11A	P	575.1	570.1	605.79	572.6	-0.01	95.29	-0.0001	603.63	572.6	1.00	93.13	0.011	
B-11B	P	513.0	508.0	605.80	510.5				603.47	510.5				
B-31R	WT	609.6	599.6	606.34	603.0	0.34	16.64	0.020	603.61	601.6	0.04	13.91	0.003	
B-31A	P	592.2	587.2	606.00	589.7				603.57	589.7				
Average								0.011	Average					0.003

Footnotes:

⁽¹⁾ For water table monitoring wells, the reference point (L) is the midpoint between water table elevation and the bottom of the well screen elevation if the water table intersects the well screen. For water table wells with a saturated screen (water table elevation above the top of screen elevation), the Reference Point (L) is the midpoint between the top and bottom of well screen elevations. For piezometers, reference point (L) is the elevation in the middle of the screen.

⁽²⁾ Delta h is the difference between water table elevation and potentiometric surface elevation.

⁽³⁾ Delta L is the difference between water table elevation and the elevation of the mid-point of the piezometer screen.

Notes:

1. Vertical gradient = Delta h/Delta L
2. A negative vertical hydraulic gradient indicates upward flow
3. WT = water table well
4. P = piezometer well
5. ft amsl = feet above mean sea level

Updated by: NLB Date: 11/20/2025
Checked by: LH Date: 11/24/2025

I:\25225071.00\Deliverables\2025 Annual CCR Report\Tables\[Table 4B_Vertical Hydraulic Gradients_2025.xlsx]GW Field Data

**Table 5A. Groundwater Analytical Results Summary - October 2024
Nelson Dewey Slag Pond, Cassville, WI / SCS Engineers Project #25225071.00**

Parameter Name	UPL	Background Well	Compliance Wells					
		B-26	B-7R	B-11A	B-11B	B-11R	B-31A	B-31R
		10/8/2024	10/7/2024	10/7/2024	10/7/2024	10/7/2024	10/8/2024	10/8/2024
Groundwater Elevation, ft amsl		603.93	604.02	603.52	603.46	603.54	603.59	603.72
Appendix III								
Boron, µg/L	70.5	35.9	139	471	3,560	2420	197	845
Calcium, µg/L	104,000	84,300	83,500	57,000	142,000	152,000	45,500	134,000
Chloride, mg/L	72.7	44.2 M0	7.8 J,D3	42.7	20.7	19.9	50.5	15.2
Fluoride, mg/L	0.2	0.11 J	<0.48 D3	<0.48 D3	0.60 J,D3	<0.48 D3	0.22 J	0.31 J
Field pH, Std. Units	7.64	7.19	6.40	7.67	7.57	6.74	7.73	6.60
Sulfate, mg/L	47.1	36.0 M0	157	96.1	405	162	23.4	187
Total Dissolved Solids, mg/L	536	448	398	424	954	766	260	666

 Blue shaded cell indicates the compliance well result exceeds the UPL (background) and the Limit of Quantitation (LOQ).

Abbreviations:

UPL = Upper Prediction Limit
SSI = Statistically Significant Increase

µg/L = micrograms per liter
mg/L = milligrams per liter

LOD = Limit of Detection
LOQ = Limit of Quantitation

ft amsl = feet above mean sea level
Std. Units = Standard Units

Lab Notes:

J = Estimated concentration at or above the LOD and below the LOQ.
D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Notes:

1. An individual result above the UPL may not constitute an SSI above background. See the accompanying letter text for identification of statistically significant results.
2. Interwell UPLs calculated based on results from background well B-26. UPLs are based on a 1-of-2 retesting approach.
3. Interwell UPLs updated July 2023 based on background well results from December 2015 through April 2023.

Created by:	NDK	Date:	12/6/2022
Last revision by:	BLR	Date:	11/14/2024
Checked by:	RM	Date:	12/27/2024
Proj Mgr QA/QC/Scientist:	TK	Date:	1/20/2025

I:\25225071.00\Deliverables\2025 Annual CCR Report\Tables\[Table 5A_2410_NED_CCR GW Screening Summary.xlsx]Current Event - Updated UPL

Table 5B. Groundwater Analytical Results Summary - April 2025
Nelson Dewey Slag Pond, Cassville, WI / SCS Engineers Project #25225071.00

Parameter Name	UPL	Background Well	Compliance Wells					
		B-26	B-7R	B-11R	B-11A	B-11B	B-31R	B-31A
		4/15/2025	4/15/2025	4/14/2025	4/14/2025	4/14/2025	4/14/2025	4/14/2025
Groundwater Elevation, ft amsl		606.80	606.13	606.20	605.79	605.80	606.34	606.00
Appendix III								
Boron, µg/L	70.5	44.8	126	2930	1,370	4780	862	184
Calcium, µg/L	104,000	78,600	54,500	124,000	52,400	130,000	93,000	44,200
Chloride, mg/L	72.7	49.8	7.4 J, D3	23.5	37.5	20.0 J, D3	13.1	52.6
Fluoride, mg/L	0.2	<0.095	<0.48 D3	<0.19 D3	<0.19 D3	<0.95 D3	<0.19 D3	0.10 J
Field pH, Std. Units	7.64	7.30	6.51	6.95	7.85	7.68	6.66	7.85
Sulfate, mg/L	47.1	38.1	35.3	86.8 M0	164	438	71.4	23.3
Total Dissolved Solids, mg/L	536	438	262	622	452	966	454	280

 Blue shaded cell indicates the compliance well result exceeds the UPL (background) and the Limit of Quantitation (LOQ).

Abbreviations:

UPL = Upper Prediction Limit
 SSI = Statistically Significant Increase

µg/L = micrograms per liter
 mg/L = milligrams per liter
 Std. Units = Standard Units

LOD = Limit of Detection
 LOQ = Limit of Quantitation
 ft amsl = feet above mean sea level

Lab Notes:

J = Estimated concentration at or above the LOD and below the LOQ.
 D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
 M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Notes:

1. An individual result above the UPL may not constitute an SSI above background. See the accompanying letter text for identification of statistically significant results.
2. Interwell UPLs calculated based on results from background well B-26. UPLs are based on a 1-of-2 retesting approach.
3. Interwell UPLs updated July 2023 based on background well results from December 2015 through April 2023.

Created by: NDK
 Last revision by: RM
 Checked by: BLJ

Date: 12/6/2022
 Date: 5/13/2025
 Date: 5/13/2025

I:\25225071.00\Deliverables\2025 Annual CCR Report\Tables\[Table 5B_2504_NED_CCR GW Screening Summary.xlsx]Current Event - Updated UPL

Table 6. Groundwater Field Data Summary
Nelson Dewey Closed Ash Disposal Facility / SCS Engineers Project #25225071.00

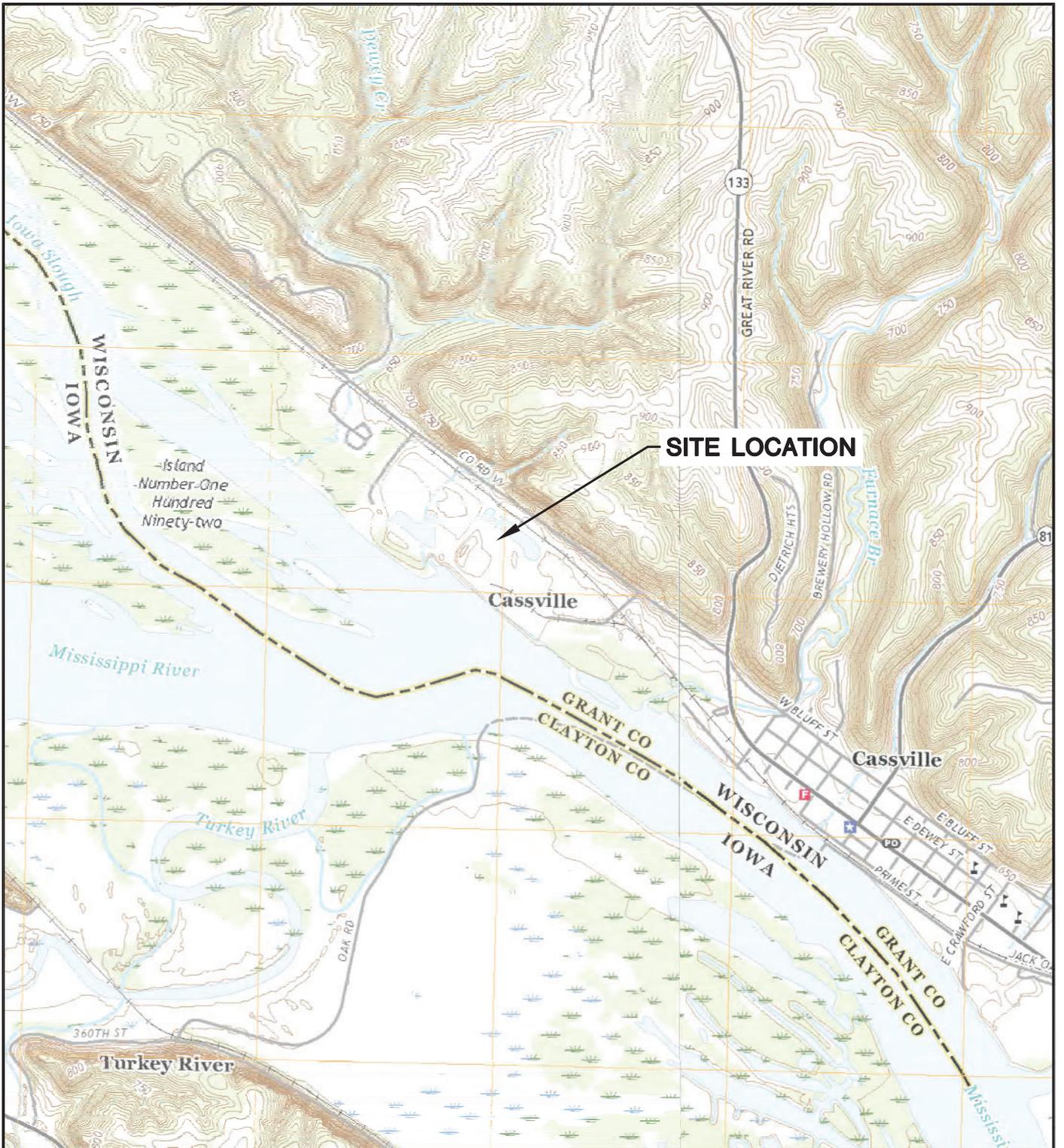
Well	Sample Date	Groundwater Elevation (feet)	Field Temperature (deg C)	Field pH (Std. Units)	Field Specific Conductance (umhos/cm)	Oxygen, Dissolved (mg/L)	Field Oxidation Potential (mV)	Turbidity (NTU)
B-7R	10/7/2024	604.02	17.5	6.40	761	0.64	-84.2	3.39
	4/14/2025	NS	10.8	6.51	498.2	0.65	17.9	12.26
B-11R	10/7/2024	603.54	14.3	6.74	1,165	0.24	-39.2	8.94
	4/14/2025	606.20	10.9	6.95	1,022	0.33	30.5	0.76
B-11A	10/7/2024	603.52	13.8	7.67	656	0.16	-42.2	0.00
	4/14/2025	605.79	13.2	7.85	733	0.07	76.2	0.47
B-11B	10/7/2024	603.46	14.3	7.57	1,279	0.34	136.9	1.32
	4/14/2025	605.80	13.2	7.68	1,339	0.44	91.3	2.78
B-26	10/8/2024	603.93	11.6	7.19	800	9.75	47.5	1.60
	4/14/2025	606.80	11.3	7.30	822	8.00	109.6	1.64
B-31R	10/8/2024	603.72	14.5	6.60	1019	0.32	-56.0	3.09
	4/14/2025	606.34	12.8	6.66	725	0.87	38.7	2.50
B-31A	10/8/2024	603.59	13.5	7.73	519	0.12	-61.0	1.00
	4/14/2025	606.00	13.6	7.85	507.6	0.17	91.2	2.50

Last revision by: LH
Checked by: RM

Date: 11/18/2025
Date: 12/4/2025

Figures

- 1 Site Location Map
- 2 Site Plan
- 3 Water Table Map – April 2025
- 4 Water Table Map – October 2025



SITE LOCATION



CASSVILLE AND TURKEY RIVER QUADRANGLES
 WISCONSIN-IOWA
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 2018
 SCALE: 1" = 2,000'



CLIENT	ALLIANT ENERGY 4902 N. BILTMORE LANE, #1000 MADISON, WI 53718		SITE	ALLIANT ENERGY NELSON DEWEY GENERATING STATION CASSVILLE, WISCONSIN		ENGINEER	SITE LOCATION MAP	
	PROJECT NO.	25220071.00		DRAWN BY:	BSS		SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE
DRAWN:	11/27/2019	CHECKED BY:	MDB	APPROVED BY:	TK 04/10/2020			
REVISED:	01/14/2020							

I:\25220071.00\Drawings\ASD\Site Location Map.dwg, 4/12/2020 7:11:31 PM

Appendix A

Summary of Regional Geologic and Hydrogeologic Information

Regional Glacial Geology

Alluvial

- al** Alluvium. Primarily sand or slightly gravelly sand on modern valley bottoms; most deposited during the last part of the Holocene; overlain by thin peat and thin silty overbank sediment in many places.
- ate** Alluvial sediment of the Elderon-phase terrace. Sand or gravelly sand, at least a few meters thick up to 15 m thick, deposited by streams carrying meltwater from the margins of the Laurentide Ice Sheet during the Elderon phase of the late Wisconsin glaciation. Occurs as terraces formed during subsequent down-cutting during the latest Wisconsin and Holocene.
- ats** Alluvial sediment of the Savanna terrace. Sand or gravelly sand, at least a few meters thick up to a 15 m thick, deposited by streams carrying meltwater from the margins of the Laurentide Ice Sheet during the late Wisconsin glaciation. Occurs as the Savanna terrace formed during subsequent down-cutting during the latest Wisconsin and Holocene.
- atb** Alluvial sediment of the Bridgeport terrace. Sand or gravelly sand, at least a few meters thick up to 15 m thick, deposited by streams carrying meltwater from the margins of the Laurentide Ice Sheet during the late Wisconsin glaciation. Occurs as remnants of the Bridgeport terrace; the terrace surface is likely largely underlain by a bedrock strath.
- af** Alluvial fan. Moderately to well-sorted cobbles, gravel, pebbles, and fine sediment forming fan-shaped deposits on valley floors. Typically forms at the base of steep slopes and particularly at the mouths of steep tributaries.

Colluvial

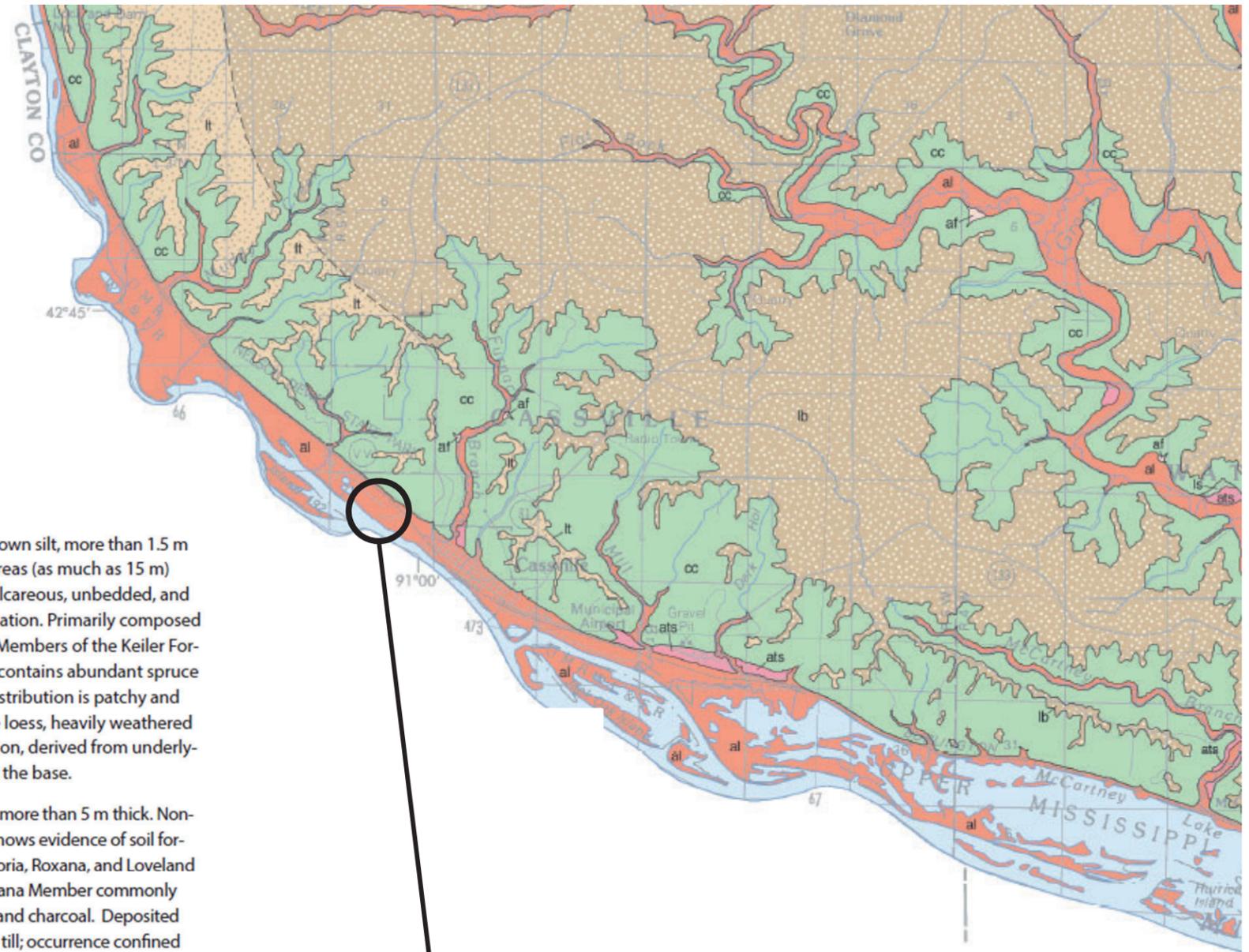
- cc** Coarse-grained colluvium. Unsorted slope sediment, derived from erosion of Paleozoic bedrock and windblown silt from upland surfaces moving downslope due to gravity. Typically associated with bedrock incision by major streams, and occurring on relatively steep slopes adjacent to major stream systems and deposits.
- ls** Landslide. Poorly sorted gravel, boulder, and blocky debris. Forms chaotic, hummocky lobes on valley floors and at bases of slopes; may have associated scarps on adjacent upslope surfaces.

Windblown

- lb** Loess on Paleozoic bedrock. Windblown silt, more than 1.5 m thick; generally thickest in western areas (as much as 15 m) and thinning toward the east. Noncalcareous, unbedded, and massive; shows evidence of soil formation. Primarily composed of the Peoria, Roxana, and Loveland Members of the Keiler Formation. Roxana Member commonly contains abundant spruce fragments and charcoal. Although distribution is patchy and uncertain due to the thickness of the loess, heavily weathered residual clay of the Rountree Formation, derived from underlying Paleozoic bedrock, is common at the base.
- lt** Loess on till. Windblown silt, typically more than 5 m thick. Non-calcareous, unbedded, and massive, shows evidence of soil formation. Primarily composed of the Peoria, Roxana, and Loveland Members of the Keiler Formation. Roxana Member commonly contains abundant spruce fragments and charcoal. Deposited on patchy, discontinuous pre-Illinoian till; occurrence confined to western Grant County, which was the easternmost extent of pre-Illinoian ice flowing from Minnesota and Iowa.
- ws** Windblown sand. More than about 1.5 m thick; dunes generally no more than a few meters high.

Symbols

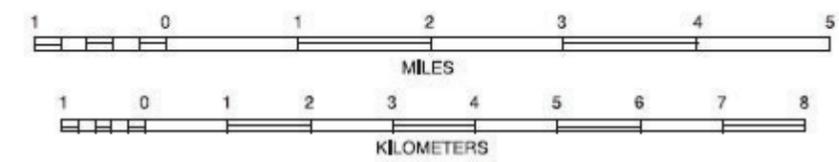
- Geologic contact. Position shown on map is judged to be generally within 0.2 km of actual position. Dashed where approximate.



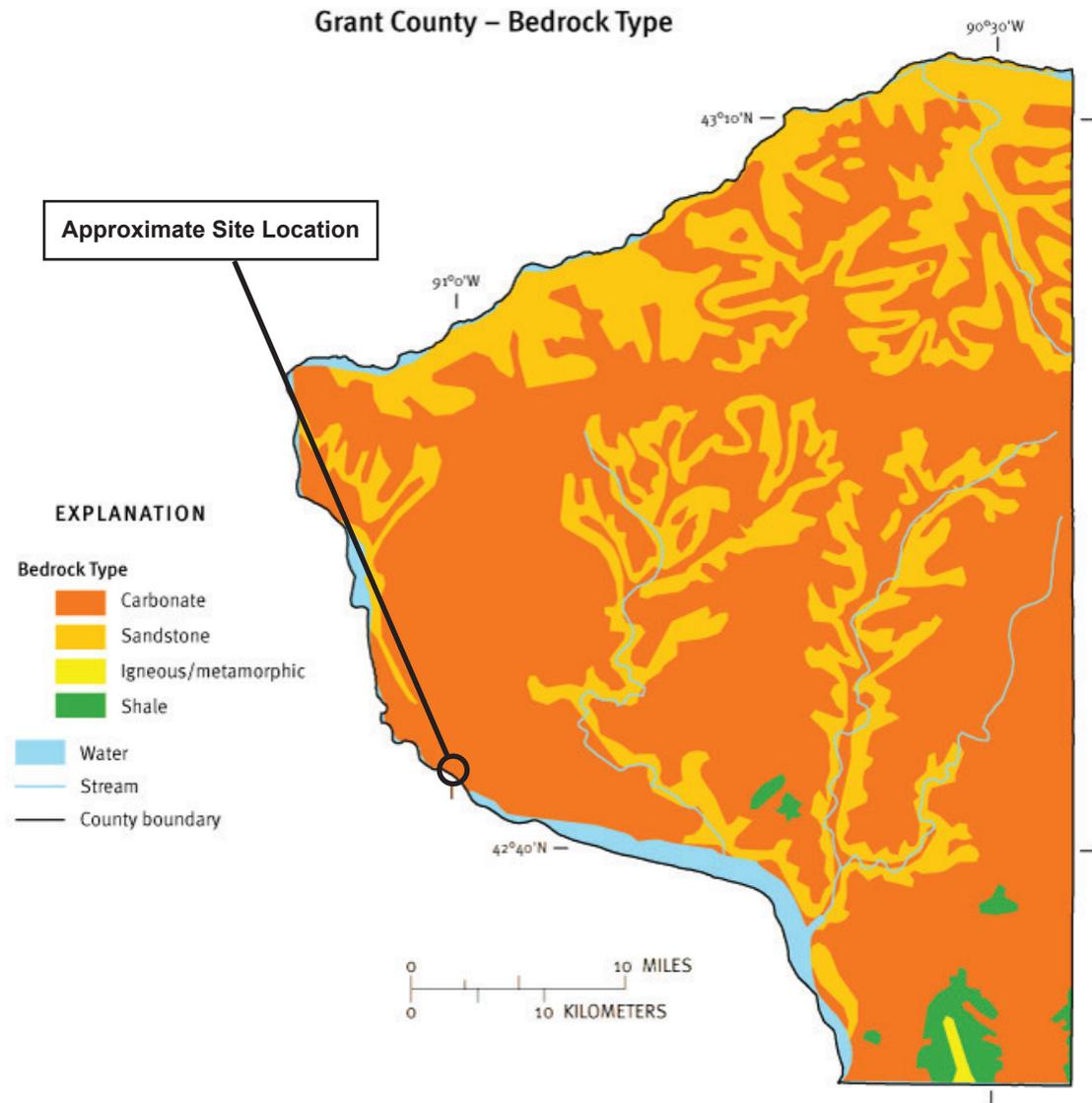
Approximate Site Location



SCALE 1:100,000



Source: Carson, Eric C., Preliminary Quaternary Geology of Grant County, Wisconsin, Wisconsin Geological and Natural History Survey Open File Report 2012-06.

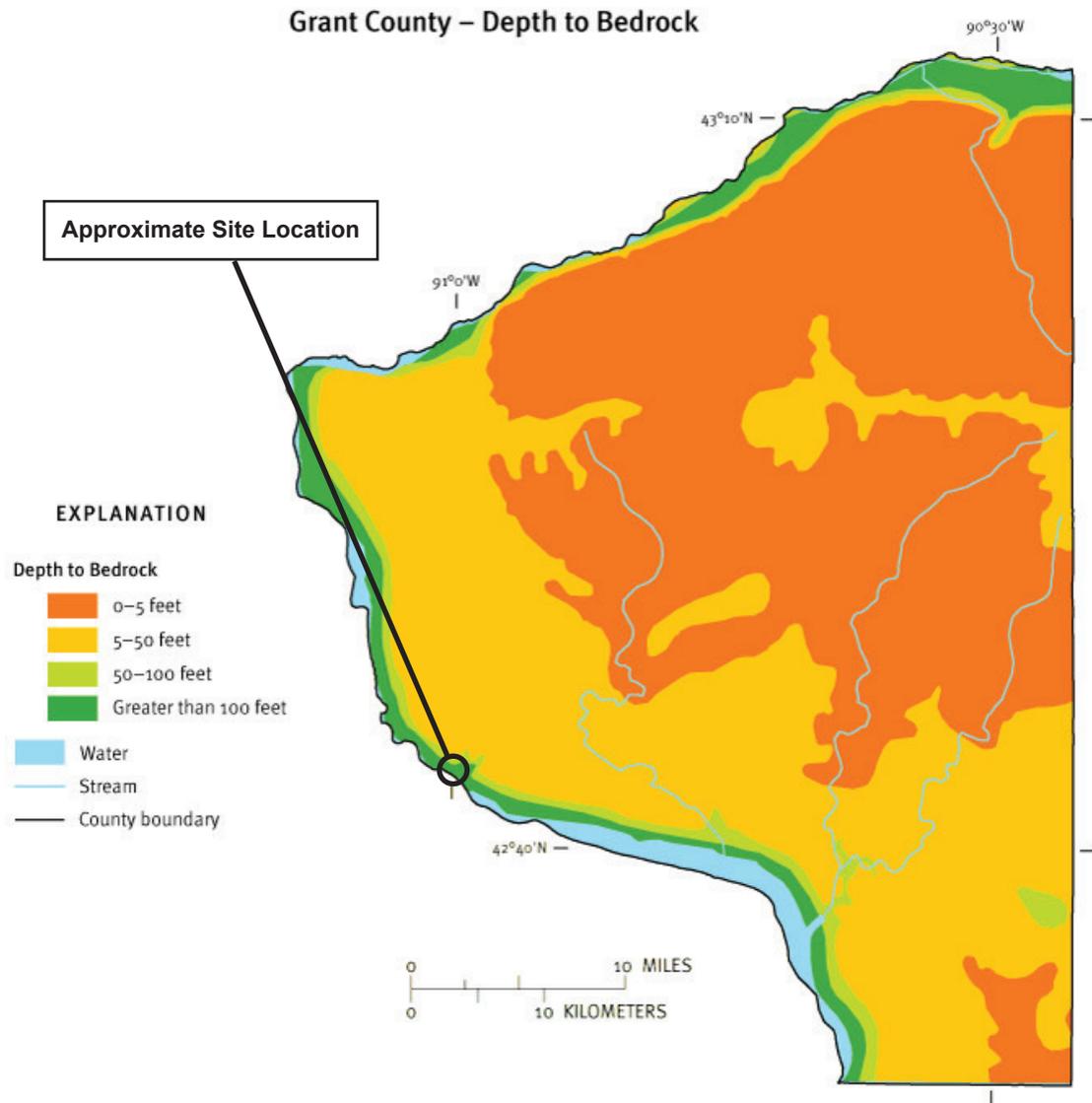


This resource characteristic map was derived from generalized statewide information at small scales, and cannot be used for any site-specific purposes.

Map source: Schmidt, R.R., 1987, Groundwater contamination susceptibility map and evaluation: Wisconsin Department of Natural Resources, Wisconsin's Groundwater Management Plan Report 5, PUBL-WR-177-87, 27 p.

Figure created for the "Protecting Wisconsin's Groundwater Through Comprehensive Planning" web site, 2007, <http://wi.water.usgs.gov/gwcomp/>

When bedrock is less than 50 feet from the land surface and the water table occurs in the bedrock, the type of bedrock is important in determining how easily a contaminant can reach the groundwater. Bedrock types that allow water to pass quickly through them will offer less protection from contaminants. In Wisconsin, these types of bedrock are typically limestone and dolomite which are highly fractured. Igneous and metamorphic rocks (e.g. granite) and sandstone are less fractured and offer some protection from infiltrating water which may contain contaminants. On the other hand, shale bedrock is almost impermeable, and doesn't allow water and accompanying contaminants to pass through it as easily. The bedrock categories used for this project are carbonates, sandstone, igneous/metamorphic/volcanic, and shale.



This resource characteristic map was derived from generalized statewide information at small scales, and cannot be used for any site-specific purposes.

Map source: Schmidt, R.R., 1987, Groundwater contamination susceptibility map and evaluation: Wisconsin Department of Natural Resources, Wisconsin's Groundwater Management Plan Report 5, PUBL-WR-177-87, 27 p.

Figure created for the "Protecting Wisconsin's Groundwater Through Comprehensive Planning" web site, 2007, <http://wi.water.usgs.gov/gwcomp/>

The depth to bedrock indicates the amount of soil and surficial deposits that exist in an area and, therefore how important the type of bedrock is in evaluating pollution potential. Information on the depth to bedrock map is used to determine the relative weight given to the other resource characteristic maps. For example, where the bedrock surface is deep and the water table occurs above the bedrock, the type of bedrock is not considered in determining groundwater contamination susceptibility. Where the depth to bedrock is shallow (less than 50 feet below the land surface), the water table is likely to occur in the bedrock. In that case, the type of bedrock is considered because it could influence a contaminant's ability to reach the groundwater. This map identifies areas where the depth to bedrock is 0-5 feet (in at least 35% of the area), 5-50 feet, 50-100 feet and greater than 100 feet.

Appendix B

Boring Logs, Well Construction, and Well Development Forms

Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name WPL- Nelson Dewey Generating Station SCS#: 25215135.30		License/Permit/Monitoring Number		Boring Number B-39	
Boring Drilled By: Name of crew chief (first, last) and Firm Dave Cruise Badger State Drilling		Date Drilling Started 10/20/2015		Date Drilling Completed 10/20/2015	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level Feet		Surface Elevation 623.58 Feet		Borehole Diameter 8.5 in.	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input type="checkbox"/> State Plane 479,423 N, 737,325 E S/C/N		Lat _____° _____'		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
NW 1/4 of NW 1/4 of Section 19, T 3 N, R 5 W		Long _____° _____'		Feet <input type="checkbox"/> S Feet <input type="checkbox"/> W	

Facility ID	County Grant	County Code 22	Civil Town/City/ or Village Cassville
-------------	------------------------	--------------------------	---

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Pocket Penetration (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	
S1	20	20 25 29 33	1-2	TOPSOIL, with medium grained sand, light brown.	TOPSOIL									
				POORLY GRADED SLAG, coarse grained, very dark brown (10YR 2/2), fly ash.										
S2	21	14 32 44 31	3-6		FILL									
S3	10	12 10 15 8	7-10											
				POORLY GRADED SAND, fine grained, dark gray (10YR4/1).										
S4	18	3 4 4 4	11-13		SP									

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature 	Firm SCS Engineers 2830 Dairy Drive Madison, WI 53711	Tel: (608) 224-2830 Fax:
---------------	---	-----------------------------

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Boring Number **B-39**

Use only as an attachment to Form 4400-122.

Page 2 of 2

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Pocket Penetration (tsf)	Moisture Content	Liquid Limit	Plasticity Index	P 200	
S5	15	4 3 5 6	15	POORLY GRADED SAND, fine grained, dark gray (10YR 4/1).	SP									
S6	16	3 4 4 6	16-17											
S7	22	4 6 8 11	19-20	POORLY GRADED GRAVEL WITH SAND, pebble size gravel, dark gray (10YR 4/1).	GP									
S8	14	7 4 4 5	22-23	POORLY GRADED SAND, coarse grained, dark gray (10YR 4/1).	SP									
S9	6	4 7 8 10	24-25											
S10	14	4 3 4 21	26-27	Trace pebbles										
			27	EOB @ 27' bgs.										

Saturation @
16.5ft bgs

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater Waste Management
 Remediation/Redevelopment Other

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name WPL- Nelson Dewey Generating St.		Local Grid Location of Well 479422.6 ft. <input checked="" type="checkbox"/> N. <input type="checkbox"/> S. 737324.8 ft. <input checked="" type="checkbox"/> E. <input type="checkbox"/> W.		Well Name B-39	
Facility License, Permit or Monitoring No.		Local Grid Origin (estimated:) or Well Location Lat. " Long. " or St. Plane ft. N, ft. E. S/C/N		Wis. Unique Well No. DNR Well ID No.	
Facility ID		Section Location of Waste/Source SE 1/4 of NW 1/4 of Sec. 19, T. 3 N, R. 5 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Date Well Installed 10 / 20 / 2015 m m d d y y v v y	
Type of Well Well Code 11 / MW		Location of Well Relative to Waste/Source <input type="checkbox"/> Upgradient <input type="checkbox"/> Sidegradient <input type="checkbox"/> Downgradient <input type="checkbox"/> Not Known		Well Installed By: Name (first, last) and Firm Dave Cruise- Badger State Drilling	
Distance from Waste/Source ft. Apply <input type="checkbox"/>		Gov. Lot Number		Kyle Kramer- SCS Engineers	

A. Protective pipe, top elevation	626.65 ft. MSL	1. Cap and lock?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation	626.48 ft. MSL	2. Protective cover pipe:	
C. Land surface elevation	623.58 ft. MSL	a. Inside diameter:	6 in.
D. Surface seal, bottom	623.08 ft. MSL or 0.5 ft.	b. Length:	4 ft.
12. USCS classification of soil near screen:		c. Material:	Steel <input checked="" type="checkbox"/> 0 4 Other <input type="checkbox"/>
GP <input checked="" type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>		d. Additional protection?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: Bollards
13. Sieve analysis performed?		3. Surface seal:	Bentonite <input checked="" type="checkbox"/> 3 0 Concrete <input type="checkbox"/> 0 1 Other <input type="checkbox"/>
14. Drilling method used:		4. Material between well casing and protective pipe:	Bentonite <input type="checkbox"/> 3 0 #5 Filter Sand - Ohio <input type="checkbox"/>
Rotary <input type="checkbox"/> 5 0 Hollow Stem Auger <input checked="" type="checkbox"/> 4 1 Other <input type="checkbox"/>		5. Annular space seal:	a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 3 3 b. Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 3 5 c. Lbs/gal mud weight Bentonite slurry <input type="checkbox"/> 3 1 d. % Bentonite Bentonite-cement grout <input type="checkbox"/> 5 0 e. Ft ³ volume added for any of the above
15. Drilling fluid used: Water <input type="checkbox"/> 0 2 Air <input type="checkbox"/> 0 1 Drilling Mud <input type="checkbox"/> 0 3 None <input checked="" type="checkbox"/> 9 9		f. How installed:	Tremie <input type="checkbox"/> 0 1 Tremie pumped <input type="checkbox"/> 0 2 Gravity <input checked="" type="checkbox"/> 0 8
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		6. Bentonite seal:	a. Bentonite granules <input type="checkbox"/> 3 3 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 3 2 c. Other <input type="checkbox"/>
Describe		7. Fine sand material: Manufacturer, product name & mesh size	a. #7 Fine Sand - Ohio <input type="checkbox"/>
17. Source of water (attach analysis, if required):		b. Volume added	ft ³
E. Bentonite seal, top	623.08 ft. MSL or 0.5 ft.	8. Filter pack material: Manufacturer, product name & mesh size	a. #5 Filter Sand - Ohio <input type="checkbox"/>
F. Fine sand, top	613.58 ft. MSL or 10 ft.	b. Volume added	ft ³
G. Filter pack, top	611.58 ft. MSL or 12 ft.	9. Well casing:	Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 2 3 Flush threaded PVC schedule 80 <input type="checkbox"/> 2 4 Other <input type="checkbox"/>
H. Screen joint, top	609.58 ft. MSL or 14 ft.	10. Screen material: 40 PVC	a. Screen type:
I. Well bottom	599.58 ft. MSL or 24 ft.	a. Screen type:	Factory cut <input checked="" type="checkbox"/> 1 1 Continuous slot <input type="checkbox"/> 0 1 Other <input type="checkbox"/>
J. Filter pack, bottom	596.58 ft. MSL or 27 ft.	b. Manufacturer	Monoflex
K. Borehole, bottom	596.58 ft. MSL or 27 ft.	c. Slot size:	0.10 in.
L. Borehole, diameter	8.5 in.	d. Slotted length:	10 ft.
M. O.D. well casing	2.4 in.	11. Backfill material (below filter pack):	None <input type="checkbox"/> 1 4 Other <input type="checkbox"/>
N. I.D. well casing	2.04 in.		#5 Coarse - Ohio

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *[Signature]* Firm SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718-6751

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name WPL - Nelson Dewey Generating Station		License/Permit/Monitoring Number 02525		Boring Number B-07R	
Boring Drilled By: Name of crew chief (first, last) and Firm Wes Imhoff Layne Christensen, Co.		Date Drilling Started 4/28/2009	Date Drilling Completed 4/28/2009	Drilling Method Rotasonic	
WI Unique Well No. VU600	DNR Well ID No. 156	Common Well Name B-07R	Final Static Water Level Feet MSL	Surface Elevation 620.5 Feet MSL	Borehole Diameter 6.0 inches
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location		
State Plane 265,999 N, 1,695,529 E S/C/N			Lat _____ " _____ "		
NW 1/4 of NW 1/4 of Section 19, T 3 N, R 5 W			Long _____ " _____ "		
Facility ID 122014530		County Grant	County Code 22	Civil Town/City/ or Village Cassville	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1 CS	60 42		1	WELL GRADED SAND WITH SILT (SW-SM), non-plastic, 5YR 4/4 reddish brown, no odor, moist, some siltier layers at 4.5 feet.										
2 CS	60 48		5	Same as above.	SW-SM									
3 CS	60 60		9	Silty organic sand layer from 9 to 9.5 feet.										
			10	Same as above, color change to 7.5YR 4/1 dark gray, moist to wet above clay.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Nate Keller Firm: RMT, Inc. 744 Heartland Trail Madison, WI 53717
Tel: 608-831-4444 Fax: 608-831-3334

WDNR_SBL_98 03026W.GPJ WI_DNR98B.GDT 8/27/09

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Boring Number **B-07R**

Use only as an attachment to Form 4400-122.

Page **2** of **2**

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
Number and Type	Length Att. & Recovered (in)								Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
4 CS	60 60		13		SW-SM										
			14	LEAN CLAY WITH SAND (CL) , fine sand, plastic, 7.5YR 3/1 very dark gray, no odor, wet.	CL										
			15	WELL GRADED SAND WITH SILT AND CLAY (SW-SM) , trace gravel, very low plasticity, 5YR 4/3 reddish brown, no odor, wet.											
			16			SW-SM									
			17												
			18												
			19												
			20	End of boring at 20.0 feet.											

WDNR_SBL_98 03026W.GPJ WI_DNR98.GDT 8/27/09

Route To: Watershed/Wastewater Remediation/Redevelopment Waste Management Other

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name WPL - Nelson Dewey Generating Station		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name B-07R	
Facility License, Permit or Monitoring No. 02525		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input checked="" type="checkbox"/>		Wis. Unique Well No. / DNR Well Number VU600 / 156	
Facility ID 122014530		St. Plane 265,999 ft. N., 1,695,529 ft. E. S/C/N		Date Well Installed 04/28/2009	
Type of Well Well Code 11/mw		Section Location of Waste/Source NW 1/4 of NW 1/4 of Sec. 19, T. 3 N, R. 5 <input type="checkbox"/> E <input checked="" type="checkbox"/> W		Well Installed By: (Person's Name and Firm) Wes Imhoff	
Distance from Waste/Source 350 ft.		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input checked="" type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known		Gov. Lot Number	
Enf. Stds. Apply <input checked="" type="checkbox"/>				Layne Christensen, Co.	

A. Protective pipe, top elevation	623.50 ft. MSL	1. Cap and lock?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation	623.35 ft. MSL	2. Protective cover pipe:	
C. Land surface elevation	620.5 ft. MSL	a. Inside diameter:	4.0 in.
D. Surface seal, bottom	618.5 ft. MSL or 2.0 ft.	b. Length:	5.0 ft.
		c. Material:	Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
12. USCS classification of soil near screen:		d. Additional protection?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input checked="" type="checkbox"/> SP <input type="checkbox"/>		If yes, describe:	
SM <input checked="" type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input checked="" type="checkbox"/> CH <input type="checkbox"/>		3. Surface seal:	Bentonite <input checked="" type="checkbox"/> 30 Concrete <input type="checkbox"/> 01 Other <input type="checkbox"/>
Bedrock <input type="checkbox"/>		4. Material between well casing and protective pipe:	Bentonite <input checked="" type="checkbox"/> 30 Other <input type="checkbox"/>
13. Sieve analysis attached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Annular space seal:	a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 33 b. ___ Lbs/gal mud weight ... Bentonite-sand slurry <input type="checkbox"/> 35 c. ___ Lbs/gal mud weight ... Bentonite slurry <input type="checkbox"/> 31 d. ___ % Bentonite ... Bentonite-cement grout <input type="checkbox"/> 50 e. 1.5 Ft ³ volume added for any of the above
14. Drilling method used:	Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input type="checkbox"/> 41 Rotosonic <input type="checkbox"/> Other <input checked="" type="checkbox"/>	f. How installed:	Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input checked="" type="checkbox"/> 08
15. Drilling fluid used:	Water <input checked="" type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input type="checkbox"/> 99	6. Bentonite seal:	a. Bentonite granules <input type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 32 c. ___ Other <input type="checkbox"/>
16. Drilling additives used?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Fine sand material: Manufacturer, product name & mesh size	a. NA b. Volume added ___ ft ³
Describe		8. Filter pack material: Manufacturer, product name & mesh size	a. Red Flint Filter Sand b. Volume added 2.1 ft ³
17. Source of water (attach analysis, if required):	on-site hydrant	9. Well casing:	Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
E. Bentonite seal, top	618.5 ft. MSL or 2.0 ft.	10. Screen material:	PVC a. Screen Type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
F. Fine sand, top	612.6 ft. MSL or 7.9 ft.	b. Manufacturer	
G. Filter pack, top	612.6 ft. MSL or 7.9 ft.	c. Slot size:	0.010 in.
H. Screen joint, top	610.5 ft. MSL or 10.0 ft.	d. Slotted length:	10.0 ft.
I. Well bottom	600.5 ft. MSL or 20.0 ft.	11. Backfill material (below filter pack):	None <input checked="" type="checkbox"/> 14 Other <input type="checkbox"/>
J. Filter pack, bottom	600.5 ft. MSL or 20.0 ft.		
K. Borehole, bottom	600.5 ft. MSL or 20.0 ft.		
L. Borehole, diameter	6.0 in.		
M. O.D. well casing	2.38 in.		
N. I.D. well casing	2.07 in.		

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Nate Kelber/go Firm RMTINC

Tel:
Fax:

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route To: Watershed/Wastewater
Remediation/Redevelopment

Waste Management
Other

Facility/Project Name WPL - Nelson Dewey Generating Station	County 22	Grant Grant	Well Name B-07R
Facility License, Permit or Monitoring Number 02525	County Code 22	Wis. Unique Well Number VU600	DNR Well Number 156

1. Can this well be purged dry? Yes No

2. Well development method:

- surged with bailer and bailed 4 1
- surged with bailer and pumped 6 1
- surged with block and bailed 4 2
- surged with block and pumped 6 2
- surged with block, bailed, and pumped 7 0
- compressed air 2 0
- bailed only 1 0
- pumped only 5 1
- pumped slowly 5 0
- other surged and pumped with Whaler pump

3. Time spent developing well **115 min.**

4. Depth of well (from top of well casing) **23.0 ft.**

5. Inside diameter of well **2.07 in.**

6. Volume of water in filter pack and well casing **1.5 gal.**

7. Volume of water removed from well **20.0 gal.**

8. Volume of water added (if any) **10.0 gal.**

9. Source of water added fire suppression system hydrant

10. Analysis performed on water added? Yes No
(If yes, attach results)

17. Additional comments on development:

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 15.50 ft.	17.85 ft.
Date	b. 4/29/2009	4/29/2009
Time	c. 07:55 <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.	09:50 <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.
12. Sediment in well bottom	inches	inches
13. Water clarity	Clear <input type="checkbox"/> 1 0 Turbid <input checked="" type="checkbox"/> 1 5 (Describe) <u>dark reddish brown, no odor</u>	Clear <input checked="" type="checkbox"/> 2 0 Turbid <input type="checkbox"/> 2 5 (Describe) <u>light brown, no odor</u>

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids **96.7 mg/l**

15. COD **mg/l**

16. Well developed by: Person's Name and Firm

**Roy Buckenberger
Layne Christensen, Co.**

Facility Address or Owner/Responsible Party Address

Name: Nathaniel Sievers
Firm: Nelson Dewey Generating Station
Street: 11999 County Rd VV
City/State/Zip: Cassville, WI 53806

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Nate Keller 1/20
Print Name: Nathaniel Keller
Firm: RMT, Inc.

NOTE: See instructions for more information including a list of county codes and well type codes.

Route To:
 Solid Waste
 Emergency Response
 Wastewater
 Haz. Waste
 Underground Tanks
 Water Resources
 Other

Facility/Project Name WP&L - Nelson Dewey 4293.02		License/Permit/Monitoring Number 2525		Boring Number B-11R	
Boring Drilled By (Firm name and name of crew chief) Environmental & Foundation Drilling; Crew Chief: Kevin Hargis		Date Drilling Started 11/17/97		Date Drilling Completed 11/17/97	
DNR Facility Well No. 155		WI Unique Well No.		Common Well Name	
Boring Location State Plane NW 1/4 of WW 1/4 of Section 19 T 3 N,R 5 W		Final Static Water Level Feet MSL		Surface Elevation 620.4 Feet MSL	
County Grant		DNR County Code 22		Civil Town/City/ or Village Cassville	
Borehole Diameter 8.0 Inches		Drilling Method 4 1/4 HSA		Local Grid Location (If applicable) 265,843 <input checked="" type="checkbox"/> N, 695,868 <input checked="" type="checkbox"/> E Feet <input type="checkbox"/> S Feet <input type="checkbox"/> W	

Sample Number	Length (In) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					Comments
									Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	
			1-23	Boring B-11R was blind drilled to a depth of 23 ft. See boring log B-11 for geologic description.	SP/SW									

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature:

Firm: **RMT**
744 Heartland Trail, Madison Wisconsin
Tel: 608-831-4444, Fax: 608-831-3334

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.



Facility/Project Name WP&L Nelson Dewey	4293.01	Local Grid Location of Well <input type="checkbox"/> N. <input type="checkbox"/> E. ____ ft. <input type="checkbox"/> S. ____ ft. <input type="checkbox"/> W.	Well Name B-11R
Facility License, Permit or Monitoring Number 2525		Grid Origin Location Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or St. Plane 265,843 ft. N., 1,695,868 ft. E.	Wis. Unique Well Number DNR Well Number 155
Distance Well is From Waste/Source Boundary ft.		Section Location of Waste/Source <input type="checkbox"/> E. <input checked="" type="checkbox"/> W. NW 1/4 of NW 1/4 of Sec.19, T3N, R5	Date Well Installed 11/ 17/ 97 MM DD YY
Type of Well: Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12		Location of Well Relative to Waste/Source U <input type="checkbox"/> Upgradient S <input type="checkbox"/> Sidegradient D <input checked="" type="checkbox"/> Downgradient N <input type="checkbox"/> Not Known	Well Installed By: (Person's Name and Firm) Kevin Hargis Environmental and Foundation Drilling Waunakee, Wisconsin
Is Well A Point of Enforcement Std. Application? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

Protective pipe, top elevation 622.56 ft. MSL

Casing, top elevation 622.62 ft. MSL

Surface elevation 620.4 ft. MSL

Seal, bottom 619.4 ft. MSL or 1.0 ft.

USCS classification of soil near screen:
 GP GM GC GW SW SP
 SM SC ML MH CL CH
 Bedrock

Soil analysis attached? Yes No

Drilling method used: Rotary 50
 Hollow Stem Auger 41
 Other

Drilling fluid used: Water 02 Air 01
 Drilling Mud 03 None 99

Drilling additives used? Yes No

Describe:

Source of water (attach analysis):

Seal, top 619.4 ft. MSL or 1.0 ft.

Seal, top 606.4 ft. MSL or 14 ft.

Seal, top 605.4 ft. MSL or 15 ft.

Seal, top 603.4 ft. MSL or 17 ft.

Seal, top 598.4 ft. MSL or 22 ft.

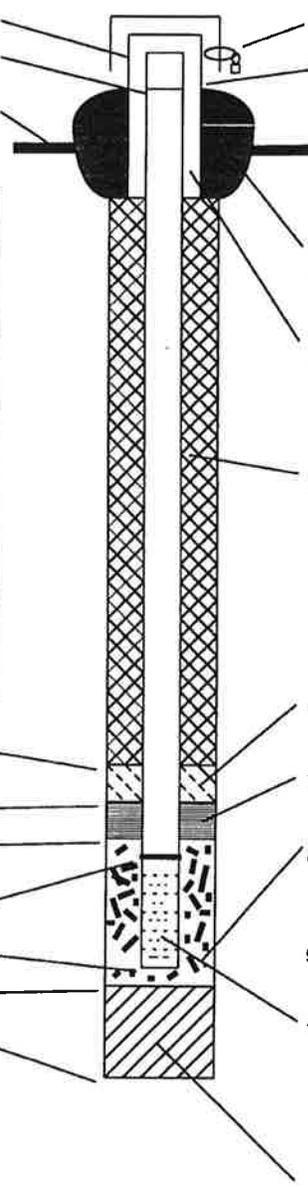
Seal, bottom 597.4 ft. MSL or 23 ft.

Seal, bottom 597.4 ft. MSL or 23 ft.

Seal diameter 8.25 in.

Casing 2.38 in.

Casing 2.00 in.



1. Cap and lock? Yes No

2. Protective cover pipe:
 a. Inside diameter: 4.0 in.
 b. Length: 7.0 ft.
 c. Material: Steel 04
 Other
 d. Additional protection? Yes No
 If yes, describe: _____

3. Surface seal: Bentonite 30
 Concrete 01
 Other

4. Material between well casing and protective pipe:
 Bentonite 30
 Annular space seal
 Other

5. Annular space seal:
 a. Granular Bentonite 33
 b. Lbs/gal mud weight... Bentonite-sand slurry 35
 c. Lbs/gal mud weight... Bentonite slurry 31
 d. % Bentonite... Bentonite-cement grout 50
 e. Ft³ volume added for any of the above
 f. How installed: Tremie 01
 Tremie pumped 02
 Gravity 08

6. Bentonite seal:
 a. Bentonite granules 33
 b. 1/4 in. 3/8 in. 1/2 in. Bentonite pellets 32
 c. Other

7. Fine sand material: Manufacturer, product name, mesh size
 a. Badger Mining Corp.
 b. Volume added 20 lbs

8. Filter pack material: Manufacturer, product, mesh size
 a. 30 - 50
 b. Volume added 300 lbs

9. Well casing: Flush threaded PVC schedule 40 23
 Flush threaded PVC schedule 80 24
 Other

10. Screen Material: Sch 40 PVC
 a. Screen type: Factory cut 11
 Continuous slot 01
 Other b.
 Manufacturer Boart Longyear
 c. Slot size: 0.010 in.
 d. Slotted length: 5.0 ft.

11. Backfill material (below filter pack): None 14
 Other

I certify that the information on this form is true and correct to the best of my knowledge.

Firm
RMT, Inc.

Print on both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be filed.

Route to: Solid Waste Haz. Waste Wastewater
Env. Response & Repair Underground Tanks Other

Facility/Project Name WP&L Nelson Dewey		County Name Grant		Well Name B-11R	
Facility License, Permit or Monitoring Number 2525		County Code <u>22</u>		DNR Well Number <u>155</u>	
1. Can this well be purged dry? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Before Development	
2. Well development method		11. Depth to Water		After Development	
surged with bailer and bailed <input type="checkbox"/> 41		(from top of well casing)		<u>17.5 ft</u>	
surged with bailer and pumped <input checked="" type="checkbox"/> 61		Date		<u>11/18/97</u>	
surged with block and bailed <input type="checkbox"/> 42		mm/dd/yy		<u>mm/dd/yy</u>	
surged with block and pumped <input type="checkbox"/> 62		Time		<u>14:20</u>	
surged with block, bailed and pumped <input type="checkbox"/> 70		a.m. <input type="checkbox"/> p.m. <input checked="" type="checkbox"/>		<input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	
compressed air <input type="checkbox"/> 20		12. Sediment in well bottom		<u>0.0</u> Inches	
bailed only <input type="checkbox"/> 10		0.5 inches			
pumped only <input type="checkbox"/> 51		13. Water clarity		Clear <input checked="" type="checkbox"/> 20	
pumped slowly <input type="checkbox"/> 50		Clear <input type="checkbox"/> 10		Turbid <input type="checkbox"/> 25	
Other <input type="checkbox"/>		Turbid <input checked="" type="checkbox"/> 15			
3. Time spent developing well <u>35</u> min.					
4. Depth of well (from top of well casing) <u>25.5</u> ft.					
5. Inside diameter of well <u>2.0</u> in.					
6. Volume of water in filter pack and well casing <u>3.0</u> gal.					
7. Volume of water removed from well <u>35</u> gal.					
8. Volume of water added (if any) <u>0</u> gal.					
9. Source of water added					
10. Analysis performed on water added? <input type="checkbox"/> Yes <input type="checkbox"/> No		14. Total suspended solids		<u>110</u> mg/L	
		mg/l			
		15. COD		<u> </u> mg/L	
		mg/l			
16. Additional comments on development:					

Well developed by: Person's Name and Firm Name: <u>Kevin Baker</u> Firm: <u>RMT, Inc.</u>	I hereby certify that the above information is true and correct to the best of my <u>knowledge</u> . Signature: Print Initials: <u>K L B</u> Firm:
---	---

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

- Route To:
- Solid Waste
 - Emergency Response
 - Wastewater
 - Haz. Waste
 - Underground Tanks
 - Water Resources
 - Other

Facility/Project Name WP&L Nelson Dewey 3314.01	License/Permit/Monitoring Number	Boring Number B11A
---	----------------------------------	------------------------------

Boring Drilled By (Firm name and name of crew chief) Environmental & Foundation Drilling, Crew Chief: G. Markgraf	Date Drilling Started 12/1/94	Date Drilling Completed 12/1/94	Drilling Method DTRC
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DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level Feet MSL	Surface Elevation 620.2 Feet MSL	Borehole Diameter 7.5 Inches
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Boring Location		Local Grid Location (If applicable)	
State Plane 265903.10 N, 1727265.86 E	Lat 00°	Long 00°	<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W
NE 1/4 of NE — 1/4 of Section 19 T 3 N,R 5W			

County Grant	DNR County Code 22	Civil Town/City/ or Village Cassville
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Sample Number	Length (In) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					Comments
									Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	
			1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Boring blind drilled to 50' bgs. See log of B-11A for geologic description.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm RMT 744 Heartland Trail, Madison Wisconsin Tel: 608-831-4444, Fax: 608-831-3334
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This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Boring Number **B11A** Use only as an attachment to Form 4400-122. Page 3 of 3

Number	Sample Length (In) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					Comments	
									Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200		
			54	Drill rod to 53'											
			55												
			56	End of Boring at 56 Ft.											

Facility/Project Name WP&L Nelson Dewey 3314.01	Local Grid Location of Well _____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E. _____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.	Well Name B-11B/A MCM 12/30/94
Facility License, Permit or Monitoring Number	Grid Origin Location Lat. _____ Long. _____ or St. Plane _____ ft. N, _____ ft. E. 265903.10N, 1727265.86E	Wis. Unique Well Number _____ DNR Well Number _____
Type of Well: Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input checked="" type="checkbox"/> 12	Section Location of Waste/Source NE¼ of NE¼ of Sec. 19, T. 3N, R. 5 <input type="checkbox"/> E. <input checked="" type="checkbox"/> W.	Date Well Installed 12 / 01 / 94 MM DD YY
Distance Well is From Waste/Source Boundary Approx. 300' ft.	Location of Well Relative to Waste/Source U <input type="checkbox"/> Upgradient S <input type="checkbox"/> Sidegradient D <input checked="" type="checkbox"/> Downgradient N <input type="checkbox"/> Not Known	Well Installed By: (Persons' Name and Firm) Greg Markgraf, Environmental & Foundation Drilling
Is Well A Point of Enforcement Std. Application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

- A. Protective pipe, top elevation 622.20 ft MSL
- B. Well casing, top elevation 622.12 ft MSL
- C. Land surface elevation 620.2 ft MSL
- D. Surface seal, bottom _____ ft MSL or _____ ft

12. USCS classification of soil near screen:
 GP GM GC GW SW SP
 SM SC ML MH CL CH
 Bedrock

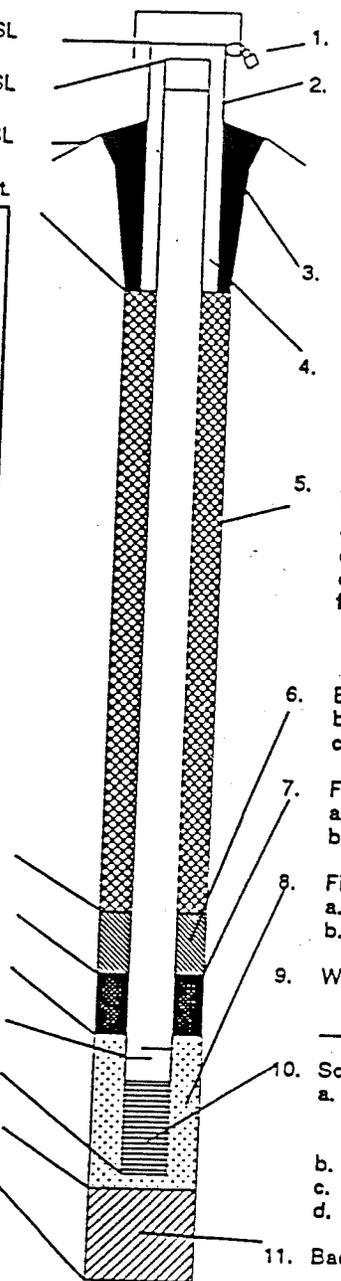
13. Sieve analysis attached? Yes No

14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
 Dual tube reverse circulation Other

15. Drilling fluid used: Water 02 Air 01
 Drilling Mud 03 None 99

16. Drilling additives used? Yes No
 Describe _____

17. Source of water (attach analysis): _____



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: 3.8 in
 - b. Length: 7.0 ft
 - c. Material: Steel 04
Other
 - d. Additional protection? Yes No
If yes, describe: _____
- 3. Surface seal:
 - Bentonite 30
 - Concrete 01
 - Other
- 4. Material between well casing and protective pipe:
 - Bentonite 30
 - Annular space seal
 - Other
- 5. Annular space seal:
 - a. Granular Bentonite 33
 - b. ___ Lbs/gal mud weight... Bentonite-sand slurry 35
 - c. ___ Lbs/gal mud weight... Bentonite slurry 31
 - d. ___ % Bentonite... Bentonite-cement grout 50
 - e. ___ lb volume added for any of the above
 - f. How installed: Tremie 01
Tremie pumped 02
Gravity 08
- 6. Bentonite seal:
 - a. Bentonite granules 33
 - b. 1/4 in. 3/8 in. 1/2 in. Bentonite pellets 32
 - c. _____ Other
- 7. Fine sand material: Manufacturer, product name, mesh size
 - a. Badger Mining 40-60
 - b. Volume added 1 bag, 50 lbs
- 8. Filter pack material: Manufacturer, product, mesh size
 - a. Badger Mining #30
 - b. Volume added 500 lbs, 10 bags
- 9. Well casing:
 - Flush threaded PVC schedule 40 23
 - Flush threaded PVC schedule 80 24
 - Other
- 10. Screen Material: PVC Schedule 40
 - a. Screen type:
 - Factory cut 11
 - Continuous slot 01
 - Other
 - b. Manufacturer Northern Air
 - c. Slot size: 0.01 in.
 - d. Slotted length: 5.0 ft
- 11. Backfill material (below filter pack):
 - None 14
 - Other

- E. Bentonite seal, top _____ ft MSL or 0.0 ft
- F. Fine sand, top _____ ft MSL or 41.0 ft
- G. Filter pack, top _____ ft MSL or 43.0 ft
- H. Screen joint, top _____ ft MSL or 45.0 ft
- I. Well bottom _____ ft MSL or 50.0 ft
- J. Filter pack, bottom _____ ft MSL or 56.0 ft
- K. Borehole, bottom _____ ft MSL or 56.0 ft
- L. Borehole, diameter 7.5 in.
- M. O.D. well casing 2.2 in.
- N. I.D. well casing 2.0 in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.
 Signature Martin G. Galt 12/21/94 Firm RMT, Inc

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

Route to: Solid Waste Haz. Waste Wastewater
Env. Response & Repair Underground Tanks Other

Facility/Project Name WP & L Nelson Dewey/Casewille	County Name Grant	Well Name E-118A MCA 12/90
Facility License, Permit or Monitoring Number	County Code	WIS Unique Well Number
		DNR Well Number

- Can this well purged dry? Yes No
- Well development method
 - surged with bailer and bailed 41
 - surged with bailer and pumped 61
 - surged with block and bailed 42
 - surged with block and pumped 62
 - surged with block, bailed and pumped 70
 - compressed air 20
 - bailed only 10
 - pumped only 51
 - pumped slowly 50
 - Other
- Time spent developing well 45 min.
- Depth of well (from top of well casing) 52.1 ft.
- Inside diameter of well 2.03 in.
- Volume of water in filter pack and well casing 2.2 gal./ft.
- Volume of water removed from well 1000.0 gal.
- Volume of water added (if any) gal.
- Source of water added
- Analysis performed on water added? (if yes, attach results) Yes No
- Additional comments on development:

	Before Development	After Development
11. Depth of Water (from top of well casing)	a. <u>16.4</u> ft.	<u>16.45</u> ft.
Date	b. <u>12/01/94</u> m m d d y y	<u>12/01/94</u> m m d d y y
Time	c. <u>5:05</u> <input checked="" type="checkbox"/> p.m.	<u>5:45</u> <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	<u>0.0</u> inches	<u>0.0</u> inches
13. Water Clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe)	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 25 (Describe)
14. Total suspended solids	<u> </u> mg/l	<u> </u> mg/l
15. COD	<u> </u> mg/l	<u> </u> mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

Well developed by: Person's Name and Firm
Name: Charles Markgraf
Firm: Environmental & Foundation Drilling, Inc.

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: [Signature]
Print Initials: G D A
Firm: Environmental & Foundation Drilling, Inc.

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

- Route To:
- Solid Waste
 - Emergency Response
 - Wastewater
 - Haz. Waste
 - Underground Tanks
 - Water Resources
 - Other

Facility/Project Name WP&L Nelson Dewey 3314.01		License/Permit/Monitoring Number		Boring Number B11B	
Boring Drilled By (Firm name and name of crew chief) Environmental & Foundation Drilling, Crew Chief: G. Markgraf		Date Drilling Started 11/29/94	Date Drilling Completed 11/30/94	Drilling Method DTRC	
DNR Facility Well No.	WI Unique Well No.	Common Well Name		Final Static Water Level Feet MSL	Surface Elevation Feet MSL
Boring Location State Plane 265907.89 N, 1727255.90 E		Lat 00''		Local Grid Location (If applicable)	
NE 1/4 of NE 1/4 of Section 19 T 3 N,R 5W		Long 00''		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
County Grant		DNR County Code 22	Civil Town/City/ or Village Cassville		

Sample Number	Length (In) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					Comments	
									Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200		
A			1-5	POORLY GRADED SAND (SP), sand fine grained, yellowish brown 10YR 5/6.	SP										
B			10-11	As above, brown 10YR 4/3.											
C			15-16	As above, yellowish brown 10YR 5/6.											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____ Firm **RMT**
744 Heartland Trail, Madison Wisconsin
Tel: 608-831-4444, Fax: 608-831-3334

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Boring Number **B11B**

Use only as an attachment to Form 4400-122.

Page 2 of 4

Sample Number	Length (In) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					Comments			
									Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200				
D			21	As above.						W							
			22														
			23														
			24														
E			25	As above.						W							
			26														
			27														
			28														
			29														
F			30	As above, sand medium grained,						W							
			31	grains are light yellowish brown,													
			32	yellowish brown and very dark													
			33	brown.													
			34														
G			35	As above, fine grained, light						W							
			36	yellowish brown 10YR 6/4.													
			37														
			38														
			39														
H			40	As above, slightly coarser grained						W							
			41	sand than at 35', fine to medium													
			42	grained.													
			43														
			44														
I			45	As above.						W							
			46														
			47														
			48														
			49														
J			50	As above.						W							
			51														
			52														
			53														

Boring Number **B11B**

Use only as an attachment to Form 4400-122.

Page 3 of 4

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					Comments
Number	Length (In) Recovered								Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	
K			54	As above, sand finer grained than at 50', yellowish brown 10YR 5/4.					W					
			55											
L			56	As above, sand medium grained.					W					
			57											
M			58	As above.					W					
			59											
N			60	As above.					W					
			61											
O			62	As above, 75% medium and 25% coarse grained sand.					W					
			63											
P			64	As above, sand fine grained.					W					
			65											
Q			66	As above, 75% fine grained and 25% medium grained sand.					W					
			67											
			68											
			69											
			70											
			71											
			72											
			73											
			74											
			75											
			76											
			77											
			78											
			79											
			80											
			81											
			82											
			83											
			84											
			85											
			86											

Facility/Project Name WP&L Nelson Dewey 3314.01	Local Grid Location of Well _____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E. _____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.	Well Name B-11x B MCM 12/30/94
Facility License, Permit or Monitoring Number	Grid Origin Location Lat _____ Long _____ or St. Plane _____ ft. N. _____ ft. E. 265907.89N, 1,727,255.90E	Wis. Unique Well Number DNR Well Number
Type of Well: Water Table Observation Well <input type="checkbox"/> 11 Piezometer <input checked="" type="checkbox"/> 12	Section Location of Waste/Source NE¼ of NE¼ of Sec. 19, T3N, R5 <input type="checkbox"/> E. <input checked="" type="checkbox"/> W.	Date Well Installed 11 / 30 / 94 MM DD YY
Distance Well is From Waste/Source Boundary Approx. 300' ft.	Location of Well Relative to Waste/Source U <input type="checkbox"/> Upgradient S <input type="checkbox"/> Sidegradient D <input checked="" type="checkbox"/> Downgradient N <input type="checkbox"/> Not Known	Well Installed By: (Persons' Name and Firm) Greg Markoraf, Environmental & Foundation Drilling
Is Well A Point of Enforcement Std. Application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

- A. Protective pipe, top elevation 622.02 ft. MSL
- B. Well casing, top elevation 621.89 ft. MSL
- C. Land surface elevation 619.7 ft. MSL
- D. Surface seal, bottom- _____ ft. MSL or 15.0 ft.

12. USCS classification of soil near screen:
 GP GM GC GW SW SP
 SM SC ML MH CL CH
 Bedrock

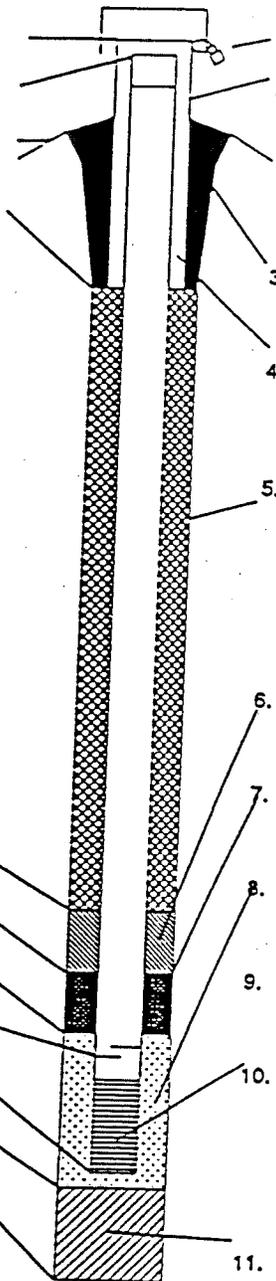
13. Sieve analysis attached? Yes No

14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
 Dual-tube reverse circulation Other

15. Drilling fluid used: Water 02 Air 01
 Drilling Mud 03 None 99

16. Drilling additives used? Yes No
 Describe _____

17. Source of water (attach analysis):



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: _____
 - b. Length: _____
 - c. Material: Flush Mount Steel Other
 - d. Additional protection? Yes No
If yes, describe: _____
- 3. Surface seal: Bentonite Concrete Other
- 13 bags bentonite chips
- 4. Material between well casing and protective pipe:
 - Bentonite 3
 - Annular space seal
 - Other
- 5. Annular space seal:
 - a. Granular Bentonite 3
 - b. _____ Lbs/gal mud weight... Bentonite-sand slurry 3
 - c. 1.9 Lbs/gal mud weight... Bentonite slurry 3
 - d. _____ % Bentonite... Bentonite-cement grout 50
 - e. 24 lb volume added for any of the above
 - f. How installed: Tremie 01
Tremie pumped 02
Gravity 08
- 6. Bentonite seal:
 - a. Bentonite granules 30
 - b. 1/4 in. 3/8 in. 1/2 in. Bentonite pellets 32
 - c. _____ Other
- 7. Fine sand material: Manufacturer, product name, mesh size
 - a. Unimin silica sand
 - b. Volume added 50 lbs, 1 bag
- 8. Filter pack material: Manufacturer, product, mesh size
 - a. Badoer Mining #30
 - b. Volume added 4 bags, 200 lbs
- 9. Well casing: Flush threaded PVC schedule 40 23
 Flush threaded PVC schedule 80 24
 Other
- 10. Screen Material: PVC Schedule 80
 - a. Screen type: Factory cut 11
 Continuous slot 01
 Other
 - b. Manufacturer Northern Air
 - c. Slot size: 0.01 in.
 - d. Slotted length: 5.0 ft.
- 11. Backfill material (below filter pack):
 - Natural material (medium sand) 14
 - None

- E. Bentonite seal, top _____ ft. MSL or 95.0 ft.
- F. Fine sand, top _____ ft. MSL or 101.5 ft.
- G. Filter pack, top _____ ft. MSL or 103.5 ft.
- H. Screen joint, top _____ ft. MSL or 106.3 ft.
- I. Well bottom _____ ft. MSL or 111.3 ft.
- J. Filter pack, bottom _____ ft. MSL or 111.3 ft.
- K. Borehole, bottom _____ ft. MSL or 117.0 ft.
- L. Borehole, diameter 7.5 in.
- M. O.D. well casing 2.38 in.
- N. I.D. well casing 1.89 in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.
 Signature M. G. [unclear] 12/21/94 Firm RMT, Inc.

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: This form is for DNR use only. See instructions for more information including where the completed form should be sent.

Route to: Solid Waste Haz. Waste Wastewater
Env. Response & Repair Underground Tanks Other

Facility/Project Name WP & L Nelson Dewey/Cassville	County Name Grant	Well Name E-11XB HCA 12/3
Facility License, Permit or Monitoring Number _____	County Code _____	Wis. Unique Well Number _____
		DNR Well Number _____

		Before Development	After Development
1. Can this well purged dry?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
2. Well development method		11. Depth of Water (from top of well casing)	
surged with bailer and bailed	<input type="checkbox"/> 41	a. <u>16.4</u> ft	<u>15.8</u> ft
surged with bailer and pumped	<input checked="" type="checkbox"/> 61	Date	b. <u>12/01/94</u>
surged with block and bailed	<input type="checkbox"/> 42	mm dd yy	mm dd yy
surged with block and pumped	<input type="checkbox"/> 62	Time	<input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.
surged with block, bailed and pumped	<input type="checkbox"/> 70	c. <u>10:00</u>	<u>10:45</u>
compressed air	<input type="checkbox"/> 20		
bailed only	<input type="checkbox"/> 10	12. Sediment in well bottom	<u>0.0</u> inches
pumped only	<input type="checkbox"/> 51		
pumped slowly	<input type="checkbox"/> 50	13. Water Clarity	Clear <input checked="" type="checkbox"/> 20
Other _____	<input type="checkbox"/>	Turbid <input type="checkbox"/> 15	Turbid <input type="checkbox"/> 25
3. Time spent developing well	<u>45</u> min.	(Describe)	(Describe)
4. Depth of well (from top of well casing)	<u>113.5</u> ft.	_____	_____
5. Inside diameter of well	<u>2.03</u> in.	_____	_____
6. Volume of water in filter pack and well casing	<u>2.2</u> gal. ft	_____	_____
7. Volume of water removed from well	<u>1350.0</u> gal.	_____	_____
8. Volume of water added (if any)	_____ gal.	_____	_____
9. Source of water added _____		_____	_____
10. Analysis performed on water added? (If yes, attach results)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	14. Total suspended solids	_____ mg/l
		15. COD	_____ mg/l
16. Additional comments on development:			

Well developed by: Person's Name and Firm Name: <u>Charles Markgraf</u> Firm: <u>Environmental & Foundation Drilling, Inc.</u>	I hereby certify that the above information is true and correct to the best of my knowledge. Signature: Print Initials: <u>G D A</u> Firm: <u>Environmental & Foundation Drilling, Inc.</u>
--	--

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

Facility/Project Name WP&L NELSON DEWEY 2767.05		License/Permit/Monitoring Number	Boring Number B-21R
Boring Drilled By (Firm name and name of crew chief) Environmental and Foundation Drilling, Crew Chief: G. Markgraf		Date Drilling Started 9/22/93	Date Drilling Completed 9/22/93
DNR Facility Well No.		WI Unique Well No. B-21R	Common Well Name
Final Static Water Level Feet MSL		Surface Elevation Feet MSL	Borehole Diameter 8 1/4 Inches
Boring Location State Plane SE 1/4 of NE 1/4 of Section 19 T 3 N, R 5 W		Lat ° ' "	Local Grid Location (If applicable) <input type="checkbox"/> N <input type="checkbox"/> E <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> W
County Grant		DNR County Code 22	Civil Town/City/ or Village Cassville

Sample Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					ROD/ Comments	
									Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200		
			1	FILL, SAND AND GRAVEL, based on backhoe excavation performed in area 1.5 hrs. ago.											
A	16	12	5	POORLY GRADED SAND (SP), fine to medium grained, brown 7.5YR 5/4, loose.	SP				-	M					SS
B	22	4	10	POORLY GRADED SAND (SP), as above, more fine grained, ~5% medium, gravel well rounded, soft.	SP				-	M					SS

I hereby certify that the information on this form is true and correct to the best of my knowledge.

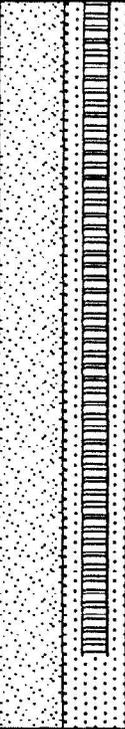
Signature 	Firm RMT 744 Heartland Trail, Madison Wisconsin Tel: 608-831-4444, Fax: 608-831-3334
---------------	--

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than \$10 nor more than \$5,000 for each violation. Fined not less than \$10 or more than \$100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Boring Number **B-21R**

Use only as an attachment to Form 4400-122.

Page 2 of 2

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number	Length (in) Recovered								Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	
C	18	5	13 14 15 16 17 18 19 20 21 22	POORLY GRADED SAND (SP), as above, loose, trace fine to medium gravel.	SP					W				SS
				<u>End of Boring at 22 Ft.</u>										

Facility/Project Name W & L/Nelson Dewey	Local Grid Location of Well <input type="checkbox"/> N. <input type="checkbox"/> E. _____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.	Well Name B-21R
City License, Permit or Monitoring Number	Grid Origin Location Lat. _____ Long. _____ or	Wis. Unique Well Number _____ DNR Well Number _____
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	St. Plane _____ ft. N. _____ ft. E.	Date Well Installed 09 / 22 / 93
Distance Well Is From Waste/Source Boundary _____ ft.	Section Location of Waste/Source 1/4 of 1/4 of Sec. 19 , T. 3 N, R. 18 W.	Well Installed By: (Person's Name & Firm) Charles Markgraf Environmental & Foundation Drilling, Inc.
Is Well A Point of Enforcement Std. Application? <input type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

<p>A. Protective Pipe, top elevation <u>0.0</u> ft. MSL</p> <p>B. Well casing, top elevation <u>621.03</u> ft. MSL</p> <p>C. Land surface elevation <u>621.7</u> ft. MSL</p> <p>D. Surface seal, bottom _____ ft. MSL or _____ ft.</p> <div style="border: 1px solid black; padding: 5px;"> <p>12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/></p> <p>13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/></p> <p>15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99</p> <p>16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____</p> <p>17. Source of water (attach analysis): _____</p> </div> <p>E. Bentonite seal, top _____ ft. MSL or <u>1.0</u> ft.</p> <p>F. Fine sand, top <u>614.7</u> ft. MSL or <u>7.0</u> ft.</p> <p>G. Filter pack, top _____ ft. MSL or <u>2.0</u> ft.</p> <p>H. Screen joint, top <u>610.7</u> ft. MSL or <u>11.0</u> ft.</p> <p>I. Well bottom <u>600.7</u> ft. MSL or <u>21.0</u> ft.</p> <p>J. Filter pack, bottom _____ ft. MSL or <u>21.0</u> ft.</p> <p>K. Borehole, bottom <u>599.7</u> ft. MSL or <u>22.0</u> ft.</p> <p>L. Borehole, diameter <u>8.3</u> in.</p> <p>M. O.D. well casing <u>2.2</u> in.</p> <p>N. I.D. well casing <u>2.0</u> in.</p>		<p>1. Cap & lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: <u>1.0</u> ft. c. Material: _____ Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/></p> <p>d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: _____</p> <p>3. Surface seal: _____ Bentonite <input type="checkbox"/> 30 Concrete <input checked="" type="checkbox"/> 01 Other <input type="checkbox"/></p> <p>4. Material between well casing & protective pipe: Bentonite <input type="checkbox"/> 30 Annular space seal <input type="checkbox"/> Other <input type="checkbox"/></p> <p>5. Annular space seal: a. Granular Bentonite <input checked="" type="checkbox"/> 33 b. _____ Lbs/gal mud weight _____ Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight _____ Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite _____ Bentonite-cement grout <input type="checkbox"/> 50 e. <u>150#</u> Ft³ volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input checked="" type="checkbox"/> 08</p> <p>6. Bentonite seal: b. <input type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input checked="" type="checkbox"/> 32 c. _____ Other <input type="checkbox"/></p> <p>7. Fine sand material: Manufacturer, product name and mesh size a. <u>Portage, Silica, Fine</u> b. Volume added <u>50#</u> ft³</p> <p>8. Filter pack material: Manufacturer, product name and mesh size a. <u>Badger Mining #30</u> b. Volume added <u>350#</u> ft³</p> <p>9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/></p> <p>10. Screen Material: _____ PVC a. Screen Type: Factory Cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/></p> <p>b. Manufacturer <u>Northern Air</u> c. Slot size: _____ 0.010 in. d. Slotted Length: <u>2.6</u> ft.</p> <p>11. Backfill material (below filter pack): <u>Natural Soil</u> None <input type="checkbox"/> 14 Other <input checked="" type="checkbox"/></p>
---	--	---

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: _____ Firm: **Environmental & Foundation, Drilling, Inc.**

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

✓ AFA 10-1-97

JOB NO. C 9065

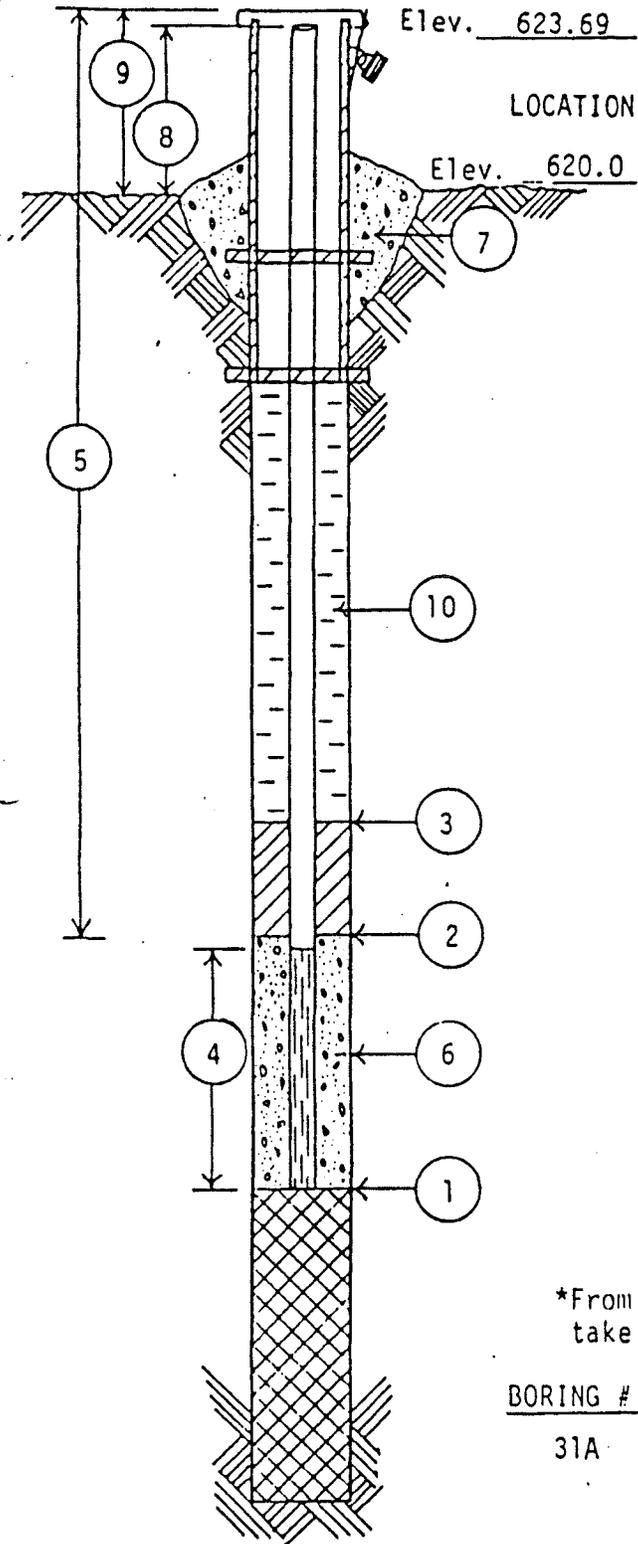
BORING NO. B 31A

DATE 2/28/80

CHIEF D. Braun

LOCATION Cassville, Wisconsin

All depth measurements of well detail assumed to be from ground surface unless otherwise indicated.



- ① DEPTH TO BOTTOM OF WELL POINT OR SLOTTED PIPE 34' FEET.
- ② DEPTH OF BOTTOM OF SEAL (if installed) 28 FEET.
- ③ DEPTH TO TOP OF SEAL (if installed) 25 FEET.
- ④ LENGTH OF WELL POINT, PVC WELL SCREEN, OR SLOTTED PIPE 5 FEET. (Circle One)
- ⑤ TOTAL LENGTH OF PIPE 33 FEET @ 2 IN. DIAMETER.
- ⑥ TYPE OF FILTER MATERIAL AROUND WELL POINT OR SLOTTED PIPE Sand.
- ⑦ CONCRETE CAP, YES NO (Circle One)
- ⑧ HEIGHT OF WELL CASING ABOVE GROUND 4 FEET.
- ⑨ PROTECTIVE CASING? YES NO (Circle One)
HEIGHT ABOVE GROUND _____
LOCKING CAP? YES NO (Circle One)
- ⑩ TYPE OF BACKFILL: Soil & Bentonite Mix

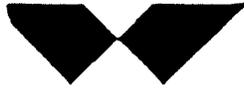
WATER LEVEL CHECKS

*From top of casing, if protective casing higher, take measurement from top of protective casing.

BORING #	DATE	TIME	DEPTH TO WATER	REMARKS
31A	2/28/80		10.5'	½ hour



WARZYN



LOG OF TEST BORING

Project WP&L
Nelson Dewey Generating Station
 Location Cassville, Wisconsin

Boring No. B-31R
 Surface Elevation _____
 Job No. 13758
 Sheet 1 of 1

ONE SCIENCE COURT • P.O. BOX 5385, MADISON, WIS. 53705 • TEL. (608) 273-0440

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N		Depth	qu (qa) (tsf)	W	LL	PL	LI
					0-1.5'	TOPSOIL - Brown Silty Sand					
					1.5-10.0'	FILL					
					10.0-14.0'	Loose, Tan Fine to Medium SAND (SW)					
1		18	W	8	14.0'						
					14.0-20.0'	Medium Dense, Tan Medium to Coarse SAND (SW)					
2		18	W	12	20.0'						
					20.0-22.0'	End Boring at 22.0'					

WATER LEVEL OBSERVATIONS

GENERAL NOTES

Wash Drilling Upon Completion of Drilling _____
 Time After Drilling _____
 Depth to Water _____ 14.0'
 Depth to Cave in _____

Start 4/25/89 End 4/25/89
 Driller E&F Chief GA Rig CME
 Logger WB Editor AJS 65
 Drill Method HSA 0-22'

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

WARZYN



ENGINEERING INC

LOG OF TEST BORING

Project Nelson Dewey Generating Station

Location Cassville, Wisconsin

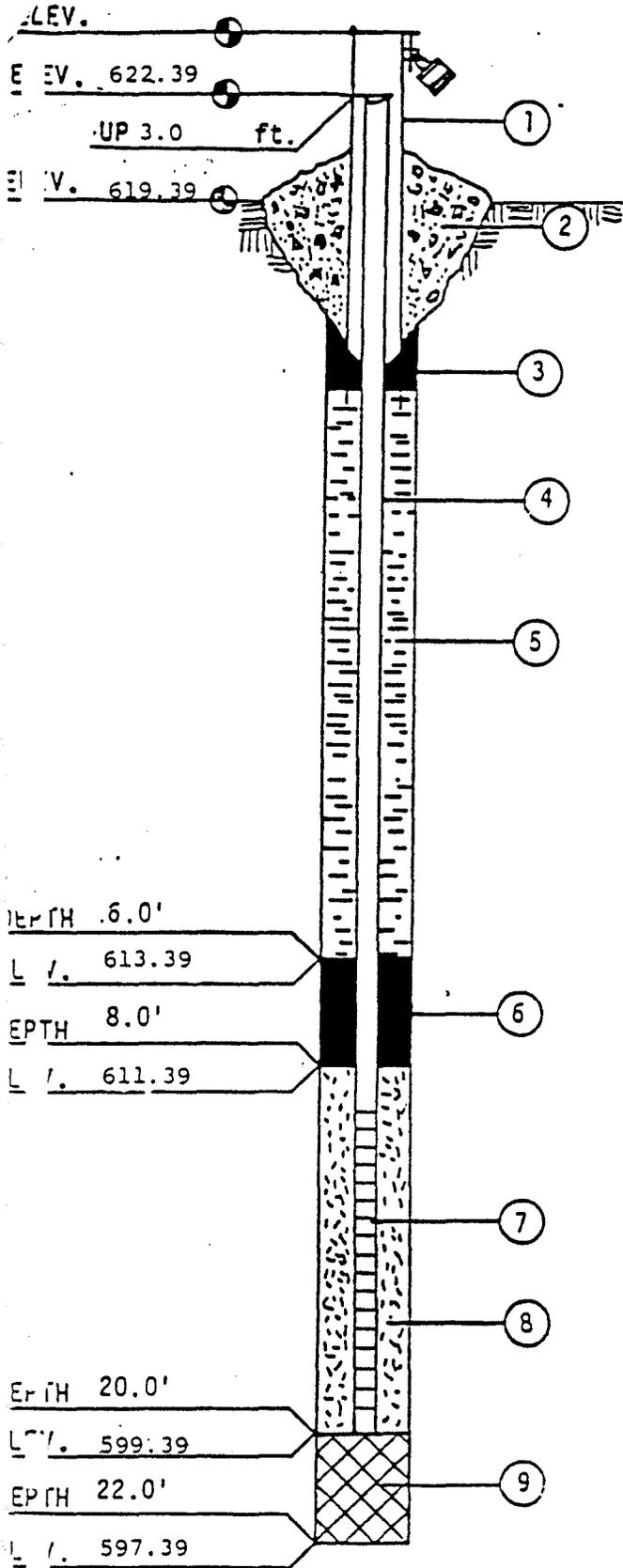
Boring No. B 31A
 Surface Elevation 6200
 Job No. C 9065
 Sheet 1 of 1

1409 EMIL STREET • P.O. BOX 9538, MADISON, WIS. 53715 • TEL. (608) 257-4848

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
Recovery		Moisture		N	Depth		q _v	W	LL	PL	D
No.	Type	↓	↓								
1	SS	X	M	33		TOPSOIL-Brown Silty SAND					
2	SS	X	M	11	5	FILL					
3	SS	X	W	6							
4	SS	X	W	3	10						
5	SS	X	W	8	15	Tan Fine to Medium SAND					
6	SS	X	W	18	20	Tan Medium to Coarse SAND, Trace Gravel					
7	SS	X	W	11	25						
8	SS	NR	W	15	30	Very Fine Tan SAND, Little Silt					
9	SS	X	W	27	35						
						End Boring at 35'					

WATER LEVEL OBSERVATIONS					
While Drilling	_____	_____	_____	_____	_____
Upon Completion of Drilling	_____	_____	_____	_____	_____
Time After Drilling	<u>1/2 hour</u>	_____	_____	_____	_____
Depth to Water	<u>10.5'</u>	_____	_____	_____	_____
Depth to Cave In	_____	_____	_____	_____	_____

GENERAL NOTES	
Start	<u>2/28/80</u> Complete <u>2/28/80</u>
Crew Chief	<u>DB</u> Rig <u>Bomb</u>
Drilling Method	<u>.0-10' Auger</u>
	<u>10-35' Wash Bore</u>



MONITORING WELL CONSTRUCTION INFORMATION

JOB NO. 13758

BORING/WELL NO. B-31R

DATE 4/25/89

CHIEF/UNIT Greg Anderson/CME 65

1. PROTECTIVE CASING YES NO
 LOCKING YES NO
2. CONCRETE SEAL YES NO
3. TYPE OF SURFACE SEAL (IF INSTALLED)
Granular Bentonite
4. SOLID PIPE TYPE PVC
 SOLID PIPE LENGTH 13.0 ft.
 JOINT TYPE SLIP/GLUED THREADED
5. TYPE OF BACKFILL Granular Bentonite
 HOW INSTALLED - TREMIE FROM SURFACE
6. TYPE OF LOWER SEAL (IF INSTALLED)
Bentonite Pellets
7. SCREEN TYPE PVC
 SCREEN LENGTH 10.0 ft.
 SLOT-SIZE 0.010" LENGTH 10 ft.
 SCREEN DIAMETER 2.0 in.
8. TYPE OF BACKFILL AROUND SCREEN
#20 Flint Sand
9. TYPE OF BACKFILL Natural Cave-in
10. DRILLING METHOD HSA
11. ADDITIVES USED (IF ANY)
-

WATER LEVEL 14.0' DATE 4/25/89

*ALL DEPTHS MEASURED FROM GROUND SURFACE.

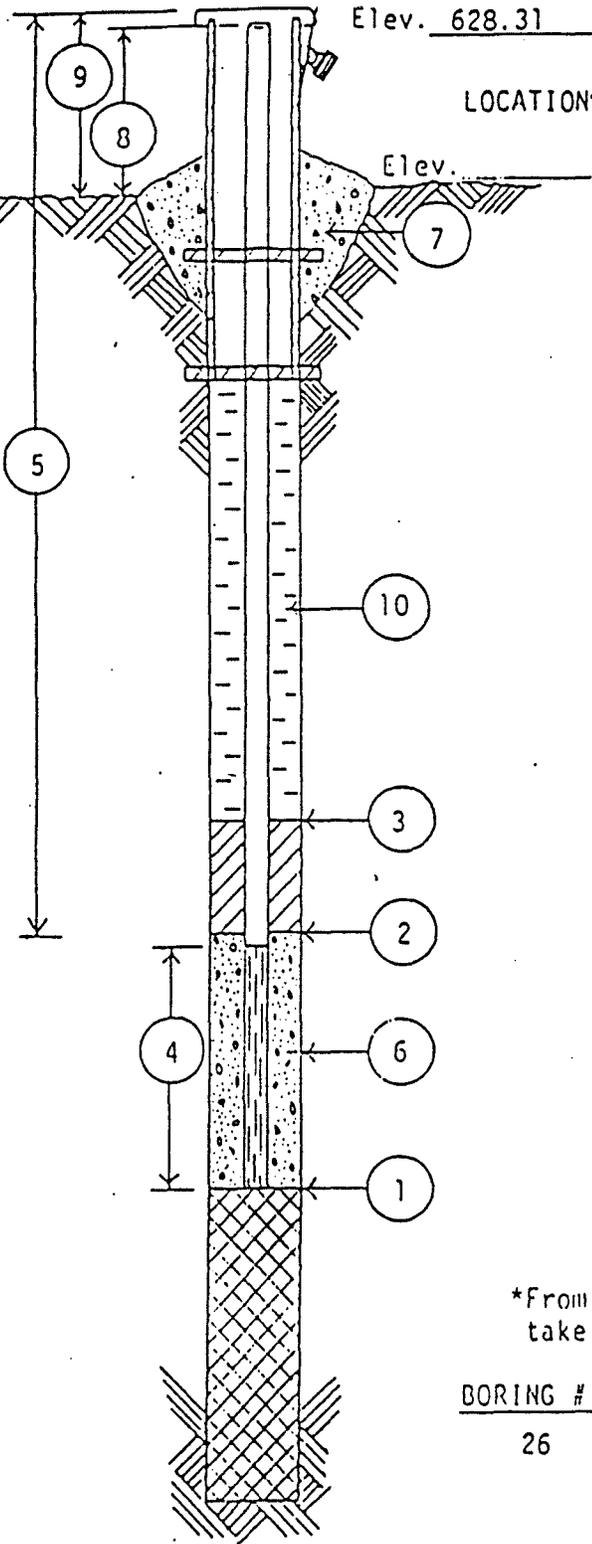


WELL DETAIL INFORMATION SHEET

JOB NO. C 9036
 BORING NO. 26
 DATE 2/28/80
 CHIEF D. Braun

LOCATION: Nelson Dewey G.S.; Cassville, Wisconsin

* All depth measurements of well detail assumed to be from ground surface unless otherwise indicated.



- ① DEPTH TO BOTTOM OF WELL POINT OR SLOTTED PIPE 29.5 FEET.
- ② DEPTH OF BOTTOM OF SEAL (if installed) 3 FEET.
- ③ DEPTH TO TOP OF SEAL (if installed) 0 FEET.
- ④ LENGTH OF WELL POINT, PVC WELL SCREEN OR SLOTTED PIPE 10 FEET. (Circle One)
- ⑤ TOTAL LENGTH OF PIPE 23.5 FEET @ 2 IN. DIAMETER.
- ⑥ TYPE OF FILTER MATERIAL AROUND WELL POINT OR SLOTTED PIPE Sand.
- ⑦ CONCRETE CAP, YES NO (Circle One)
- ⑧ HEIGHT OF WELL CASING ABOVE GROUND 4 FEET.
- ⑨ PROTECTIVE CASING? YES NO (Circle One)
 HEIGHT ABOVE GROUND -
 LOCKING CAP? YES NO (Circle One)
- ⑩ TYPE OF BACKFILL: Soil & Bentonite Mix

WATER LEVEL CHECKS

*From top of casing, if protective casing higher, take measurement from top of protective casing.

BORING #	DATE	TIME	DEPTH TO WATER	REMARKS
26	2/28/80		17'8"	½ hour



WARZYN



ENGINEERING INC

LOG OF TEST BORING

Project Nelson Dewey Generating Station
Proposed Slag Disposal Area
 Location Cassville, Wisconsin

Boring No. B 26A
 Surface Elevation 624.6
 Job No. C 9036
 Sheet 1 of 2

1409 EMIL STREET • P.O. BOX 9538, MADISON, WIS. 53715 • TEL. (608) 257-4848

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					
No.	Type	Recovery		Moisture			Depth	q _c	W	LL	PL	D
		↓	↓	M	Depth							
1	SS	X	M	11		TOPSOIL						
2	SS	X	M	4	5	Brown SILT, Some Clay, Some Sand (CL-ML) Occasional Sand Lenses	4.5					
	SS	X	M	-								
3	SS	X	M	5								
	SS	X	M	-								
4	SS	X	M	6	10				25.4	19.9		
5	SS	X	M	9	15							
6	SS	X	W	28	20	Tan Coarse to Medium SAND, Some to Trace Gravel, Trace Silt and Clay (SP)						
7	SS	X	W	20	25							
						Tan Medium to Fine SAND, Trace Gravel, Little to Trace Silt and Clay (SP)						
8	SS	X	W	11	30							
9	SS	X	W	19	35							
1	SS	X	W	27	40							
						Tan Coarse to Medium SAND, Some to Trace Gravel, Trace Silt and Clay (SP)						
	SS	X	W	26	45							
						End Boring at 45'						

(Continued)

WARZYN



ENGINEERING INC

LOG OF TEST BORING

Project Nelson Dewey Generating Station
Proposed Slag Disposal Area
Location Cassville, Wisconsin

Boring No. B 26A
Surface Elevation 624.6
Job No. C 9036
Sheet 2 of 2

1409 EMIL STREET • P.O. BOX 9538, MADISON, WIS. 53715 • TEL. (608) 257-4848

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
Recovery		Moisture		N	Depth		q _s	W	LL	PL	D
No.	Type	↓	↓								
					50						
					55						
					60						
					65						
					70						
					75						
					80						
					85						
WATER LEVEL OBSERVATIONS						GENERAL NOTES					
While Drilling <u>19.5'</u>						Start <u>2/27/80</u> Complete <u>2/27/80</u>					
Upon Completion of Drilling _____						Crew Chief <u>DB.. Rig ...Bomb...</u>					
Time After Drilling <u>3/10/80</u>						Drilling Method _____					
Depth to Water <u>23.14</u>						Auger to <u>20'</u>					
Depth to Cave In _____						Wash Bore to <u>45'</u>					

WARZYN



ENGINEERING INC

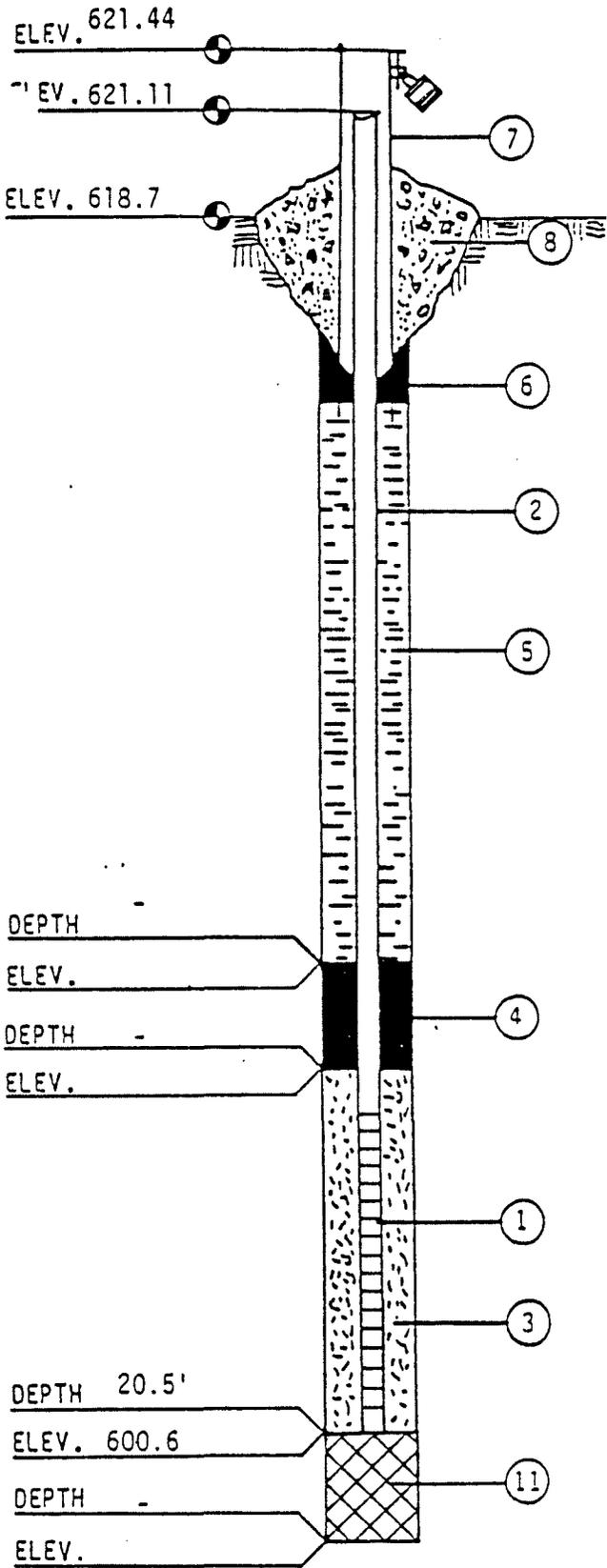
LOG OF TEST BORING

Project Ash Lagoon
 WP&L Plant
 Location Cassville, Wisconsin

Boring No. 8-36
 Surface Elevation 618.7
 Job No. C 11254
 Sheet of

1408 EMIL STREET • P.O. BOX 9638, MADISON, WIS. 53718 • TEL. (608) 287-4848

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					
Recovery		Moisture				No.	W	LL	PL	D	
No.	Type	↓	↓	N							Depth
					See Log of Test Boring B-36A for Soil Classification						
					End Boring at 20.5'						
WATER LEVEL OBSERVATIONS						GENERAL NOTES					
While Drilling _____						Start <u>3/27/85</u> Complete <u>3/27/85</u>					
Upon Completion of Drilling _____						Crew Chief M.G. Rig <u>9920</u>					
Time After Drilling <u>1/2 hour</u>						Drilling Method <u>DC 0-5'</u>					
Depth to Water <u>7.5'</u>						RB <u>0-20.5'</u>					
Depth to Cave In _____											



MONITORING WELL CONSTRUCTION INFORMATION

JOB NO. C 11254

BORING/WELL NO. B-36

DATE 3/27/85

CHIEF/UNIT MG/9920

1. SCREEN TYPE PVC

SLOTTED LENGTH 9.0 ft.

SLOT SIZE 0.010

SCREEN DIAMETER 2 in.

2. SOLID PIPE TYPE PVC

SOLID PIPE LENGTH 13 ft.

JOINT TYPE SLIP/GLUED THREADED

3. TYPE OF BACKFILL AROUND SCREEN
Flint Sand

4. TYPE OF LOWER SEAL (IF INSTALLED)
-

5. TYPE OF BACKFILL Granular Bentonite

HOW INSTALLED - TREMIE
FROM SURFACE

6. TYPE OF SURFACE SEAL (IF INSTALLED)
Granular Bentonite

7. PROTECTIVE CASING YES NO

LOCKING YES NO

8. CONCRETE SEAL YES NO

9. DRILLING METHOD WB

10. ADDITIVES USED (IF ANY)
Quick Gel

11. TYPE OF BACKFILL -

WATER LEVEL 7.5' DATE 3/27/85

*ALL DEPTHS MEASURED FROM GROUND SURFACE.



WARZYN



ENGINEERING INC

LOG OF TEST BORING

Project Ash Lagoon
 WP&L Plant
 Location Cassville, Wisconsin

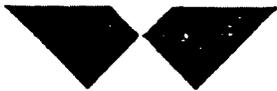
Boring No. B 36A
 Surface Elevation 618.7
 Job No. C 11254
 Sheet 1 of 2

1409 EMIL STREET • P.O. BOX 9538, MADISON, WIS. 53715 • TEL. (608) 257-4848

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					
No.	Type	Recovery		Moisture			Depth	q _c	W	LL	PL	D
		↓	↓	N	↓							
							Brown Fine to Coarse SAND, Some Fine to Coarse Gravel (FILL)					
1	SS	X	M	5	5							
							Dark Brown TOPSOIL					
							Brown Silty CLAY					
							Dark Brown Fine SAND, Some Silt (SM)					
2	SS	X	W	8	10							
							Brown Fine to Medium SAND, Little Fine to Coarse Gravel, Trace Silt (SP)					
3	SS	X	W	15	15							
4	SS	X	W	10	20							
5	SS	X	W	8	25							
6	SS	X	W	19	30							
7	SS	X	W	23	35							
8	SS	X	W	46	40							
9	SS	X	W	32	45							

(Continued)

WARZYN



ENGINEERING INC

LOG OF TEST BORING

Project Ash Lagoon
 WP&L Plant
 Location Cassville, Wisconsin

Boring No. B 36A
 Surface Elevation ..618.7
 Job No. C..11254
 Sheet ... 2 of ... 2

1409 EMIL STREET • P.O. BOX 9538, MADISON, WIS. 53715 • TEL. (608) 257-4848

SAMPLE						VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
Recovery			Moisture				No	W	LL	PL	D
to.	Type	↓	↓	M	Depth						
						Brown Fine to Medium SAND, Little Fine to Coarse Gravel, Trace Silt (SP)					
10	SS	X	W	38	50						
						End Boring at 50'					
					55						
					60						
					65						
					70						
					75						
					80						
					85						

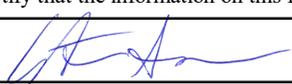
WATER LEVEL OBSERVATIONS						GENERAL NOTES	
While Drilling	_____	_____	_____	_____	_____	Start	3/27/85
Upon Completion of Drilling	_____	_____	_____	_____	_____	Complete	3/27/85
Time After Drilling	1/2 hour	_____	_____	_____	_____	Crew Chief	MG Rig 9920
Depth to Water	9'	_____	_____	_____	_____	Drilling Method	DC 0-5'
Depth to Cave In	_____	_____	_____	_____	_____		RB 0-50'

Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nelson Dewey		License/Permit/Monitoring Number SCS#: 02525		Boring Number B-40	
Boring Drilled By: Name of crew chief (first, last) and Firm Gage Kapugi On-Site Environmental Services, Inc.			Date Drilling Started 4/8/2024	Date Drilling Completed 4/8/2024	Drilling Method direct push
WI Unique Well No. WD889	DNR Well ID No.	Common Well Name B-40	Final Static Water Level 16.0 Feet	Surface Elevation Feet	Borehole Diameter 2.3 in.
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane 265,285 N, 1,697,499 E S/C/N SE 1/4 of NE 1/4 of Section 19, T 3 N, R 5 W			Lat 42° 43' 24.11" Long 91° 0' 30.65"		Local Grid Location Feet <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W
Facility ID 122014530		County Grant	County Code 22	Civil Town/City/ or Village Cassville	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200		
			1.5	Hydrovaced to 8' bgs. POORLY GRADED SAND (SP), trace fine gravel. Observed from hydrovac cuttings.											
			3.0												
			4.5												
			6.0												
			7.5												
			9.0												
			10.5												
1	36		12.0	POORLY GRADED SAND (SP). Trace f-c grained sub/rounded gravel, brown (7.5 4/4). 0.5 foot lense of poorly graded sand with trace clay, dark brown (7.5 3/4) at 14.9 feet.											Bag Sample 10'
			13.5												
			15.0												
			16.5												
2	42		18.0												Bag Sample 15'
			19.5												

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature  Ethan Schaefer Firm SCS Engineers Tel: Fax:

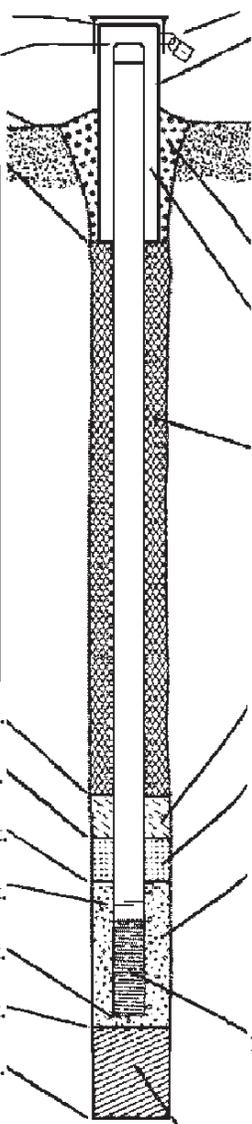
This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Boring Number **B-40** Use only as an attachment to Form 4400-122. Page **2** of **2**

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
3	40		21.0 22.5 24.0		SP									Bag Sample 20' / Bag Sample 25'
				End of boring at 25'. Set well B-40.										

Facility/Project Name WPL - Nelson Dewey Generating Station		Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name B-40	
Facility License, Permit or Monitoring No. 02525		Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. 42° 43' 24.10839" Long. 91° 00' 30.65260" or		Wis. Unique Well No. <u>WD889</u> DNR Well ID No. _____	
Facility ID 122014530		St. Plane 265285.41 ft. N, 1697498.67 ft. E. S/C/N		Date Well Installed <u>4</u> / <u>8</u> / <u>2024</u> m m d d y y y y	
Type of Well Well Code <u>11</u> / MW		Section Location of Waste/Source SE 1/4 of NE 1/4 of Sec. 19, T. 3 N, R. 5 <input checked="" type="checkbox"/> E <input type="checkbox"/> W		Well Installed By: Name (first, last) and Firm On-site Environmental Inc.	
Distance from Waste/Source _____ ft.		Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known		Gage Kapugi	

A. Protective pipe, top elevation --- 623.84 ft. MSL		1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
B. Well casing, top elevation --- 623.67 ft. MSL		2. Protective cover pipe: a. Inside diameter: --- 4 in. b. Length: --- 5 ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>	
C. Land surface elevation --- 621.40 ft. MSL		d. Additional protection? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: <u>Bumper Posts</u>	
D. Surface seal, bottom --- 620.40 ft. MSL or --- 1 ft.		3. Surface seal: Bentonite <input type="checkbox"/> 30 Concrete <input type="checkbox"/> 01 Other <input checked="" type="checkbox"/>	
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>		4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 30 Other <input checked="" type="checkbox"/>	
13. Sieve analysis performed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		5. Annular space seal: a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 33 b. ___ Lbs/gal mud weight... Bentonite-sand slurry <input type="checkbox"/> 35 c. ___ Lbs/gal mud weight... Bentonite slurry <input type="checkbox"/> 31 d. ___ % Bentonite... Bentonite-cement grout <input type="checkbox"/> 50 e. ___ Ft ³ volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input checked="" type="checkbox"/> 08	
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input type="checkbox"/> 41 Direct Push <input checked="" type="checkbox"/> Other <input checked="" type="checkbox"/>		6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input type="checkbox"/> 1/4 in. <input checked="" type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input type="checkbox"/> 32 c. ___ Other <input type="checkbox"/>	
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99		7. Fine sand material: Manufacturer, product name & mesh size a. <u>R.W. Sindley Inc. 30/100</u> <input type="checkbox"/> b. Volume added <u>.25</u> ft ³	
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____		8. Filter pack material: Manufacturer, product name & mesh size a. <u>R.W. Sindley Inc. #5</u> <input type="checkbox"/> b. Volume added <u>2.5</u> ft ³	
17. Source of water (attach analysis, if required): _____		9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>	
E. Bentonite seal, top --- 620.40 ft. MSL or --- 1 ft.		10. Screen material: <u>Sch. 40 PVC</u> a. Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>	
F. Fine sand, top --- 611.40 ft. MSL or --- 10 ft.		b. Manufacturer _____ c. Slot size: 0. <u>01</u> in. d. Slotted length: --- 10 ft.	
G. Filter pack, top --- 609.40 ft. MSL or --- 12 ft.		11. Backfill material (below filter pack): None <input type="checkbox"/> 14 Other <input checked="" type="checkbox"/>	
H. Screen joint, top --- 607.40 ft. MSL or --- 14 ft.			
I. Well bottom --- 597.40 ft. MSL or --- 24 ft.			
J. Filter pack, bottom --- 597.40 ft. MSL or --- 24 ft.			
K. Borehole, bottom --- 596.40 ft. MSL or --- 25 ft.			
L. Borehole, diameter --- 6 in.			
M. O.D. well casing --- 2.4 in.			
N. I.D. well casing --- 2.04 in.			



I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Ethan Schaefer Firm SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Route to: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name WPL - Nelson Dewey	County Name Grant	Well Name B-40	
Facility License, Permit or Monitoring Number 02525	County Code 22	Wis. Unique Well Number WD889	DNR Well ID Number _____

- 1. Can this well be purged dry? Yes No
- 2. Well development method
 - surged with bailer and bailed 4 1
 - surged with bailer and pumped 6 1
 - surged with block and bailed 4 2
 - surged with block and pumped 6 2
 - surged with block, bailed and pumped 7 0
 - compressed air 2 0
 - bailed only 1 0
 - pumped only 5 1
 - pumped slowly 5 0
 - Other _____
- 3. Time spent developing well _____ 85 min.
- 4. Depth of well (from top of well casing) _____ 27.0 ft.
- 5. Inside diameter of well _____ 2.04 in.
- 6. Volume of water in filter pack and well casing _____ 5.8 gal.
- 7. Volume of water removed from well _____ 58.5 gal.
- 8. Volume of water added (if any) _____ gal.
- 9. Source of water added _____
- 10. Analysis performed on water added? Yes No
(If yes, attach results)

- 11. Depth to Water (from top of well casing)

	<u>Before Development</u>	<u>After Development</u>
a.	18.72 ft.	18.72 ft.
Date	b. 4/8/2024	4/8/2024
	m m d d y y y y	m m d d y y y y
Time	c. 13:55 <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	15:20 <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
 - 12. Sediment in well bottom _____ <1.0 inches
 - 13. Water clarity

Clear <input type="checkbox"/> 1 0	Clear <input type="checkbox"/> 2 0
Turbid <input checked="" type="checkbox"/> 1 5	Turbid <input checked="" type="checkbox"/> 2 5
(Describe) _____	(Describe) _____
light brown	light brown
- Fill in if drilling fluids were used and well is at solid waste facility:
- 14. Total suspended solids _____ mg/l 2148 mg/l
 - 15. COD _____ mg/l _____ mg/l

16. Well developed by: Name (first, last) and Firm
 First Name: Ethan Last Name: Schaefer
 Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718

17. Additional comments on development:
 TSS sample taken

Name and Address of Facility Contact /Owner/Responsible Party
 First Name: Duane Last Name: Fritz
 Facility/Firm: Wisconsin Power and Light Company
 Street: 11999 Cth VV
 City/State/Zip: Cassville, WI 53806

I hereby certify that the above information is true and correct to the best of my knowledge.
 Signature: *Ethan Schaefer*
 Print Name: Ethan Schaefer
 Firm: SCS ENGINEERS, 2830 Dairy Drive, Madison, WI 53718



Appendix C
Laboratory Analytical Reports



November 08, 2024

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25224071 ALLIANT NELS DEW CCR
Pace Project No.: 40285557

Dear Meghan Blodgett:

Enclosed are the analytical results for sample(s) received by the laboratory between October 10, 2024 and October 16, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:
• Pace Analytical Services - Green Bay

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

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Matt Bizjack, Alliant Energy
Natalie Burris, SCS ENGINEERS
Sherren Clark, SCS Engineers
Jenny Coughlin, Alliant Energy
Tom Karwoski, SCS ENGINEERS
Ryan Matzuk, SCS Engineers
Jeff Maxted, ALLIANT ENERGY



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CERTIFICATIONS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-21-8

Virginia VELAP Certification ID: 11873

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-21-00008

Federal Fish & Wildlife Permit #: 51774A

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SAMPLE SUMMARY

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40285557001	B-7R	Water	10/07/24 14:15	10/10/24 09:30
40285557002	B-11R	Water	10/07/24 16:12	10/10/24 09:30
40285557003	B-11A	Water	10/07/24 15:17	10/10/24 09:30
40285557004	B-11B	Water	10/07/24 13:30	10/10/24 09:30
40285557005	B-26	Water	10/08/24 14:00	10/10/24 09:30
40285557006	B-31R	Water	10/08/24 12:23	10/10/24 09:30
40285557007	B-31A	Water	10/08/24 11:58	10/10/24 09:30
40285557008	FIELD BLANK	Water	10/08/24 11:00	10/10/24 09:30
40285557009	B-39	Water	10/07/24 00:00	10/16/24 00:00

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SAMPLE ANALYTE COUNT

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40285557001	B-7R	EPA 6020B	KXS	2
			LB	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	HMB	3
40285557002	B-11R	EPA 6020B	KXS	2
			LB	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	HMB	3
40285557003	B-11A	EPA 6020B	KXS	2
			LB	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	HMB	3
40285557004	B-11B	EPA 6020B	KXS	2
			LB	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	HMB	3
40285557005	B-26	EPA 6020B	KXS	2
			LB	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	HMB	3
40285557006	B-31R	EPA 6020B	KXS	2
			LB	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	HMB	3
40285557007	B-31A	EPA 6020B	KXS	2
			LB	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	HMB	3
40285557008	FIELD BLANK	EPA 6020B	KXS	2
		SM 2540C	LMB	1

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SAMPLE ANALYTE COUNT

Project: 25224071 ALLIANT NELS DEW CCR
Pace Project No.: 40285557

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9040	HML	1
		EPA 300.0	HMB	3
40285557009	B-39		LB	1

PASI-G = Pace Analytical Services - Green Bay

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ANALYTICAL RESULTS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Sample: B-7R **Lab ID: 40285557001** Collected: 10/07/24 14:15 Received: 10/10/24 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay							
Boron	139	ug/L	10.0	3.0	1	10/11/24 07:24	10/15/24 10:50	7440-42-8	
Calcium	83500	ug/L	254	76.2	1	10/11/24 07:24	10/15/24 00:15	7440-70-2	
Field Data		Analytical Method: Pace Analytical Services - Green Bay							
Field pH	6.40	Std. Units			1		10/07/24 14:15		
Field Specific Conductance	761	umhos/cm			1		10/07/24 14:15		
Oxygen, Dissolved	0.64	mg/L			1		10/07/24 14:15	7782-44-7	
REDOX	-84.2	mV			1		10/07/24 14:15		
Turbidity	3.39	NTU			1		10/07/24 14:15		
Static Water Level	604.02	feet			1		10/07/24 14:15		
Temperature, Water (C)	17.5	deg C			1		10/07/24 14:15		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Green Bay							
Total Dissolved Solids	398	mg/L	20.0	8.7	1		10/14/24 18:04		
9040 pH		Analytical Method: EPA 9040 Pace Analytical Services - Green Bay							
pH at 25 Degrees C	7.3	Std. Units	0.10	0.010	1		10/18/24 15:48		H6
300.0 IC Anions		Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay							
Chloride	7.8J	mg/L	10.0	3.0	5		10/30/24 05:19	16887-00-6	D3
Fluoride	<0.48	mg/L	1.6	0.48	5		10/30/24 13:09	16984-48-8	D3
Sulfate	157	mg/L	10.0	2.2	5		10/30/24 05:19	14808-79-8	

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ANALYTICAL RESULTS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Sample: B-11R **Lab ID: 40285557002** Collected: 10/07/24 16:12 Received: 10/10/24 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay							
Boron	2420	ug/L	100	30.3	10	10/11/24 07:24	10/15/24 10:16	7440-42-8	
Calcium	152000	ug/L	254	76.2	1	10/11/24 07:24	10/15/24 00:19	7440-70-2	
Field Data		Analytical Method: Pace Analytical Services - Green Bay							
Field pH	6.74	Std. Units			1		10/07/24 16:12		
Field Specific Conductance	1165	umhos/cm			1		10/07/24 16:12		
Oxygen, Dissolved	0.24	mg/L			1		10/07/24 16:12	7782-44-7	
REDOX	-39.2	mV			1		10/07/24 16:12		
Turbidity	8.94	NTU			1		10/07/24 16:12		
Static Water Level	603.54	feet			1		10/07/24 16:12		
Temperature, Water (C)	14.3	deg C			1		10/07/24 16:12		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Green Bay							
Total Dissolved Solids	766	mg/L	20.0	8.7	1		10/14/24 17:57		
9040 pH		Analytical Method: EPA 9040 Pace Analytical Services - Green Bay							
pH at 25 Degrees C	7.8	Std. Units	0.10	0.010	1		10/18/24 16:09		H6
300.0 IC Anions		Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay							
Chloride	19.9	mg/L	10.0	3.0	5		10/30/24 05:32	16887-00-6	
Fluoride	<0.48	mg/L	1.6	0.48	5		10/30/24 13:22	16984-48-8	D3
Sulfate	162	mg/L	10.0	2.2	5		10/30/24 05:32	14808-79-8	

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ANALYTICAL RESULTS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Sample: B-11A Lab ID: 40285557003 Collected: 10/07/24 15:17 Received: 10/10/24 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay							
Boron	471	ug/L	10.0	3.0	1	10/11/24 07:24	10/15/24 00:32	7440-42-8	
Calcium	57000	ug/L	254	76.2	1	10/11/24 07:24	10/15/24 00:32	7440-70-2	
Field Data		Analytical Method: Pace Analytical Services - Green Bay							
Field pH	7.67	Std. Units			1		10/07/24 15:17		
Field Specific Conductance	656	umhos/cm			1		10/07/24 15:17		
Oxygen, Dissolved	0.16	mg/L			1		10/07/24 15:17	7782-44-7	
REDOX	-42.2	mV			1		10/07/24 15:17		
Turbidity	0.00	NTU			1		10/07/24 15:17		
Static Water Level	603.52	feet			1		10/07/24 15:17		
Temperature, Water (C)	13.8	deg C			1		10/07/24 15:17		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Green Bay							
Total Dissolved Solids	424	mg/L	20.0	8.7	1		10/14/24 17:57		
9040 pH		Analytical Method: EPA 9040 Pace Analytical Services - Green Bay							
pH at 25 Degrees C	8.3	Std. Units	0.10	0.010	1		10/18/24 16:11		H6
300.0 IC Anions		Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay							
Chloride	42.7	mg/L	2.0	0.59	1		10/30/24 05:45	16887-00-6	
Fluoride	<0.48	mg/L	1.6	0.48	5		10/30/24 13:35	16984-48-8	D3
Sulfate	96.1	mg/L	10.0	2.2	5		10/30/24 13:35	14808-79-8	

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ANALYTICAL RESULTS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Sample: B-11B **Lab ID: 40285557004** Collected: 10/07/24 13:30 Received: 10/10/24 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Boron	3560	ug/L	200	60.6	20	10/11/24 07:24	10/15/24 10:20	7440-42-8	
Calcium	142000	ug/L	254	76.2	1	10/11/24 07:24	10/15/24 00:36	7440-70-2	
Field Data									
Analytical Method:									
Pace Analytical Services - Green Bay									
Field pH	7.57	Std. Units			1		10/07/24 13:30		
Field Specific Conductance	1279	umhos/cm			1		10/07/24 13:30		
Oxygen, Dissolved	0.34	mg/L			1		10/07/24 13:30	7782-44-7	
REDOX	136.9	mV			1		10/07/24 13:30		
Turbidity	1.32	NTU			1		10/07/24 13:30		
Static Water Level	603.46	feet			1		10/07/24 13:30		
Temperature, Water (C)	14.3	deg C			1		10/07/24 13:30		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Green Bay									
Total Dissolved Solids	954	mg/L	20.0	8.7	1		10/14/24 18:02		
9040 pH									
Analytical Method: EPA 9040									
Pace Analytical Services - Green Bay									
pH at 25 Degrees C	8.3	Std. Units	0.10	0.010	1		10/18/24 16:16		H6
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	20.7	mg/L	10.0	3.0	5		10/30/24 05:57	16887-00-6	
Fluoride	0.60J	mg/L	1.6	0.48	5		10/31/24 21:05	16984-48-8	D3
Sulfate	405	mg/L	40.0	8.9	20		10/30/24 15:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Sample: B-26 **Lab ID: 40285557005** Collected: 10/08/24 14:00 Received: 10/10/24 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Boron	35.9	ug/L	10.0	3.0	1	10/11/24 07:24	10/15/24 10:54	7440-42-8	
Calcium	84300	ug/L	254	76.2	1	10/11/24 07:24	10/15/24 00:40	7440-70-2	
Field Data									
Analytical Method:									
Pace Analytical Services - Green Bay									
Field pH	7.19	Std. Units			1		10/08/24 14:00		
Field Specific Conductance	800	umhos/cm			1		10/08/24 14:00		
Oxygen, Dissolved	9.75	mg/L			1		10/08/24 14:00	7782-44-7	
REDOX	47.5	mV			1		10/08/24 14:00		
Turbidity	1.60	NTU			1		10/08/24 14:00		
Static Water Level	603.93	feet			1		10/08/24 14:00		
Temperature, Water (C)	11.6	deg C			1		10/08/24 14:00		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Green Bay									
Total Dissolved Solids	448	mg/L	20.0	8.7	1		10/14/24 17:57		
9040 pH									
Analytical Method: EPA 9040									
Pace Analytical Services - Green Bay									
pH at 25 Degrees C	8.3	Std. Units	0.10	0.010	1		10/18/24 16:21		H6
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	44.2	mg/L	10.0	3.0	5		10/31/24 09:54	16887-00-6	M0
Fluoride	0.11J	mg/L	0.32	0.095	1		10/30/24 18:04	16984-48-8	
Sulfate	36.0	mg/L	10.0	2.2	5		10/31/24 09:54	14808-79-8	M0

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Sample: B-31R **Lab ID: 40285557006** Collected: 10/08/24 12:23 Received: 10/10/24 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Boron	845	ug/L	50.0	15.2	5	10/11/24 07:24	10/15/24 10:24	7440-42-8	
Calcium	134000	ug/L	254	76.2	1	10/11/24 07:24	10/15/24 00:44	7440-70-2	
Field Data									
Analytical Method:									
Pace Analytical Services - Green Bay									
Field pH	6.60	Std. Units			1		10/08/24 12:23		
Field Specific Conductance	1019	umhos/cm			1		10/08/24 12:23		
Oxygen, Dissolved	0.32	mg/L			1		10/08/24 12:23	7782-44-7	
REDOX	-56.0	mV			1		10/08/24 12:23		
Turbidity	3.09	NTU			1		10/08/24 12:23		
Static Water Level	603.72	feet			1		10/08/24 12:23		
Temperature, Water (C)	14.5	deg C			1		10/08/24 12:23		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Green Bay									
Total Dissolved Solids	666	mg/L	20.0	8.7	1		10/14/24 17:57		
9040 pH									
Analytical Method: EPA 9040									
Pace Analytical Services - Green Bay									
pH at 25 Degrees C	7.8	Std. Units	0.10	0.010	1		10/18/24 16:24		H6
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	15.2	mg/L	2.0	0.59	1		10/30/24 19:09	16887-00-6	
Fluoride	0.31J	mg/L	0.32	0.095	1		10/30/24 19:09	16984-48-8	
Sulfate	187	mg/L	20.0	4.4	10		10/31/24 10:26	14808-79-8	

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ANALYTICAL RESULTS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Sample: B-31A **Lab ID: 40285557007** Collected: 10/08/24 11:58 Received: 10/10/24 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay							
Boron	197	ug/L	10.0	3.0	1	10/11/24 07:24	10/15/24 00:49	7440-42-8	
Calcium	45500	ug/L	254	76.2	1	10/11/24 07:24	10/15/24 00:49	7440-70-2	
Field Data		Analytical Method: Pace Analytical Services - Green Bay							
Field pH	7.73	Std. Units			1		10/08/24 11:58		
Field Specific Conductance	519	umhos/cm			1		10/08/24 11:58		
Oxygen, Dissolved	0.12	mg/L			1		10/08/24 11:58	7782-44-7	
REDOX	-61.0	mV			1		10/08/24 11:58		
Turbidity	1.00	NTU			1		10/08/24 11:58		
Static Water Level	603.59	feet			1		10/08/24 11:58		
Temperature, Water (C)	13.5	deg C			1		10/08/24 11:58		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Green Bay							
Total Dissolved Solids	260	mg/L	20.0	8.7	1		10/14/24 18:02		
9040 pH		Analytical Method: EPA 9040 Pace Analytical Services - Green Bay							
pH at 25 Degrees C	8.4	Std. Units	0.10	0.010	1		10/18/24 16:36		H6
300.0 IC Anions		Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay							
Chloride	50.5	mg/L	2.0	0.59	1		10/30/24 19:20	16887-00-6	
Fluoride	0.22J	mg/L	0.32	0.095	1		10/30/24 19:20	16984-48-8	
Sulfate	23.4	mg/L	2.0	0.44	1		10/30/24 19:20	14808-79-8	

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ANALYTICAL RESULTS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Sample: FIELD BLANK Lab ID: 40285557008 Collected: 10/08/24 11:00 Received: 10/10/24 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Boron	4.2J	ug/L	10.0	3.0	1	10/11/24 07:24	10/15/24 10:45	7440-42-8	
Calcium	<76.2	ug/L	254	76.2	1	10/11/24 07:24	10/15/24 00:53	7440-70-2	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Green Bay									
Total Dissolved Solids	<8.7	mg/L	20.0	8.7	1		10/14/24 17:58		1q
9040 pH									
Analytical Method: EPA 9040									
Pace Analytical Services - Green Bay									
pH at 25 Degrees C	7.2	Std. Units	0.10	0.010	1		10/18/24 16:47		H6
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	<0.59	mg/L	2.0	0.59	1		10/30/24 19:31	16887-00-6	
Fluoride	<0.095	mg/L	0.32	0.095	1		10/30/24 19:31	16984-48-8	
Sulfate	<0.44	mg/L	2.0	0.44	1		10/30/24 19:31	14808-79-8	

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ANALYTICAL RESULTS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Sample: B-39 Lab ID: 40285557009 Collected: 10/07/24 00:00 Received: 10/16/24 00:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Green Bay									
Static Water Level	604.15	feet			1		10/07/24 00:00		

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QUALITY CONTROL DATA

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

QC Batch:	486918	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40285557001, 40285557002, 40285557003, 40285557004, 40285557005, 40285557006, 40285557007, 40285557008		

METHOD BLANK: 2788571 Matrix: Water
 Associated Lab Samples: 40285557001, 40285557002, 40285557003, 40285557004, 40285557005, 40285557006, 40285557007, 40285557008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	ug/L	<3.0	10.0	10/14/24 22:51	
Calcium	ug/L	<76.2	254	10/14/24 22:51	

LABORATORY CONTROL SAMPLE: 2788572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	250	221	89	80-120	
Calcium	ug/L	10000	9690	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2788573 2788574

Parameter	Units	40285519001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result						
Boron	ug/L	9.8J	250	250	235	232	90	89	75-125	1	20	
Calcium	ug/L	76100	10000	10000	85900	84500	99	85	75-125	2	20	

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QUALITY CONTROL DATA

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

QC Batch:	487080	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40285557001, 40285557002, 40285557003, 40285557004, 40285557005, 40285557006, 40285557007, 40285557008

METHOD BLANK: 2789745 Matrix: Water

Associated Lab Samples: 40285557001, 40285557002, 40285557003, 40285557004, 40285557005, 40285557006, 40285557007, 40285557008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	10/14/24 18:01	

LABORATORY CONTROL SAMPLE: 2789746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	582	560	96	80-120	

SAMPLE DUPLICATE: 2789747

Parameter	Units	40285557008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	<8.7	<8.7		10	

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QUALITY CONTROL DATA

Project: 25224071 ALLIANT NELS DEW CCR
 Pace Project No.: 40285557

QC Batch:	487656	Analysis Method:	EPA 9040
QC Batch Method:	EPA 9040	Analysis Description:	9040 pH
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40285557001, 40285557002, 40285557003, 40285557004, 40285557005, 40285557006, 40285557007, 40285557008

SAMPLE DUPLICATE: 2792630

Parameter	Units	40285402001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	9.8	9.9	1	20	H6

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QUALITY CONTROL DATA

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

QC Batch:	488581	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40285557001, 40285557002, 40285557003, 40285557004

METHOD BLANK: 2797836 Matrix: Water
 Associated Lab Samples: 40285557001, 40285557002, 40285557003, 40285557004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	10/29/24 23:44	
Fluoride	mg/L	<0.095	0.32	10/29/24 23:44	
Sulfate	mg/L	<0.44	2.0	10/29/24 23:44	

LABORATORY CONTROL SAMPLE: 2797837

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.0	105	90-110	
Fluoride	mg/L	2	2.2	109	90-110	
Sulfate	mg/L	20	20.8	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2797838 2797839

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40285967002	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	15.2	20	20	35.9	35.8	104	103	90-110	0	15		
Fluoride	mg/L	<0.095	2	2	2.3	2.3	115	114	90-110	0	15	M0	
Sulfate	mg/L	10.8	20	20	32.2	32.1	107	107	90-110	0	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2797840 2797841

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40285557004	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	20.7	100	100	125	124	104	103	90-110	0	15		
Fluoride	mg/L	0.60J	10	10	10.6	10.6	100	100	90-110	0	15		
Sulfate	mg/L	405	400	400	812	807	102	101	90-110	1	15		

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QUALITY CONTROL DATA

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

QC Batch:	488703	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40285557005, 40285557006, 40285557007, 40285557008

METHOD BLANK: 2798377 Matrix: Water
 Associated Lab Samples: 40285557005, 40285557006, 40285557007, 40285557008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	10/30/24 17:42	
Fluoride	mg/L	<0.095	0.32	10/30/24 17:42	
Sulfate	mg/L	<0.44	2.0	10/30/24 17:42	

LABORATORY CONTROL SAMPLE: 2798378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.0	100	90-110	
Fluoride	mg/L	2	1.9	96	90-110	
Sulfate	mg/L	20	19.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2798379 2798380

Parameter	Units	40285557005		40285557006		40285557007		40285557008		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.										
Chloride	mg/L	44.2	100	100	148	158	104	114	90-110	7	15	M0	
Fluoride	mg/L	0.11J	2	2	2.2	2.2	102	104	90-110	1	15		
Sulfate	mg/L	36.0	100	100	139	148	103	112	90-110	6	15	M0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2798381 2798382

Parameter	Units	40285899029		40285899029		40285899029		40285899029		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.										
Chloride	mg/L	311	400	400	746	720	109	102	90-110	4	15		
Fluoride	mg/L	<1.9	40	40	41.3	40.1	100	97	90-110	3	15		
Sulfate	mg/L	337	400	400	768	737	108	100	90-110	4	15		

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QUALIFIERS

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - The reported result is an estimated value.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

DL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Analyte was not detected and is reported as less than the LOD or as defined by the customer.

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1q Analyte was measured in the associated method blank at a concentration of -10mg/L.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25224071 ALLIANT NELS DEW CCR

Pace Project No.: 40285557

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40285557001	B-7R	EPA 3010A	486918	EPA 6020B	487131
40285557002	B-11R	EPA 3010A	486918	EPA 6020B	487131
40285557003	B-11A	EPA 3010A	486918	EPA 6020B	487131
40285557004	B-11B	EPA 3010A	486918	EPA 6020B	487131
40285557005	B-26	EPA 3010A	486918	EPA 6020B	487131
40285557006	B-31R	EPA 3010A	486918	EPA 6020B	487131
40285557007	B-31A	EPA 3010A	486918	EPA 6020B	487131
40285557008	FIELD BLANK	EPA 3010A	486918	EPA 6020B	487131
40285557001	B-7R				
40285557002	B-11R				
40285557003	B-11A				
40285557004	B-11B				
40285557005	B-26				
40285557006	B-31R				
40285557007	B-31A				
40285557009	B-39				
40285557001	B-7R	SM 2540C	487080		
40285557002	B-11R	SM 2540C	487080		
40285557003	B-11A	SM 2540C	487080		
40285557004	B-11B	SM 2540C	487080		
40285557005	B-26	SM 2540C	487080		
40285557006	B-31R	SM 2540C	487080		
40285557007	B-31A	SM 2540C	487080		
40285557008	FIELD BLANK	SM 2540C	487080		
40285557001	B-7R	EPA 9040	487656		
40285557002	B-11R	EPA 9040	487656		
40285557003	B-11A	EPA 9040	487656		
40285557004	B-11B	EPA 9040	487656		
40285557005	B-26	EPA 9040	487656		
40285557006	B-31R	EPA 9040	487656		
40285557007	B-31A	EPA 9040	487656		
40285557008	FIELD BLANK	EPA 9040	487656		
40285557001	B-7R	EPA 300.0	488581		
40285557002	B-11R	EPA 300.0	488581		
40285557003	B-11A	EPA 300.0	488581		
40285557004	B-11B	EPA 300.0	488581		
40285557005	B-26	EPA 300.0	488703		
40285557006	B-31R	EPA 300.0	488703		
40285557007	B-31A	EPA 300.0	488703		
40285557008	FIELD BLANK	EPA 300.0	488703		

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Sample Condition Upon Receipt Form (SCUR)

Client Name: SCS

Project #: _____

WO#: 40285557



40285557

Courier: CS Logistics Fed Ex Speedee UPS Waltco
 Client Pace Other: _____

Tracking #: NLA

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used SR - 127 Type of Ice: Wet Blue Dry None Meltwater Only

Cooler Temperature Uncorr: 3.0 /Corr: 3.0

Temp Blank Present: yes no Biological Tissue is Frozen: yes no

Person examining contents:
 Date: 10/10/24 Initials: YN
 Labeled By Initials: KKS

Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No - DI VOA Samples frozen upon receipt <input type="checkbox"/> Yes <input type="checkbox"/> No	5. Date/Time: _____
Short Hold Time Analysis (<72hr): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: For Analysis: <input type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Correct Type: <u>Green Bay</u> Pace IR, Non-Pace	9.
Containers Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A -Includes date/time/ID/Analysis Matrix: <u>W</u>	12.
Trip Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Trip Blank Custody Seals Present <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Pace Trip Blank Lot # (if purchased): _____	13.

Client Notification/ Resolution: _____ If checked, see attached form for additional comments

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____



May 08, 2025

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: ALLIANT NELSON DEWEY CCR
Pace Project No.: 40293800

Dear Meghan Blodgett:

Enclosed are the analytical results for sample(s) received by the laboratory on April 17, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Green Bay

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

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Matt Bizjack, Alliant Energy
Natalie Burris, SCS ENGINEERS
Sherren Clark, SCS Engineers
Jenny Coughlin, Alliant Energy
Tom Karwoski, SCS ENGINEERS
Ryan Matzuk, SCS Engineers
Jeff Maxted, ALLIANT ENERGY



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CERTIFICATIONS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-21-8

Virginia VELAP Certification ID: 11873

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-21-00008

Federal Fish & Wildlife Permit #: 51774A

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SAMPLE SUMMARY

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40293800001	B-7R	Water	04/15/25 11:40	04/17/25 10:10
40293800002	B-11R	Water	04/14/25 17:37	04/17/25 10:10
40293800003	B-11A	Water	04/14/25 15:04	04/17/25 10:10
40293800004	B-11B	Water	04/14/25 15:28	04/17/25 10:10
40293800005	B-26	Water	04/15/25 14:30	04/17/25 10:10
40293800006	B-31R	Water	04/14/25 13:53	04/17/25 10:10
40293800007	B-31A	Water	04/14/25 13:08	04/17/25 10:10
40293800008	FIELD BLANK	Water	04/15/25 11:45	04/17/25 10:10
40293800009	B-39	Water	04/14/25 00:00	04/17/25 10:10

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SAMPLE ANALYTE COUNT

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40293800001	B-7R	EPA 6020B	KXS	2
			AG1	6
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	AJS1	3
40293800002	B-11R	EPA 6020B	KXS	2
			AG1	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	AJS1	3
40293800003	B-11A	EPA 6020B	KXS	2
			AG1	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	AJS1	3
40293800004	B-11B	EPA 6020B	KXS	2
			AG1	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	AJS1	3
40293800005	B-26	EPA 6020B	KXS	2
			AG1	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	AJS1	3
40293800006	B-31R	EPA 6020B	KXS	2
			AG1	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	AJS1	3
40293800007	B-31A	EPA 6020B	KXS	2
			AG1	7
		SM 2540C	LMB	1
		EPA 9040	HML	1
		EPA 300.0	AJS1	3
40293800008	FIELD BLANK	EPA 6020B	KXS	2
		SM 2540C	LMB	1

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SAMPLE ANALYTE COUNT

Project: ALLIANT NELSON DEWEY CCR
Pace Project No.: 40293800

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 9040	HML	1
		EPA 300.0	AJS1	3
40293800009	B-39		AG1	1

PASI-G = Pace Analytical Services - Green Bay

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ANALYTICAL RESULTS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Sample: B-7R Lab ID: 40293800001 Collected: 04/15/25 11:40 Received: 04/17/25 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Boron	126	ug/L	10.0	3.0	1	04/22/25 08:08	04/24/25 17:00	7440-42-8	
Calcium	54500	ug/L	254	76.2	1	04/22/25 08:08	04/24/25 17:00	7440-70-2	
Field Data									
Analytical Method:									
Pace Analytical Services - Green Bay									
Field pH	6.51	Std. Units			1		04/15/25 11:40		
Field Specific Conductance	498.2	umhos/cm			1		04/15/25 11:40		
Oxygen, Dissolved	0.65	mg/L			1		04/15/25 11:40	7782-44-7	
REDOX	17.9	mV			1		04/15/25 11:40		
Turbidity	12.26	NTU			1		04/15/25 11:40		
Temperature, Water (C)	10.8	deg C			1		04/15/25 11:40		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Green Bay									
Total Dissolved Solids	262	mg/L	20.0	8.7	1		04/21/25 14:35		
9040 pH									
Analytical Method: EPA 9040									
Pace Analytical Services - Green Bay									
pH at 25 Degrees C	7.2	Std. Units	0.10	0.010	1		04/21/25 11:26		H6
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	7.4J	mg/L	10.0	3.0	5		04/30/25 09:50	16887-00-6	D3
Fluoride	<0.48	mg/L	1.6	0.48	5		04/30/25 09:50	16984-48-8	D3
Sulfate	35.3	mg/L	10.0	2.2	5		04/30/25 09:50	14808-79-8	

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ANALYTICAL RESULTS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Sample: B-11R Lab ID: 40293800002 Collected: 04/14/25 17:37 Received: 04/17/25 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay							
Boron	2930	ug/L	100	30.3	10	04/22/25 08:08	04/25/25 07:16	7440-42-8	
Calcium	124000	ug/L	2540	762	10	04/22/25 08:08	04/25/25 07:16	7440-70-2	
Field Data		Analytical Method: Pace Analytical Services - Green Bay							
Field pH	6.95	Std. Units			1		04/14/25 17:37		
Field Specific Conductance	1022	umhos/cm			1		04/14/25 17:37		
Oxygen, Dissolved	0.33	mg/L			1		04/14/25 17:37	7782-44-7	
REDOX	30.5	mV			1		04/14/25 17:37		
Turbidity	0.76	NTU			1		04/14/25 17:37		
Static Water Level	606.20	feet			1		04/14/25 17:37		
Temperature, Water (C)	10.9	deg C			1		04/14/25 17:37		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Green Bay							
Total Dissolved Solids	622	mg/L	20.0	8.7	1		04/21/25 14:35		
9040 pH		Analytical Method: EPA 9040 Pace Analytical Services - Green Bay							
pH at 25 Degrees C	7.7	Std. Units	0.10	0.010	1		04/21/25 11:31		H6
300.0 IC Anions		Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay							
Chloride	23.5	mg/L	4.0	1.2	2		04/24/25 13:12	16887-00-6	
Fluoride	<0.19	mg/L	0.63	0.19	2		04/24/25 13:12	16984-48-8	D3
Sulfate	86.8	mg/L	10.0	2.2	5		04/28/25 10:29	14808-79-8	M0

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ANALYTICAL RESULTS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Sample: B-11A Lab ID: 40293800003 Collected: 04/14/25 15:04 Received: 04/17/25 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay							
Boron	1370	ug/L	10.0	3.0	1	04/22/25 08:08	04/24/25 17:36	7440-42-8	
Calcium	52400	ug/L	254	76.2	1	04/22/25 08:08	04/24/25 17:36	7440-70-2	
Field Data		Analytical Method: Pace Analytical Services - Green Bay							
Field pH	7.85	Std. Units			1		04/14/25 15:04		
Field Specific Conductance	733	umhos/cm			1		04/14/25 15:04		
Oxygen, Dissolved	0.07	mg/L			1		04/14/25 15:04	7782-44-7	
REDOX	76.2	mV			1		04/14/25 15:04		
Turbidity	0.47	NTU			1		04/14/25 15:04		
Static Water Level	605.79	feet			1		04/14/25 15:04		
Temperature, Water (C)	13.2	deg C			1		04/14/25 15:04		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Green Bay							
Total Dissolved Solids	452	mg/L	20.0	8.7	1		04/21/25 14:35		
9040 pH		Analytical Method: EPA 9040 Pace Analytical Services - Green Bay							
pH at 25 Degrees C	8.1	Std. Units	0.10	0.010	1		04/21/25 11:34		H6
300.0 IC Anions		Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay							
Chloride	37.5	mg/L	4.0	1.2	2		04/24/25 13:45	16887-00-6	
Fluoride	<0.19	mg/L	0.63	0.19	2		04/24/25 13:45	16984-48-8	D3
Sulfate	164	mg/L	10.0	2.2	5		04/28/25 11:02	14808-79-8	

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ANALYTICAL RESULTS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Sample: B-11B Lab ID: 40293800004 Collected: 04/14/25 15:28 Received: 04/17/25 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay							
Boron	4780	ug/L	200	60.6	20	04/22/25 08:08	04/25/25 07:25	7440-42-8	
Calcium	130000	ug/L	5080	1520	20	04/22/25 08:08	04/25/25 07:25	7440-70-2	
Field Data		Analytical Method: Pace Analytical Services - Green Bay							
Field pH	7.68	Std. Units			1		04/14/25 15:28		
Field Specific Conductance	1339	umhos/cm			1		04/14/25 15:28		
Oxygen, Dissolved	0.44	mg/L			1		04/14/25 15:28	7782-44-7	
REDOX	91.3	mV			1		04/14/25 15:28		
Turbidity	2.78	NTU			1		04/14/25 15:28		
Static Water Level	605.80	feet			1		04/14/25 15:28		
Temperature, Water (C)	13.2	deg C			1		04/14/25 15:28		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Green Bay							
Total Dissolved Solids	966	mg/L	20.0	8.7	1		04/21/25 14:35		
9040 pH		Analytical Method: EPA 9040 Pace Analytical Services - Green Bay							
pH at 25 Degrees C	8.2	Std. Units	0.10	0.010	1		04/21/25 11:40		H6
300.0 IC Anions		Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay							
Chloride	20.0J	mg/L	20.0	5.9	10		04/24/25 13:56	16887-00-6	D3
Fluoride	<0.95	mg/L	3.2	0.95	10		04/24/25 13:56	16984-48-8	D3
Sulfate	438	mg/L	20.0	4.4	10		04/24/25 13:56	14808-79-8	

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ANALYTICAL RESULTS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Sample: B-26 **Lab ID: 40293800005** Collected: 04/15/25 14:30 Received: 04/17/25 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Boron	44.8	ug/L	10.0	3.0	1	04/22/25 08:08	04/24/25 17:45	7440-42-8	
Calcium	78600	ug/L	254	76.2	1	04/22/25 08:08	04/24/25 17:45	7440-70-2	
Field Data									
Analytical Method:									
Pace Analytical Services - Green Bay									
Field pH	7.30	Std. Units			1		04/15/25 14:30		
Field Specific Conductance	822	umhos/cm			1		04/15/25 14:30		
Oxygen, Dissolved	8.00	mg/L			1		04/15/25 14:30	7782-44-7	
REDOX	109.6	mV			1		04/15/25 14:30		
Turbidity	1.64	NTU			1		04/15/25 14:30		
Static Water Level	606.80	feet			1		04/15/25 14:30		
Temperature, Water (C)	11.3	deg C			1		04/15/25 14:30		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Green Bay									
Total Dissolved Solids	438	mg/L	20.0	8.7	1		04/21/25 14:35		
9040 pH									
Analytical Method: EPA 9040									
Pace Analytical Services - Green Bay									
pH at 25 Degrees C	8.0	Std. Units	0.10	0.010	1		04/21/25 11:43		H6
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	49.8	mg/L	2.0	0.59	1		04/28/25 11:13	16887-00-6	
Fluoride	<0.095	mg/L	0.32	0.095	1		04/28/25 11:13	16984-48-8	
Sulfate	38.1	mg/L	2.0	0.44	1		04/28/25 11:13	14808-79-8	

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ANALYTICAL RESULTS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Sample: B-31R Lab ID: 40293800006 Collected: 04/14/25 13:53 Received: 04/17/25 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay							
Boron	862	ug/L	10.0	3.0	1	04/22/25 08:08	04/24/25 17:50	7440-42-8	
Calcium	93000	ug/L	254	76.2	1	04/22/25 08:08	04/24/25 17:50	7440-70-2	
Field Data		Analytical Method: Pace Analytical Services - Green Bay							
Field pH	6.66	Std. Units			1		04/14/25 13:53		
Field Specific Conductance	725	umhos/cm			1		04/14/25 13:53		
Oxygen, Dissolved	0.87	mg/L			1		04/14/25 13:53	7782-44-7	
REDOX	38.7	mV			1		04/14/25 13:53		
Turbidity	2.50	NTU			1		04/14/25 13:53		
Static Water Level	606.34	feet			1		04/14/25 13:53		
Temperature, Water (C)	12.8	deg C			1		04/14/25 13:53		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Green Bay							
Total Dissolved Solids	454	mg/L	20.0	8.7	1		04/21/25 14:35		
9040 pH		Analytical Method: EPA 9040 Pace Analytical Services - Green Bay							
pH at 25 Degrees C	7.5	Std. Units	0.10	0.010	1		04/21/25 11:45		H6
300.0 IC Anions		Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay							
Chloride	13.1	mg/L	4.0	1.2	2		04/24/25 14:17	16887-00-6	
Fluoride	<0.19	mg/L	0.63	0.19	2		04/24/25 14:17	16984-48-8	D3
Sulfate	71.4	mg/L	4.0	0.89	2		04/24/25 14:17	14808-79-8	

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ANALYTICAL RESULTS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Sample: B-31A Lab ID: 40293800007 Collected: 04/14/25 13:08 Received: 04/17/25 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Green Bay							
Boron	184	ug/L	10.0	3.0	1	04/22/25 08:08	04/24/25 17:54	7440-42-8	
Calcium	44200	ug/L	254	76.2	1	04/22/25 08:08	04/24/25 17:54	7440-70-2	
Field Data		Analytical Method: Pace Analytical Services - Green Bay							
Field pH	7.85	Std. Units			1		04/14/25 13:08		
Field Specific Conductance	507.6	umhos/cm			1		04/14/25 13:08		
Oxygen, Dissolved	0.17	mg/L			1		04/14/25 13:08	7782-44-7	
REDOX	91.2	mV			1		04/14/25 13:08		
Turbidity	2.50	NTU			1		04/14/25 13:08		
Static Water Level	606.00	feet			1		04/14/25 13:08		
Temperature, Water (C)	13.6	deg C			1		04/14/25 13:08		
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Green Bay							
Total Dissolved Solids	280	mg/L	20.0	8.7	1		04/21/25 14:36		
9040 pH		Analytical Method: EPA 9040 Pace Analytical Services - Green Bay							
pH at 25 Degrees C	8.2	Std. Units	0.10	0.010	1		04/21/25 11:49		H6
300.0 IC Anions		Analytical Method: EPA 300.0 Pace Analytical Services - Green Bay							
Chloride	52.6	mg/L	2.0	0.59	1		04/28/25 11:23	16887-00-6	
Fluoride	0.10J	mg/L	0.32	0.095	1		04/28/25 11:23	16984-48-8	
Sulfate	23.3	mg/L	2.0	0.44	1		04/28/25 11:23	14808-79-8	

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ANALYTICAL RESULTS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Sample: FIELD BLANK Lab ID: 40293800008 Collected: 04/15/25 11:45 Received: 04/17/25 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020B MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Boron	<3.0	ug/L	10.0	3.0	1	04/22/25 08:08	04/24/25 17:59	7440-42-8	
Calcium	<76.2	ug/L	254	76.2	1	04/22/25 08:08	04/24/25 17:59	7440-70-2	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C									
Pace Analytical Services - Green Bay									
Total Dissolved Solids	10.0J	mg/L	20.0	8.7	1		04/21/25 14:36		
9040 pH									
Analytical Method: EPA 9040									
Pace Analytical Services - Green Bay									
pH at 25 Degrees C	6.4	Std. Units	0.10	0.010	1		04/21/25 11:59		H6
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	<0.59	mg/L	2.0	0.59	1		04/24/25 15:15	16887-00-6	
Fluoride	<0.095	mg/L	0.32	0.095	1		04/24/25 15:15	16984-48-8	
Sulfate	<0.44	mg/L	2.0	0.44	1		04/24/25 15:15	14808-79-8	

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ANALYTICAL RESULTS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

Sample: B-39 Lab ID: 40293800009 Collected: 04/14/25 00:00 Received: 04/17/25 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Green Bay									
Static Water Level	606.79	feet			1		04/14/25 00:00		

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QUALITY CONTROL DATA

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

QC Batch:	502533	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40293800001, 40293800002, 40293800003, 40293800004, 40293800005, 40293800006, 40293800007, 40293800008		

METHOD BLANK:	2869351	Matrix:	Water
Associated Lab Samples:	40293800001, 40293800002, 40293800003, 40293800004, 40293800005, 40293800006, 40293800007, 40293800008		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	ug/L	<3.0	10.0	04/24/25 16:33	
Calcium	ug/L	<76.2	254	04/24/25 16:33	

LABORATORY CONTROL SAMPLE: 2869352						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	250	243	97	80-120	
Calcium	ug/L	10000	10200	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2869353												2869354	
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40293800001	Result	Spike Conc.	Spike Conc.								
Boron	ug/L	126	250	250	369	368	97	97	75-125	0	20		
Calcium	ug/L	54500	10000	10000	64700	65100	102	106	75-125	1	20		

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QUALITY CONTROL DATA

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

QC Batch: 502356

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40293800001, 40293800002, 40293800003, 40293800004, 40293800005, 40293800006, 40293800007, 40293800008

METHOD BLANK: 2868114

Matrix: Water

Associated Lab Samples: 40293800001, 40293800002, 40293800003, 40293800004, 40293800005, 40293800006, 40293800007, 40293800008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	04/21/25 14:33	

LABORATORY CONTROL SAMPLE: 2868115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	578	556	96	80-120	

SAMPLE DUPLICATE: 2868120

Parameter	Units	40293749001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1030	1040	1	10	

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QUALITY CONTROL DATA

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

QC Batch: 502476 Analysis Method: EPA 9040

QC Batch Method: EPA 9040 Analysis Description: 9040 pH

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40293800001, 40293800002, 40293800003, 40293800004, 40293800005, 40293800006, 40293800007, 40293800008

SAMPLE DUPLICATE: 2869201

Parameter	Units	40293800001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.1	1	20	H6

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

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QUALITY CONTROL DATA

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

QC Batch:	502526	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40293800002, 40293800003, 40293800004, 40293800005, 40293800006, 40293800007, 40293800008

METHOD BLANK: 2869299 Matrix: Water
 Associated Lab Samples: 40293800002, 40293800003, 40293800004, 40293800005, 40293800006, 40293800007, 40293800008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	04/24/25 11:45	
Fluoride	mg/L	<0.095	0.32	04/24/25 11:45	
Sulfate	mg/L	<0.44	2.0	04/24/25 11:45	

LABORATORY CONTROL SAMPLE: 2869300

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.4	102	90-110	
Fluoride	mg/L	2	2.0	101	90-110	
Sulfate	mg/L	20	20.9	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2869303 2869304

Parameter	Units	40293837003		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec					
Chloride	mg/L	35.0	20	20	52.8	52.3	89	87	90-110	1	15	M0	
Fluoride	mg/L	<0.095	2	2	2.0	1.9	99	97	90-110	2	15		
Sulfate	mg/L	40.2	40	40	82.7	82.9	106	107	90-110	0	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2869310 2869311

Parameter	Units	40293800002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec					
Chloride	mg/L	23.5	40	40	62.3	61.9	97	96	90-110	1	15		
Fluoride	mg/L	<0.19	4	4	4.4	4.4	109	109	90-110	0	15		
Sulfate	mg/L	86.8	100	100	194	199	107	112	90-110	2	15	M0	

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QUALITY CONTROL DATA

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

QC Batch: 503144	Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40293800001

METHOD BLANK: 2873031 Matrix: Water

Associated Lab Samples: 40293800001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	04/30/25 09:39	
Fluoride	mg/L	<0.095	0.32	04/30/25 09:39	
Sulfate	mg/L	<0.44	2.0	04/30/25 09:39	

LABORATORY CONTROL SAMPLE: 2873032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.1	100	90-110	
Fluoride	mg/L	2	1.9	96	90-110	
Sulfate	mg/L	20	19.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2873037 2873038

Parameter	Units	40293800001		2873037		2873038		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	7.4J	100	100	105	108	98	101	90-110	3	15		
Fluoride	mg/L	<0.48	10	10	10.4	10.8	104	108	90-110	4	15		
Sulfate	mg/L	35.3	100	100	137	140	102	105	90-110	2	15		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2873105 2873106

Parameter	Units	40293971001		2873105		2873106		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	1040	1000	1000	2050	2000	102	96	90-110	3	15		
Fluoride	mg/L	<4.8	100	100	108	107	108	107	90-110	1	15		
Sulfate	mg/L	381	1000	1000	1420	1400	104	101	90-110	2	15		

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QUALIFIERS

Project: ALLIANT NELSON DEWEY CCR

Pace Project No.: 40293800

DEFINITIONS

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

ND - Not Detected at or above LOD.

J - The reported result is an estimated value.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

DL - Adjusted Method Detection Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Analyte was not detected and is reported as less than the LOD or as defined by the customer.

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ALLIANT NELSON DEWEY CCR
 Pace Project No.: 40293800

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40293800001	B-7R	EPA 3010A	502533	EPA 6020B	502669
40293800002	B-11R	EPA 3010A	502533	EPA 6020B	502669
40293800003	B-11A	EPA 3010A	502533	EPA 6020B	502669
40293800004	B-11B	EPA 3010A	502533	EPA 6020B	502669
40293800005	B-26	EPA 3010A	502533	EPA 6020B	502669
40293800006	B-31R	EPA 3010A	502533	EPA 6020B	502669
40293800007	B-31A	EPA 3010A	502533	EPA 6020B	502669
40293800008	FIELD BLANK	EPA 3010A	502533	EPA 6020B	502669
40293800001	B-7R				
40293800002	B-11R				
40293800003	B-11A				
40293800004	B-11B				
40293800005	B-26				
40293800006	B-31R				
40293800007	B-31A				
40293800009	B-39				
40293800001	B-7R	SM 2540C	502356		
40293800002	B-11R	SM 2540C	502356		
40293800003	B-11A	SM 2540C	502356		
40293800004	B-11B	SM 2540C	502356		
40293800005	B-26	SM 2540C	502356		
40293800006	B-31R	SM 2540C	502356		
40293800007	B-31A	SM 2540C	502356		
40293800008	FIELD BLANK	SM 2540C	502356		
40293800001	B-7R	EPA 9040	502476		
40293800002	B-11R	EPA 9040	502476		
40293800003	B-11A	EPA 9040	502476		
40293800004	B-11B	EPA 9040	502476		
40293800005	B-26	EPA 9040	502476		
40293800006	B-31R	EPA 9040	502476		
40293800007	B-31A	EPA 9040	502476		
40293800008	FIELD BLANK	EPA 9040	502476		
40293800001	B-7R	EPA 300.0	503144		
40293800002	B-11R	EPA 300.0	502526		
40293800003	B-11A	EPA 300.0	502526		
40293800004	B-11B	EPA 300.0	502526		
40293800005	B-26	EPA 300.0	502526		
40293800006	B-31R	EPA 300.0	502526		
40293800007	B-31A	EPA 300.0	502526		
40293800008	FIELD BLANK	EPA 300.0	502526		

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Sample Condition Upon Receipt Form (SCUR)

Client Name: SCS

Project #:

WO#: **40293800**



Courier: CS Logistics Fed Ex Speedee UPS Purple Mountain
 Client Pace Other: _____

Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer Used SR - 148 Type of Ice: Wet Blue Dry None Meltwater Only

Cooler Temperature Uncorr: 2.0 / Corr: 2.0

Temp Blank Present: yes no

Biological Tissue is Frozen: yes no

Person examining contents:

Date: 4/17/25 / Initials: MCA

Labeled By Initials: EL

Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Chain of Custody Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- DI VOA Samples frozen upon receipt <input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time: _____
Short Hold Time Analysis (<72hr): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.
Rush Turn Around Time Requested: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Correct Type: <u>Pace Green Bay</u> , Pace IR, Non-Pace	
Containers Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>	
Trip Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____	

Client Notification/ Resolution:

If checked, see attached form for additional comments

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMS. By releasing the project, the PM acknowledges they have reviewed the sample logir



Appendix D

Historical Monitoring Results

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-7R
 Number of Sampling Dates: 24

Parameter Name	Units	12/9/2015	4/13/2016	7/18/2016	10/19/2016	1/12/2017	4/17/2017	6/7/2017	8/1/2017	10/19/2017	4/2/2018	10/9/2018	4/22/2019	10/14/2019	4/13/2020	10/13/2020	4/20/2021
Boron	ug/L	110	115	164	154	159	129	110	129	159	121	73	93.5	139	96	145	104
Calcium	ug/L	31700	42300	44400	56600	56700	61400	51600	50400	56200	49200	38500	59400	57700	58700	41900	56100
Chloride	mg/L	45.2	4.6	7.1	22	19.7	13.1	12.8	8.1	12	10.1	1.9	10.9	11.5	14.3	6.7	9.5
Fluoride	mg/L	<1	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.1	<0.5	<0.5	<0.48	<0.48	<0.48
Field pH	Std. Units	6.74	6.8	6.29	6.55	7.43	6.6	6.65	6.28	6.88	6.57	6.23	6.63	6.62	6.6	6.35	6.54
Sulfate	mg/L	17	2.5	2.4	<5	<5	<5	<5	3.7	<5	<5	3.2	<5	<5	7.5	<2.2	<2.2
Total Dissolved Solids	mg/L	198	218	220	288	240	278	240	220	242	220	186	254	208	306	208	248
Antimony	ug/L	0.28	<0.073	0.25	0.086	0.2	0.18	<0.15	0.33	--	<0.15	--	--	--	--	--	--
Arsenic	ug/L	5	2	1.8	5.7	6.6	3.5	2.6	2	--	2.6	--	--	--	--	--	--
Barium	ug/L	77.8	67.8	54.5	78.8	98.4	83.3	65.8	54.2	--	89.3	--	--	--	--	--	--
Beryllium	ug/L	<0.13	<0.13	<0.13	<0.13	0.16	<0.13	<0.18	<0.18	--	<0.18	--	--	--	--	--	--
Cadmium	ug/L	0.17	<0.089	<0.089	0.13	0.16	0.11	<0.081	0.23	--	<0.081	--	--	--	--	--	--
Chromium	ug/L	0.5	<0.39	<0.39	<0.39	0.62	0.41	<1	<1	--	<1	--	--	--	--	--	--
Cobalt	ug/L	1.3	0.88	0.69	1.8	1.5	1.4	1.1	1.3	--	0.42	--	--	--	--	--	--
Lead	ug/L	0.21	0.16	0.078	0.14	0.42	0.26	<0.2	0.29	--	<0.2	--	--	--	--	--	--
Lithium	ug/L	0.45	0.14	0.18	0.23	0.35	0.26	<0.14	0.41	--	0.22	--	--	--	--	--	--
Mercury	ug/L	<0.1	<0.18	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	--	<0.13	--	--	--	--	--	--
Molybdenum	ug/L	9.6	1.4	1.4	4.3	3.3	2.1	2.8	1.9	--	0.84	--	--	--	--	--	--
Selenium	ug/L	0.44	0.24	0.26	0.23	0.47	0.39	<0.32	0.56	--	<0.32	--	--	--	--	--	--
Thallium	ug/L	0.2	<0.14	<0.14	<0.14	<0.14	0.22	<0.14	0.36	--	<0.14	--	--	--	--	--	--
Total Radium	pCi/L	0.933	1.18	0.598	0.118	0.828	0.747	0.181	0.967	--	0.339	--	--	--	--	--	--
Radium-226	pCi/L	0.341	0.436	-0.089	-0.243	-0.253	0.345	0.181	0.379	--	0.339	--	--	--	--	--	--
Radium-228	pCi/L	0.592	0.746	0.598	0.118	0.828	0.402	-0.057	0.588	--	-0.032	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	367.8	410.9	422.3	583.4	1054	532	303	411.8	480.9	342.5	336	603.7	576.6	623.8	414.4	535
Oxygen, Dissolved	mg/L	4.88	1.29	0.55	0.37	0.1	0.1	0.22	0.47	0.31	0.3	1.24	0.17	0.11	2.18	1.68	0.19
Field Oxidation Potential	mV	-48.2	-46.1	-26.6	137.3	-122.2	-83.3	-12.6	-3	112.8	-74.1	54.5	-100.9	-132.2	-124	142.1	-23.4
Groundwater Elevation	feet	606.69	609.32	606.54	608.59	604.94	609.08	610.74	607.02	609.6	604.82	610.76	615.28	613.43	614.12	605.09	608.83
Temperature	deg C	13.9	11.7	15.1	16	11.7	10.9	13.5	16.5	16	9.2	16.3	10.5	15.2	8.2	13.7	9.3
Turbidity	NTU	--	4.8	4.3	2.22	2.69	3.53	3.28	1.31	3	4.17	29.56	17.05	4.25	8.2	54.78	0.99
pH at 25 Degrees C	Std. Units	6.3	6.5	6.4	7.1	6.6	6.8	7.7	6.6	6.6	6.8	6.6	6.6	6.9	6.6	6.4	6.6
REDOX	mV	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-7R
 Number of Sampling Dates: 24

Parameter Name	Units	10/7/2021	4/26/2022	10/18/2022	4/3/2023	10/3/2023	4/23/2024	10/7/2024	4/15/2025
Boron	ug/L	--	98.1	--	120	144	134	139	126
Calcium	ug/L	--	59200	--	48800	41000	52300	83500	54500
Chloride	mg/L	--	12	--	7.9	4.7	8.2	7.8	7.4
Fluoride	mg/L	--	<0.48	--	<0.48	<0.095	<0.48	<0.48	<0.48
Field pH	Std. Units	--	6.43	--	6.18	6.3	6.33	6.4	6.51
Sulfate	mg/L	--	3.7	--	<2.2	4.5	<2.2	157	35.3
Total Dissolved Solids	mg/L	--	318	--	224	184	232	398	262
Antimony	ug/L	--	--	--	--	--	--	--	--
Arsenic	ug/L	--	--	--	--	--	--	--	--
Barium	ug/L	--	--	--	--	--	--	--	--
Beryllium	ug/L	--	--	--	--	--	--	--	--
Cadmium	ug/L	--	--	--	--	--	--	--	--
Chromium	ug/L	--	--	--	--	--	--	--	--
Cobalt	ug/L	--	--	--	--	--	--	--	--
Lead	ug/L	--	--	--	--	--	--	--	--
Lithium	ug/L	--	--	--	--	--	--	--	--
Mercury	ug/L	--	--	--	--	--	--	--	--
Molybdenum	ug/L	--	--	--	--	--	--	--	--
Selenium	ug/L	--	--	--	--	--	--	--	--
Thallium	ug/L	--	--	--	--	--	--	--	--
Total Radium	pCi/L	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	--	614.1	--	442.9	427.4	459.6	761	498.2
Oxygen, Dissolved	mg/L	--	0.82	--	0.16	0.39	2.07	0.64	0.65
Field Oxidation Potential	mV	--	-86.1	--	57.8	-79.3	-297.3	-84.2	--
Groundwater Elevation	feet	604.05	609.84	603.81	607.51	604.39	606.66	604.02	--
Temperature	deg C	--	8.5	--	9.2	24.8	11.5	17.5	--
Turbidity	NTU	--	3.56	--	21.98	7.4	3.2	3.39	12.26
pH at 25 Degrees C	Std. Units	--	6.6	--	6.6	6.4	8.2	7.3	7.2
REDOX	mV	--	--	--	--	--	--	--	17.9
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	10.8

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-11R
 Number of Sampling Dates: 24

Parameter Name	Units	12/9/2015	4/13/2016	7/19/2016	10/20/2016	1/12/2017	4/17/2017	6/7/2017	8/1/2017	10/19/2017	4/2/2018	10/9/2018	4/22/2019	10/14/2019	4/13/2020	10/12/2020	4/19/2021
Boron	ug/L	4170	3410	3530	4120	3530	3520	3420	2040	3120	3180	576	1360	1440	2140	2870	3010
Calcium	ug/L	126000	141000	130000	128000	126000	123000	128000	139000	117000	124000	49900	82400	66000	117000	120000	115000
Chloride	mg/L	39.2	7	38.9	39.1	42.3	40.2	42	24.7	38.8	36.8	5.9	12.6	13.1	22.5	20.7	27.2
Fluoride	mg/L	<1	<0.2	0.22	<0.5	<0.5	<0.5	<0.5	0.25	<0.5	<0.5	0.15	0.2	0.26	<0.48	<0.48	<0.48
Field pH	Std. Units	7.07	6.78	6.69	6.77	6.98	7.11	6.8	6.7	7.22	7.14	6.55	6.82	6.83	6.8	6.83	7.11
Sulfate	mg/L	75.4	18.4	115	118	108	108	98.2	126	97.7	88.1	15.1	34.6	40.7	41.9	22.8	61.2
Total Dissolved Solids	mg/L	616	682	698	660	616	620	630	738	586	638	266	406	310	570	600	578
Antimony	ug/L	<0.073	<0.073	<0.073	0.22	<0.073	<0.073	<0.15	0.42	--	<0.15	--	--	--	--	--	--
Arsenic	ug/L	14.8	7	10.6	7.4	7.1	6.9	6.1	7.5	--	9.3	--	--	--	--	--	--
Barium	ug/L	204	169	187	159	144	149	152	168	--	144	--	--	--	--	--	--
Beryllium	ug/L	<0.13	<0.13	<0.13	0.36	<0.13	<0.13	<0.18	<0.18	--	<0.18	--	--	--	--	--	--
Cadmium	ug/L	<0.089	<0.089	<0.089	0.15	<0.089	<0.089	<0.081	0.32	--	<0.081	--	--	--	--	--	--
Chromium	ug/L	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	<1	<1	--	<1	--	--	--	--	--	--
Cobalt	ug/L	0.36	0.54	0.68	1	1.2	1.3	1.5	1.4	--	0.94	--	--	--	--	--	--
Lead	ug/L	0.21	<0.04	0.13	0.19	<0.04	0.12	<0.2	0.39	--	<0.2	--	--	--	--	--	--
Lithium	ug/L	2.3	1.5	1.6	2	1.4	1.4	1.3	2	--	1.6	--	--	--	--	--	--
Mercury	ug/L	<0.1	<0.18	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	--	<0.13	--	--	--	--	--	--
Molybdenum	ug/L	15.1	23.2	34.9	43.8	42.8	57.2	53.8	22.7	--	35.6	--	--	--	--	--	--
Selenium	ug/L	1.2	5	<0.21	0.3	<0.21	<0.21	<0.32	0.78	--	<0.32	--	--	--	--	--	--
Thallium	ug/L	<0.14	<0.14	<0.14	0.5	<0.14	<0.14	<0.14	0.47	--	<0.14	--	--	--	--	--	--
Total Radium	pCi/L	1.45	1.62	0.953	1.51	0.345	1.45	2.1	1.43	--	0.749	--	--	--	--	--	--
Radium-226	pCi/L	0.797	0.863	0.19	0.516	0	0.719	0.272	0.602	--	0.254	--	--	--	--	--	--
Radium-228	pCi/L	0.653	0.757	0.763	0.997	0.345	0.732	1.83	0.826	--	0.495	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	931	1172	1160	1139	1876	1020	721	1192	870	839	463.2	737	612	993	1125	1003
Oxygen, Dissolved	mg/L	2.47	0.03	0.08	0.34	0.14	0.11	0.21	0.1	0.19	0.09	0.34	0.37	0.1	0.22	0.14	0.1
Field Oxidation Potential	mV	-114.2	-91	-94.7	-113.2	-72.9	-53.3	-26.8	-41.3	133.4	-128.6	-49.5	-20.9	-4.7	-75.8	-139.8	-64.5
Groundwater Elevation	feet	606.71	609.32	606.14	608.35	604.57	608.34	610.42	606.73	609.42	606.27	610.67	615.28	613.06	614.39	604.57	608.57
Temperature	deg C	14.5	10.9	14	15.5	12.7	11.7	11.9	14.4	15.1	11.1	16.2	10	14.5	10.1	14.3	10.6
Turbidity	NTU	--	3.18	2.11	1.66	2.51	3.85	1.72	1.04	2.5	3.58	10.05	8.88	7.5	8.97	6.58	8.4
pH at 25 Degrees C	Std. Units	6.9	6.8	6.8	7.3	6.9	7.2	7.1	6.9	6.8	7	6.9	6.9	7	6.8	7	7
REDOX	mV	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Static Water Level	feet	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-11R
 Number of Sampling Dates: 24

Parameter Name	Units	10/7/2021	4/26/2022	10/18/2022	4/4/2023	10/3/2023	4/24/2024	10/7/2024	4/14/2025
Boron	ug/L	2940	2330	3090	3110	3120	2640	2420	2930
Calcium	ug/L	119000	114000	116000	105000	90600	96700	152000	124000
Chloride	mg/L	23.1	18	28.8	30.7	41.6	35.8	19.9	23.5
Fluoride	mg/L	<0.48	<0.48	0.16	<0.48	0.2	0.27	<0.48	<0.19
Field pH	Std. Units	6.86	7.01	6.76	6.81	6.8	6.89	6.74	6.95
Sulfate	mg/L	61.8	58.1	65.3	57	58	64.8	162	86.8
Total Dissolved Solids	mg/L	576	560	572	554	456	536	766	622
Antimony	ug/L	--	--	--	--	--	--	--	--
Arsenic	ug/L	--	--	--	--	--	--	--	--
Barium	ug/L	--	--	--	--	--	--	--	--
Beryllium	ug/L	--	--	--	--	--	--	--	--
Cadmium	ug/L	--	--	--	--	--	--	--	--
Chromium	ug/L	--	--	--	--	--	--	--	--
Cobalt	ug/L	--	--	--	--	--	--	--	--
Lead	ug/L	--	--	--	--	--	--	--	--
Lithium	ug/L	--	--	--	--	--	--	--	--
Mercury	ug/L	--	--	--	--	--	--	--	--
Molybdenum	ug/L	--	--	--	--	--	--	--	--
Selenium	ug/L	--	--	--	--	--	--	--	--
Thallium	ug/L	--	--	--	--	--	--	--	--
Total Radium	pCi/L	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	1029	934	1014	908	810	878	1165	1022
Oxygen, Dissolved	mg/L	1.57	0.07	0.22	0.17	0.21	0.3	0.24	0.33
Field Oxidation Potential	mV	-42.6	-41.5	-18.9	-55.6	-11.9	-40.1	-39.2	--
Groundwater Elevation	feet	603.85	609.75	603.59	607.83	603.93	606.72	603.54	--
Temperature	deg C	14.6	10.4	13.3	11	13.8	11.4	14.3	--
Turbidity	NTU	10.81	6.7	2.22	3.14	0	3.25	8.94	0.76
pH at 25 Degrees C	Std. Units	7.3	6.9	7	7	7.1	8.4	7.8	7.7
REDOX	mV	--	--	--	--	--	--	--	30.5
Static Water Level	feet	--	--	--	--	--	--	--	606.2
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	10.9

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-11A
 Number of Sampling Dates: 24

Parameter Name	Units	12/9/2015	4/13/2016	7/19/2016	10/19/2016	1/12/2017	4/17/2017	6/8/2017	8/1/2017	10/19/2017	4/2/2018	10/9/2018	4/22/2019	10/14/2019	4/13/2020	10/12/2020	4/19/2021
Boron	ug/L	124	116	104	112	106	100	102	105	116	91	94.2	93.9	80.7	86.3	99.3	88.1
Calcium	ug/L	58800	60100	54000	54600	54500	54800	57800	54500	55000	53300	48600	60400	56600	57500	55600	50600
Chloride	mg/L	40.4	43	46.6	46.5	46.6	45.4	46.9	46.7	49.9	54.7	57.8	83.6	96.6	93.7	65.3	59.1
Fluoride	mg/L	0.3	0.38	0.35	0.36	0.43	0.36	0.37	0.37	0.32	0.24	0.29	0.29	0.26	0.27	0.28	0.23
Field pH	Std. Units	7.7	7.75	7.42	7.47	7.89	7.38	7.78	7.67	7.96	8.04	7.43	7.62	7.66	7.75	7.74	7.65
Sulfate	mg/L	3.2	3.8	2.7	3	2.3	<1	1.4	2.4	5.1	12.3	6	1.9	<1	1.4	1	2.9
Total Dissolved Solids	mg/L	338	362	336	340	322	326	338	326	322	336	332	386	348	394	364	366
Antimony	ug/L	0.42	0.14	0.17	0.44	0.22	0.51	<0.15	0.27	--	<0.15	--	--	--	--	--	--
Arsenic	ug/L	0.27	0.19	0.18	0.51	0.19	0.4	<0.28	<0.28	--	<0.28	--	--	--	--	--	--
Barium	ug/L	202	206	171	181	187	192	194	184	--	170	--	--	--	--	--	--
Beryllium	ug/L	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.18	<0.18	--	<0.18	--	--	--	--	--	--
Cadmium	ug/L	<0.089	<0.089	<0.089	0.26	<0.089	0.24	<0.081	<0.081	--	<0.081	--	--	--	--	--	--
Chromium	ug/L	<0.39	<0.39	<0.39	<0.39	0.46	0.52	<1	<1	--	<1	--	--	--	--	--	--
Cobalt	ug/L	1.3	1.4	0.97	1.3	1.2	1.4	1.1	1.3	--	1.1	--	--	--	--	--	--
Lead	ug/L	0.083	<0.04	<0.04	0.34	<0.04	0.33	<0.2	<0.2	--	<0.2	--	--	--	--	--	--
Lithium	ug/L	5.9	6.1	5.8	5.9	5.9	5.9	6.1	4.9	--	5.1	--	--	--	--	--	--
Mercury	ug/L	<0.1	<0.18	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	--	<0.13	--	--	--	--	--	--
Molybdenum	ug/L	22.7	24.1	22.5	21.8	21.8	22.4	22.2	20	--	18.2	--	--	--	--	--	--
Selenium	ug/L	<0.21	<0.21	<0.21	0.27	<0.21	0.36	<0.32	<0.32	--	<0.32	--	--	--	--	--	--
Thallium	ug/L	0.14	<0.14	<0.14	0.5	<0.14	0.46	<0.14	0.15	--	<0.14	--	--	--	--	--	--
Total Radium	pCi/L	1.08	1.48	0.937	0.95	0.845	1.4	1.88	0.917	--	0.848	--	--	--	--	--	--
Radium-226	pCi/L	0.579	0.148	0.179	0.172	0	0.948	0.454	0.0728	--	0.405	--	--	--	--	--	--
Radium-228	pCi/L	0.503	1.33	0.758	0.778	0.845	0.447	1.43	0.844	--	0.443	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	660	658	598.1	631	1049	583.3	407.9	588.8	519.1	481.9	654	721	708	720	674	638
Oxygen, Dissolved	mg/L	0.49	0.03	0.08	0.37	0.19	0.11	0.23	0.1	0.51	0.12	0.08	0.07	0.14	0.19	0.09	0.21
Field Oxidation Potential	mV	9.8	-31.2	84.2	-76.8	-88.3	-103.6	31.4	-44.1	112.1	-42.1	-47.9	218.3	-59	-31	55.1	135.4
Groundwater Elevation	feet	606.3	608.71	606.76	608.21	604.36	609.05	609.81	605.57	609.58	606.63	610.28	615.29	613.29	613.88	604.54	608.72
Temperature	deg C	14.8	14.8	14.8	14.9	14.2	14.4	14.3	14.7	14.9	13.9	15	13.8	14.3	13.4	14.2	13.4
Turbidity	NTU	--	0.23	0.01	0.15	0.21	0.51	0.39	0.12	0.78	0.5	3.15	0	2.58	0	0	0
pH at 25 Degrees C	Std. Units	7.4	7.5	7.5	7.9	7.7	7.7	7.7	7.7	7.6	7.8	7.7	7.7	7.8	7.6	7.7	7.7
REDOX	mV	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Static Water Level	feet	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-11A
 Number of Sampling Dates: 24

Parameter Name	Units	10/7/2021	4/26/2022	10/18/2022	4/4/2023	10/3/2023	4/24/2024	10/7/2024	4/14/2025
Boron	ug/L	85.4	88.6	95.2	119	231	715	471	1370
Calcium	ug/L	51400	51600	46000	51700	60300	63900	57000	52400
Chloride	mg/L	58.8	58.3	49.1	40.7	43.9	35.1	42.7	37.5
Fluoride	mg/L	0.22	<0.095	0.22	0.22	0.16	0.23	<0.48	<0.19
Field pH	Std. Units	7.57	7.53	7.61	7.62	7.66	7.82	7.67	7.85
Sulfate	mg/L	7	8.5	22.7	70.8	86	155	96.1	164
Total Dissolved Solids	mg/L	356	350	332	394	352	478	424	452
Antimony	ug/L	--	--	--	--	--	--	--	--
Arsenic	ug/L	--	--	--	--	--	--	--	--
Barium	ug/L	--	--	--	--	--	--	--	--
Beryllium	ug/L	--	--	--	--	--	--	--	--
Cadmium	ug/L	--	--	--	--	--	--	--	--
Chromium	ug/L	--	--	--	--	--	--	--	--
Cobalt	ug/L	--	--	--	--	--	--	--	--
Lead	ug/L	--	--	--	--	--	--	--	--
Lithium	ug/L	--	--	--	--	--	--	--	--
Mercury	ug/L	--	--	--	--	--	--	--	--
Molybdenum	ug/L	--	--	--	--	--	--	--	--
Selenium	ug/L	--	--	--	--	--	--	--	--
Thallium	ug/L	--	--	--	--	--	--	--	--
Total Radium	pCi/L	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	621	633.7	608	605.6	628	716	656	733
Oxygen, Dissolved	mg/L	1.27	0.15	0.12	0.25	0.11	0.59	0.16	0.07
Field Oxidation Potential	mV	61.4	0.3	91.5	-30.4	-27.1	-261.5	-42.2	--
Groundwater Elevation	feet	603.79	610	603.63	607.92	603.97	606.86	603.52	--
Temperature	deg C	13.9	13	13.3	12.7	13.7	12.5	13.8	--
Turbidity	NTU	0	0	0.72	1.23	0	2.84	0	0.47
pH at 25 Degrees C	Std. Units	8	7.7	7.9	7.8	7.7	8.5	8.3	8.1
REDOX	mV	--	--	--	--	--	--	--	76.2
Static Water Level	feet	--	--	--	--	--	--	--	605.79
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	13.2

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-11B
 Number of Sampling Dates: 25

Parameter Name	Units	12/9/2015	4/13/2016	7/19/2016	10/20/2016	1/12/2017	4/17/2017	6/8/2017	8/1/2017	10/19/2017	4/2/2018	10/9/2018	11/12/2018	4/22/2019	10/14/2019	4/13/2020	10/12/2020
Boron	ug/L	1140	1360	1210	1460	1540	1760	1880	1800	1500	2020	3620	--	6830	4630	5380	3350
Calcium	ug/L	64100	65400	59000	59100	63900	67400	68200	61400	52400	59000	66300	--	83300	91400	115000	91200
Chloride	mg/L	31.2	32.7	33.6	34.3	36.1	36.3	33.9	35.9	36.1	31.3	21.9	--	28.4	32.3	30.9	33.4
Fluoride	mg/L	0.44	0.49	0.45	0.53	0.52	0.58	0.59	0.6	0.59	0.65	0.61	--	0.64	0.62	<0.95	<0.095
Field pH	Std. Units	8.06	8.14	7.77	7.91	8.18	7.83	8.07	7.77	7.77	8.42	7.74	8.05	7.91	7.92	7.89	7.8
Sulfate	mg/L	134	148	165	178	182	181	191	179	175	200	197	--	303	339	378	388
Total Dissolved Solids	mg/L	494	512	520	496	488	502	516	498	510	550	602	594	742	728	872	906
Antimony	ug/L	0.32	<0.073	0.097	0.21	0.12	0.098	<0.15	<0.15	--	<0.15	--	--	--	--	--	--
Arsenic	ug/L	0.67	0.38	0.36	0.52	0.4	0.47	<0.28	<0.28	--	0.29	--	--	--	--	--	--
Barium	ug/L	147	153	128	130	145	151	151	132	--	128	--	--	--	--	--	--
Beryllium	ug/L	<0.13	<0.13	<0.13	<0.25	<0.13	<0.13	<0.18	<0.18	--	<0.18	--	--	--	--	--	--
Cadmium	ug/L	0.23	<0.089	<0.089	0.18	<0.089	<0.089	<0.081	<0.081	--	<0.081	--	--	--	--	--	--
Chromium	ug/L	0.7	0.74	<0.39	<0.39	<0.39	0.45	<1	<1	--	<1	--	--	--	--	--	--
Cobalt	ug/L	0.44	0.23	0.21	0.38	0.3	0.29	0.26	0.2	--	0.17	--	--	--	--	--	--
Lead	ug/L	0.45	<0.04	<0.04	0.36	0.083	0.061	<0.2	<0.2	--	<0.2	--	--	--	--	--	--
Lithium	ug/L	21.7	21.3	18.4	19.8	20	19.5	19.4	17	--	15.4	--	--	--	--	--	--
Mercury	ug/L	<0.1	<0.18	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	--	<0.13	--	--	--	--	--	--
Molybdenum	ug/L	46.2	51.7	48.7	48.1	52.6	53.8	55.1	55.9	--	77.7	--	--	--	--	--	--
Selenium	ug/L	0.46	<0.21	<0.21	0.28	<0.21	<0.21	<0.32	<0.32	--	<0.32	--	--	--	--	--	--
Thallium	ug/L	0.35	<0.14	<0.14	0.32	<0.14	<0.14	0.16	<0.14	--	0.16	--	--	--	--	--	--
Total Radium	pCi/L	0.862	1.69	0.977	0.534	0.787	0.643	1.05	2.21	--	1.02	--	--	--	--	--	--
Radium-226	pCi/L	0.733	0.0581	0.284	-0.487	-0.434	0.193	0.389	0.766	--	0.518	--	--	--	--	--	--
Radium-228	pCi/L	0.129	1.63	0.693	0.534	0.787	0.45	0.661	1.44	--	0.505	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	631	808	785	807	1342	799	534.3	776	709	671	954	863	1129	1132	1280	1348
Oxygen, Dissolved	mg/L	0.84	0.04	0.08	0.3	0.16	0.09	0.28	0.13	0.22	0.59	0.13	0.16	0.09	0.19	0.24	0.22
Field Oxidation Potential	mV	-50.9	-66.9	-69	-114.5	-135.7	-121.3	36.2	-81.1	93.7	116.3	13.2	45.8	207.8	-48.9	-57.9	225
Groundwater Elevation	feet	606.26	608.68	606.74	608.19	604.32	608.99	610.08	605.5	609.65	606.55	610.24	609.14	615.28	613.18	613.86	604.44
Temperature	deg C	14.4	14.3	14.6	14.6	14.1	14.2	14.1	14.5	14.8	13.5	14.8	14.1	13.6	14.3	13.5	14.3
Turbidity	NTU	--	0.21	0.01	0.33	0.38	0.36	0.7	0.07	1.01	0.78	2.98	2.65	0	1.5	0	0
pH at 25 Degrees C	Std. Units	7.7	7.8	7.8	8	7.9	7.9	8.1	7.9	7.7	8.1	7.9	--	7.9	7.8	7.8	7.9
REDOX	mV	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Static Water Level	feet	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-11B
 Number of Sampling Dates: 25

Parameter Name	Units	4/19/2021	10/7/2021	4/26/2022	10/18/2022	4/4/2023	10/3/2023	4/23/2024	10/7/2024	4/14/2025
Boron	ug/L	4440	2480	2590	3010	4740	5040	5630	3560	4780
Calcium	ug/L	93400	100000	97100	75100	84400	80600	171000	142000	130000
Chloride	mg/L	28.3	39.6	36.5	32.8	25.2	25.5	25.1	20.7	20
Fluoride	mg/L	0.36	<0.95	<0.48	0.47	0.65	<0.95	0.43	0.6	<0.95
Field pH	Std. Units	8.07	7.81	7.63	7.74	7.68	7.84	7.36	7.57	7.68
Sulfate	mg/L	379	466	513	429	436	403	435	405	438
Total Dissolved Solids	mg/L	910	884	1000	920	980	918	1010	954	966
Antimony	ug/L	--	--	--	--	--	--	--	--	--
Arsenic	ug/L	--	--	--	--	--	--	--	--	--
Barium	ug/L	--	--	--	--	--	--	--	--	--
Beryllium	ug/L	--	--	--	--	--	--	--	--	--
Cadmium	ug/L	--	--	--	--	--	--	--	--	--
Chromium	ug/L	--	--	--	--	--	--	--	--	--
Cobalt	ug/L	--	--	--	--	--	--	--	--	--
Lead	ug/L	--	--	--	--	--	--	--	--	--
Lithium	ug/L	--	--	--	--	--	--	--	--	--
Mercury	ug/L	--	--	--	--	--	--	--	--	--
Molybdenum	ug/L	--	--	--	--	--	--	--	--	--
Selenium	ug/L	--	--	--	--	--	--	--	--	--
Thallium	ug/L	--	--	--	--	--	--	--	--	--
Total Radium	pCi/L	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	1286	1337	1432	1395	1395	1346	1301	1279	1339
Oxygen, Dissolved	mg/L	0.13	1.29	0.22	0.22	0.32	0.3	1.17	0.34	0.44
Field Oxidation Potential	mV	44.7	46.9	45.4	104	128.7	40.6	-248.7	136.9	--
Groundwater Elevation	feet	608.67	603.74	609.98	603.57	607.9	603.91	606.66	603.46	--
Temperature	deg C	13.4	14	13	13.5	12.3	15.1	13.4	14.3	--
Turbidity	NTU	0	0	0	2.55	0	0	0.4	1.32	2.78
pH at 25 Degrees C	Std. Units	8	8	7.8	8	7.9	7.8	8.4	8.3	8.2
REDOX	mV	--	--	--	--	--	--	--	--	91.3
Static Water Level	feet	--	--	--	--	--	--	--	--	605.8
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	--	13.2

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-26
 Number of Sampling Dates: 24

Parameter Name	Units	12/9/2015	4/12/2016	7/19/2016	10/20/2016	1/12/2017	4/17/2017	6/7/2017	8/2/2017	10/19/2017	4/3/2018	10/8/2018	4/23/2019	10/15/2019	4/14/2020	10/13/2020	4/21/2021
Boron	ug/L	29.6	33.7	28.6	33	35.2	50.1	45.8	54.6	47.4	48	53.4	41.6	<3	66.1	63.6	63.6
Calcium	ug/L	81300	86200	82400	82700	89400	89000	105000	98100	102000	88100	78700	75300	<76.2	88500	76500	78700
Chloride	mg/L	45.5	51.3	55.6	52.8	54.5	56	59.6	52.6	79.3	54.4	33.2	40.8	30.5	54.9	35.3	42.6
Fluoride	mg/L	<0.2	<0.2	<0.2	0.13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	<0.095	<0.095
Field pH	Std. Units	7.35	7.43	7.14	7.19	7.57	7.54	7.22	7.21	7.5	7.64	7.2	7.1	7.24	7.27	7.34	7.27
Sulfate	mg/L	37.1	38	36.2	35	35	32.4	31	28.5	25.3	19.1	25.1	26.7	36	30.2	37	35.3
Total Dissolved Solids	mg/L	424	456	504	466	446	468	538	496	542	464	450	458	404	464	448	470
Antimony	ug/L	0.075	<0.073	0.16	0.2	0.24	0.087	<0.15	<0.15	--	<0.15	--	--	--	--	--	--
Arsenic	ug/L	0.49	0.54	0.49	0.59	0.6	0.5	0.39	0.5	--	0.36	--	--	--	--	--	--
Barium	ug/L	73.7	81.8	77.8	81.2	89.2	91	107	100	--	91.5	--	--	--	--	--	--
Beryllium	ug/L	<0.13	<0.13	<0.13	<0.13	0.13	<0.13	<0.18	<0.18	--	<0.18	--	--	--	--	--	--
Cadmium	ug/L	<0.089	<0.089	<0.089	0.13	0.15	<0.089	<0.081	<0.081	--	0.085	--	--	--	--	--	--
Chromium	ug/L	0.94	4.1	1.1	0.83	1	1.1	<1	<1	--	<1	--	--	--	--	--	--
Cobalt	ug/L	0.17	0.13	0.086	0.21	0.25	0.13	<0.085	0.13	--	<0.085	--	--	--	--	--	--
Lead	ug/L	0.057	<0.04	<0.04	0.15	0.2	0.079	<0.2	<0.2	--	0.3	--	--	--	--	--	--
Lithium	ug/L	2.1	2.1	1.9	2.2	2.5	2.1	2.2	2	--	2.1	--	--	--	--	--	--
Mercury	ug/L	<0.1	<0.18	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	--	<0.13	--	--	--	--	--	--
Molybdenum	ug/L	0.19	0.5	0.15	0.39	0.34	0.2	<0.44	<0.44	--	<0.44	--	--	--	--	--	--
Selenium	ug/L	0.69	0.67	0.98	1.1	0.99	1.5	1.5	1.4	--	1.4	--	--	--	--	--	--
Thallium	ug/L	<0.14	<0.14	<0.14	0.27	0.16	<0.14	<0.14	<0.14	--	<0.14	--	--	--	--	--	--
Total Radium	pCi/L	1.22	0.773	0.416	0.713	0.672	0.867	0.646	0.681	--	0.449	--	--	--	--	--	--
Radium-226	pCi/L	0.404	-0.058	-0.089	0.353	0	0.398	0.124	0.224	--	0.261	--	--	--	--	--	--
Radium-228	pCi/L	0.82	0.773	0.416	0.36	0.672	0.469	0.522	0.457	--	0.188	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	567	783	788	823	1394	800	575.9	836	786	655.2	661.9	815	753	852	782	778
Oxygen, Dissolved	mg/L	5.88	5.3	4.41	6.25	5.58	7.79	2.92	6.8	8.49	2.68	5.98	8.73	12.17	8.43	7.2	8.74
Field Oxidation Potential	mV	14.3	130.2	63.2	68.9	59.1	148.4	53.4	155.9	215.6	69.7	109.2	259.9	175.8	160.4	242.6	105.8
Groundwater Elevation	feet	606.8	609.81	606.09	608.84	604.52	608.59	611.25	607.39	608.84	606.49	610.34	615.49	613.1	613.76	604.92	608.55
Temperature	deg C	11.1	10.9	10.7	11.3	11.5	11.1	10.9	11.3	11.7	11.3	12	11.4	11.6	11.3	11.9	11
Turbidity	NTU	--	0.27	0.27	0.37	0.14	0.56	0.44	0.15	0.89	0.99	3.44	0	1.5	0	0	0
pH at 25 Degrees C	Std. Units	7.2	7.4	7.2	7.7	7.6	7.5	7.5	7.3	7.4	7.3	7.3	7.4	7.4	7.2	7.4	7.4
REDOX	mV	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Static Water Level	feet	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-26
 Number of Sampling Dates: 24

Parameter Name	Units	10/8/2021	4/25/2022	10/18/2022	4/5/2023	10/3/2023	4/24/2024	10/8/2024	4/15/2025
Boron	ug/L	48.4	52.5	48.8	38.6	44.8	44.8	35.9	44.8
Calcium	ug/L	84900	75900	80300	77400	85100	79600	84300	78600
Chloride	mg/L	39.1	45.3	37.4	29.1	50.2	43.5	44.2	49.8
Fluoride	mg/L	<0.095	<0.48	<0.095	<0.095	<0.095	0.16	0.11	<0.095
Field pH	Std. Units	7.18	7.19	7.15	7.05	7.47	7.23	7.19	7.3
Sulfate	mg/L	43.8	34.2	47.6	34.3	42.5	29.8	36	38.1
Total Dissolved Solids	mg/L	440	470	472	448	418	448	448	438
Antimony	ug/L	--	--	--	--	--	--	--	--
Arsenic	ug/L	--	--	--	--	--	--	--	--
Barium	ug/L	--	--	--	--	--	--	--	--
Beryllium	ug/L	--	--	--	--	--	--	--	--
Cadmium	ug/L	--	--	--	--	--	--	--	--
Chromium	ug/L	--	--	--	--	--	--	--	--
Cobalt	ug/L	--	--	--	--	--	--	--	--
Lead	ug/L	--	--	--	--	--	--	--	--
Lithium	ug/L	--	--	--	--	--	--	--	--
Mercury	ug/L	--	--	--	--	--	--	--	--
Molybdenum	ug/L	--	--	--	--	--	--	--	--
Selenium	ug/L	--	--	--	--	--	--	--	--
Thallium	ug/L	--	--	--	--	--	--	--	--
Total Radium	pCi/L	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	788	826	784	750	810	760	800	822
Oxygen, Dissolved	mg/L	9.4	10.44	9.51	9.56	8.35	9.28	9.75	8
Field Oxidation Potential	mV	122.1	252.4	93.9	142.4	106.3	31.4	47.5	--
Groundwater Elevation	feet	604.21	610.12	603.99	607.36	604.2	606.51	603.93	--
Temperature	deg C	11.4	11	11	10.9	11.2	11.1	11.6	--
Turbidity	NTU	0	0.3	0	0	0	3.11	1.6	1.64
pH at 25 Degrees C	Std. Units	7.7	7.4	7.6	7.4	7.2	8.6	8.3	8
REDOX	mV	--	--	--	--	--	--	--	109.6
Static Water Level	feet	--	--	--	--	--	--	--	606.8
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	11.3

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-31A
 Number of Sampling Dates: 24

Parameter Name	Units	12/9/2015	4/13/2016	7/19/2016	10/20/2016	1/12/2017	4/17/2017	6/8/2017	8/1/2017	10/19/2017	4/2/2018	10/9/2018	4/22/2019	10/14/2019	4/13/2020	10/12/2020	4/19/2021
Boron	ug/L	59	79.2	67.2	63.7	76.4	69.9	58.5	56.3	63.9	74.8	71.8	86.2	98.5	132	127	172
Calcium	ug/L	48400	51900	48900	45800	46600	46900	49400	46000	49600	49300	46600	48200	52200	50900	47700	52100
Chloride	mg/L	35.3	35.8	36.4	39	39.9	40.3	40.9	40.8	40.8	42.7	40.2	40.8	47.1	51	57.9	64.8
Fluoride	mg/L	<0.2	0.22	<0.2	0.18	0.22	0.19	0.18	0.2	0.16	0.13	0.17	0.22	0.22	0.19	0.18	0.14
Field pH	Std. Units	7.65	7.63	7.25	7.54	7.82	7.83	7.74	7.56	7.92	8	7.48	7.61	7.69	7.71	7.78	7.9
Sulfate	mg/L	26.2	22.6	24.2	27.2	29.8	31	31.2	26.6	26.1	27.4	24.8	21.6	22.3	16.6	16.8	15.8
Total Dissolved Solids	mg/L	274	302	280	292	284	318	296	284	290	282	278	284	272	298	300	330
Antimony	ug/L	<0.073	<0.073	0.14	0.084	<0.073	<0.073	<0.15	<0.15	--	<0.15	--	--	--	--	--	--
Arsenic	ug/L	1.6	1.6	1.4	1.5	1.5	1.3	1.3	1.2	--	1.3	--	--	--	--	--	--
Barium	ug/L	132	147	130	128	146	146	150	133	--	139	--	--	--	--	--	--
Beryllium	ug/L	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.18	<0.18	--	<0.18	--	--	--	--	--	--
Cadmium	ug/L	<0.089	<0.089	<0.089	<0.089	<0.089	<0.089	<0.081	<0.081	--	<0.081	--	--	--	--	--	--
Chromium	ug/L	<0.39	<0.39	<0.39	<0.39	<0.39	<0.39	9.4	<1	--	<1	--	--	--	--	--	--
Cobalt	ug/L	2.2	2.3	1.8	1.8	2	1.9	2.2	1.8	--	1.8	--	--	--	--	--	--
Lead	ug/L	0.08	<0.04	<0.04	0.05	<0.04	0.36	<0.2	<0.2	--	<0.2	--	--	--	--	--	--
Lithium	ug/L	0.83	0.91	0.77	0.97	0.98	0.97	0.94	0.93	--	0.86	--	--	--	--	--	--
Mercury	ug/L	<0.1	<0.18	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	--	<0.13	--	--	--	--	--	--
Molybdenum	ug/L	25.3	29.8	23.4	22.6	23.9	23.8	22.9	22.9	--	24.8	--	--	--	--	--	--
Selenium	ug/L	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.32	<0.32	--	<0.32	--	--	--	--	--	--
Thallium	ug/L	<0.14	<0.14	<0.14	0.2	<0.14	<0.14	<0.14	<0.14	--	<0.14	--	--	--	--	--	--
Total Radium	pCi/L	1.47	0.387	0.492	0.331	0.407	1.18	1.34	1.15	--	0.289	--	--	--	--	--	--
Radium-226	pCi/L	0.484	-0.152	-0.097	0	0	0.482	0.594	0.163	--	0.132	--	--	--	--	--	--
Radium-228	pCi/L	0.985	0.387	0.492	0.331	0.407	0.696	0.746	0.982	--	0.157	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	405	505.8	487.2	509.7	858	486	334.2	479.5	433.5	398.9	503.8	517	514	556	557.3	563
Oxygen, Dissolved	mg/L	0.88	0.04	0.18	0.34	0.13	0.14	0.25	0.12	0.23	0.14	0.1	0.13	0.12	0.24	0.19	0.18
Field Oxidation Potential	mV	-84.7	-106.2	-71.1	-113	-98.4	-55.2	-19.8	-77.3	97.1	-111.6	-75.8	-4.5	-60.5	-68.2	-55.9	79.6
Groundwater Elevation	feet	606.39	609.01	606.73	608.2	607.84	608.98	609.63	605.69	609.43	606.46	610.27	615.33	613.2	613.79	604.54	608.63
Temperature	deg C	15.1	15.4	15.3	15	14.6	14.8	14.7	14.9	14.9	14.4	15	13.9	14.2	13.6	13.9	13.5
Turbidity	NTU	--	0.36	0.63	0.38	0.21	0.37	0.66	0.17	1.25	0.42	2.83	0	2.66	0.75	1.11	0
pH at 25 Degrees C	Std. Units	7.4	7.3	7.6	7.8	7.3	7.7	7.8	7.6	7.5	7.7	7.7	7.6	7.7	7.7	7.7	7.8
REDOX	mV	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Static Water Level	feet	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-31A
 Number of Sampling Dates: 24

Parameter Name	Units	10/7/2021	4/26/2022	10/18/2022	4/4/2023	10/2/2023	4/23/2024	10/8/2024	4/14/2025
Boron	ug/L	178	198	213	193	191	187	197	184
Calcium	ug/L	53500	55300	45300	46100	48300	46000	45500	44200
Chloride	mg/L	60.3	56	53.9	50.4	55.7	51	50.5	52.6
Fluoride	mg/L	0.15	0.22	0.14	0.18	0.14	0.15	0.22	0.1
Field pH	Std. Units	7.44	7.82	7.63	7.59	7.67	7.74	7.73	7.85
Sulfate	mg/L	14.9	15.4	23	15.9	20	19	23.4	23.3
Total Dissolved Solids	mg/L	294	316	310	324	274	306	260	280
Antimony	ug/L	--	--	--	--	--	--	--	--
Arsenic	ug/L	--	--	--	--	--	--	--	--
Barium	ug/L	--	--	--	--	--	--	--	--
Beryllium	ug/L	--	--	--	--	--	--	--	--
Cadmium	ug/L	--	--	--	--	--	--	--	--
Chromium	ug/L	--	--	--	--	--	--	--	--
Cobalt	ug/L	--	--	--	--	--	--	--	--
Lead	ug/L	--	--	--	--	--	--	--	--
Lithium	ug/L	--	--	--	--	--	--	--	--
Mercury	ug/L	--	--	--	--	--	--	--	--
Molybdenum	ug/L	--	--	--	--	--	--	--	--
Selenium	ug/L	--	--	--	--	--	--	--	--
Thallium	ug/L	--	--	--	--	--	--	--	--
Total Radium	pCi/L	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	553	556	558.1	522.6	522.8	504.8	519	507.6
Oxygen, Dissolved	mg/L	1.35	0.17	0.18	0.36	0.27	0.11	0.12	0.17
Field Oxidation Potential	mV	23.5	59.6	31.7	-68	-32.3	-35.4	-61	--
Groundwater Elevation	feet	603.84	609.95	603.61	607.85	603.95	606.63	603.59	--
Temperature	deg C	13.5	13.2	13.2	12.9	13.4	13.3	13.5	--
Turbidity	NTU	0	0	0.94	1.17	0	0	1	2.5
pH at 25 Degrees C	Std. Units	7.9	7.6	7.9	7.9	7.7	8.6	8.4	8.2
REDOX	mV	--	--	--	--	--	--	--	91.2
Static Water Level	feet	--	--	--	--	--	--	--	606
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	13.6

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-31R
 Number of Sampling Dates: 25

Parameter Name	Units	12/9/2015	4/13/2016	7/19/2016	10/20/2016	1/12/2017	4/17/2017	6/8/2017	8/1/2017	10/19/2017	4/2/2018	10/9/2018	11/12/2018	4/22/2019	10/14/2019	4/13/2020	10/12/2020
Boron	ug/L	851	838	641	1020	749	929	895	1550	645	540	1430	--	906	915	730	702
Calcium	ug/L	77400	84900	76100	84200	73900	85600	90700	93400	75700	72900	125000	--	105000	110000	93800	95700
Chloride	mg/L	29.9	17.6	30.3	16.4	26	20.4	20.7	3.6	29	32.6	19.7	--	17.8	26	29.9	24.4
Fluoride	mg/L	<0.2	<0.2	<0.2	0.17	0.26	0.12	0.13	0.16	0.14	<0.1	<0.1	--	0.16	0.25	0.28	<0.48
Field pH	Std. Units	6.79	6.76	6.44	6.53	6.8	6.8	6.67	6.56	7.19	6.76	6.41	6.59	6.62	6.72	6.79	6.89
Sulfate	mg/L	28.8	34.1	38.5	49.7	34.9	43	41.1	55.6	19.2	22	186	162	121	146	89.4	49.4
Total Dissolved Solids	mg/L	374	404	406	452	380	416	426	432	358	374	668	596	516	480	464	462
Antimony	ug/L	0.47	0.15	0.21	0.24	0.18	0.22	<0.15	0.18	--	0.15	--	--	--	--	--	--
Arsenic	ug/L	0.47	0.24	0.37	0.37	0.22	0.29	<0.28	<0.28	--	<0.28	--	--	--	--	--	--
Barium	ug/L	86.2	93.5	85.3	92.6	86.7	91.1	93.9	97.4	--	72.1	--	--	--	--	--	--
Beryllium	ug/L	<0.13	<0.13	<0.13	<0.25	<0.13	<0.13	<0.18	<0.18	--	<0.18	--	--	--	--	--	--
Cadmium	ug/L	2.5	2.5	2	3	2.2	3	2.9	3.1	--	2	--	--	--	--	--	--
Chromium	ug/L	0.43	0.4	<0.39	<0.39	0.41	<0.39	<1	<1	--	<1	--	--	--	--	--	--
Cobalt	ug/L	3	3.5	5.4	5.2	6.6	3.1	2.3	4.4	--	3.3	--	--	--	--	--	--
Lead	ug/L	1.8	0.53	0.14	0.37	0.047	0.57	<0.2	<0.2	--	<0.2	--	--	--	--	--	--
Lithium	ug/L	18.6	18	18.1	22.3	21.4	21.7	21.4	22	--	16.2	--	--	--	--	--	--
Mercury	ug/L	<0.1	<0.18	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	--	<0.13	--	--	--	--	--	--
Molybdenum	ug/L	31.4	27.2	23.9	24.4	27.1	26.8	25.4	21.6	--	31.9	--	--	--	--	--	--
Selenium	ug/L	0.69	0.48	<0.21	0.29	0.63	0.96	<0.32	1.4	--	0.93	--	--	--	--	--	--
Thallium	ug/L	2.2	1.9	2	2.3	2.1	2.2	2.2	2	--	1.8	--	--	--	--	--	--
Total Radium	pCi/L	1.34	1.22	1.16	1.3	1.23	0.613	1.36	1.31	--	0.676	--	--	--	--	--	--
Radium-226	pCi/L	0.575	0.661	0.513	0.583	0.92	0.38	0.534	0.612	--	0.132	--	--	--	--	--	--
Radium-228	pCi/L	0.769	0.559	0.649	0.717	0.31	0.233	0.827	0.698	--	0.544	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	543	674	660	742	1100	637	465.4	697	519.6	476.8	1016	858	827	837	763	826
Oxygen, Dissolved	mg/L	2.36	0.07	0.09	0.33	0.21	0.16	0.21	0.27	0.21	0.45	0.12	0.19	0.1	0.1	0.14	0.22
Field Oxidation Potential	mV	77.6	36.2	-11	5.8	12.3	676	64.7	2.9	153	28	-0.5	1	94.2	20.7	7.3	-60.7
Groundwater Elevation	feet	607.4	609.34	606.55	608.51	608.37	607.2	610.5	606.84	609.47	604.44	610.39	609.11	615.01	612.5	613.8	604.66
Temperature	deg C	15.8	15	15.1	15.2	14.5	13.8	13.6	14.8	15	13.8	15.9	15	11.8	14.2	12	14
Turbidity	NTU	--	1.01	1.5	0.7	0.72	0.62	0.92	1.18	1.53	1.29	3.94	3.83	0	2.81	0.01	0
pH at 25 Degrees C	Std. Units	6.7	6.8	6.6	7.1	6.8	6.8	6.8	6.8	6.8	6.8	6.8	--	6.8	7	6.8	7.1
REDOX	mV	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Static Water Level	feet	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Single Location
Name: WPL - Nelson
Dewey

Location ID: B-31R
 Number of Sampling Dates: 25

Parameter Name	Units	4/19/2021	10/7/2021	4/25/2022	10/18/2022	4/4/2023	10/2/2023	4/23/2024	10/8/2024	4/14/2025
Boron	ug/L	621	353	454	327	589	519	659	845	862
Calcium	ug/L	91400	79000	81100	78500	88300	114000	89300	134000	93000
Chloride	mg/L	23.3	36.5	36	35.1	24.5	19.3	35.4	15.2	13.1
Fluoride	mg/L	0.19	0.22	<0.095	0.21	<0.48	0.14	0.31	0.31	<0.19
Field pH	Std. Units	6.91	6.63	6.77	6.83	6.62	6.82	6.73	6.6	6.66
Sulfate	mg/L	45.3	24.9	60	29.6	50	103	113	187	71.4
Total Dissolved Solids	mg/L	454	372	428	386	440	536	506	666	454
Antimony	ug/L	--	--	--	--	--	--	--	--	--
Arsenic	ug/L	--	--	--	--	--	--	--	--	--
Barium	ug/L	--	--	--	--	--	--	--	--	--
Beryllium	ug/L	--	--	--	--	--	--	--	--	--
Cadmium	ug/L	--	--	--	--	--	--	--	--	--
Chromium	ug/L	--	--	--	--	--	--	--	--	--
Cobalt	ug/L	--	--	--	--	--	--	--	--	--
Lead	ug/L	--	--	--	--	--	--	--	--	--
Lithium	ug/L	--	--	--	--	--	--	--	--	--
Mercury	ug/L	--	--	--	--	--	--	--	--	--
Molybdenum	ug/L	--	--	--	--	--	--	--	--	--
Selenium	ug/L	--	--	--	--	--	--	--	--	--
Thallium	ug/L	--	--	--	--	--	--	--	--	--
Total Radium	pCi/L	--	--	--	--	--	--	--	--	--
Radium-226	pCi/L	--	--	--	--	--	--	--	--	--
Radium-228	pCi/L	--	--	--	--	--	--	--	--	--
Field Specific Conductance	umhos/cm	747	649	728	711	698	898	750	1019	725
Oxygen, Dissolved	mg/L	0.12	1.81	0.38	0.45	0.18	0.19	0.19	0.32	0.87
Field Oxidation Potential	mV	16.3	16.7	-25.3	-28.4	95	-36.7	-14.6	-56	--
Groundwater Elevation	feet	608.66	603.98	610.27	603.69	607.88	603.98	606.61	603.72	--
Temperature	deg C	12.1	13.8	11.3	12.7	11.9	14.2	12.8	14.5	--
Turbidity	NTU	11.39	0	3.68	1.27	2.38	4.56	0.27	3.09	2.5
pH at 25 Degrees C	Std. Units	6.9	7.3	6.9	7.3	7	6.8	8.6	7.8	7.5
REDOX	mV	--	--	--	--	--	--	--	--	38.7
Static Water Level	feet	--	--	--	--	--	--	--	--	606.34
Temperature, Water (C)	deg C	--	--	--	--	--	--	--	--	12.8



Appendix E
Alternative Source Demonstration Reports

E1 Alternative Source Demonstration, October 2024 Detection Monitoring

Alternative Source Demonstration October 2024 Detection Monitoring

Slag Pond
Nelson Dewey Generating Station
Cassville, Wisconsin

Prepared for:



SCS ENGINEERS

25224071.00 | May 7, 2025

2830 Dairy Drive
Madison, WI 53718-6751
608-224-2830

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- Appendix B 1994 RMT Environmental Contamination Assessment Information
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PE CERTIFICATION

	<p>I, Sherren Clark, hereby certify that the information in this alternative source demonstration is accurate and meets the requirements of 40 CFR 257.94(e)(2). This certification is based on my review of the groundwater data and related site information available for the Nelson Dewey Generating Station Slag Pond facility. I am a duly licensed Professional Engineer under the laws of the State of Wisconsin.</p>	
		<p>5-7-2025</p>
	(signature)	(date)
	<p>Sherren Clark</p>	
	<p>(printed or typed name)</p>	
	<p>License number <u>E-29863</u></p>	
	<p>My license renewal date is July 31, 2026.</p>	
<p>Pages or sheets covered by this seal:</p>		
<p>Alternative Source Demonstration, October 2024</p>		
<p>Detection Monitoring – Slag Pond</p>		
<p>Nelson Dewey Generating Station, Cassville</p>		
<p>(Entire Document)</p>		

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1.0 INTRODUCTION

This Alternative Source Demonstration (ASD) was prepared to support compliance with the groundwater monitoring requirements of the “Coal Combustion Residuals (CCR) Final Rule” published by the U.S. Environmental Protection Agency (U.S. EPA) in the *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*, dated April 17, 2015 (U.S. EPA, 2015), and subsequent amendments. Specifically, this report was prepared to fulfill the requirements of 40 CFR 257.94(e)(2). The applicable sections of the Rule are provided below in *italics*.

1.1 §257.94(E)(2) ALTERNATIVE SOURCE DEMONSTRATION REQUIREMENTS

The owner and operator may demonstrate that a source other than the CCR Unit caused the statistically significant increase over background levels for a constituent or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The owner or operator must complete the written demonstration within 90 days of detecting a statistically significant increase over background levels.

An ASD is completed when there are exceedances of one or more benchmarks established within the groundwater monitoring program to determine if any other sources are likely causes of the identified exceedance(s) of established benchmark(s) at the site. This ASD was performed in response to results indicating a statistically significant increase (SSI) over background levels during detection monitoring under the CCR Rule.

This ASD report evaluates the SSIs observed in the statistical evaluation of the October 2024 detection monitoring event at the Nelson Dewey Generating Station (NED). The first ASD prepared for this facility evaluated the SSIs observed in the statistical evaluation of the October 2017 detection monitoring event (SCS Engineers [SCS], 2018). The October 2017 ASD and subsequent semiannual updates have included several lines of evidence demonstrating that SSIs reported for Appendix III parameters in the downgradient monitoring wells were likely due to man-made sources other than the slag pond CCR Unit and/or naturally occurring constituents in the alluvial aquifer. The conclusions of this ASD are consistent with previous ASDs.

1.2 SITE INFORMATION AND MAP

The NED site is located along the east bank of the Mississippi River, north of the Village of Cassville, in Grant County, Wisconsin (**Figure 1**). The facility includes a decommissioned coal-fired generating plant, a CCR landfill that was closed in 2001, a closed Slag Pond, and a closed wastewater treatment pond. The layout of the site on an aerial photograph base is shown on **Figure 2**. The closed landfill at the NED facility was permitted under Wisconsin Department of Natural Resources (DNR) License #02525.

The existing CCR Unit evaluated for this ASD is:

- Slag Pond (existing surface impoundment – closed January 2018)

A map showing the CCR Unit and all background (or upgradient) and downgradient monitoring wells with identification numbers for the CCR groundwater monitoring program and the state monitoring program is provided on **Figure 3**.

Operations at the facility began in the late 1950s, and a CCR impoundment that included what is now the Slag Pond closure area was commissioned at that time. The CCR landfill was initially licensed in 1976 and received fly ash from NED until it was closed in phases between 1996 and 2001. The CCR landfill was initially operated as a fly ash sluice basin, then transitioned to dry ash placement prior to closure. The wastewater ponds, now closed, were constructed in 1976 for the purpose of settling CCR from the NED process wastewater streams and sediment from storm water runoff prior to discharge. Both NED generating units were retired on December 31, 2015, and have since been decommissioned. The generating station was demolished in 2017. Closure of the slag pond was completed in January 2018.

1.3 STATISTICALLY SIGNIFICANT INCREASES IDENTIFIED

The statistical evaluation was completed in accordance with 40 CFR 257.93(f)(3) using a prediction interval procedure, in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper prediction limit (UPL). The initial evaluation was based on an interwell comparison. The UPLs were calculated based on a 1-of-2 resampling approach. The UPLs and the analytical results for the October 2024 monitoring event are summarized in the attached **Table 1**.

The initial evaluation indicated that the October 2024 monitoring event results represent an SSI over background for the following parameters and wells:

- Boron: B-7R, B-11A, B-11B, B-11R, B-31A, B-31R
- Calcium: B-11B, B-11R, B-31R
- Field pH: B-11A, B-31A
- Sulfate: B-7R, B-11A, B-11B, B-11R, B-31R
- Total Dissolved Solids (TDS): B-11B, B-11R, B-31R

The SSIs are generally consistent with SSIs identified in previous detection monitoring results.

1.4 OVERVIEW OF ALTERNATIVE SOURCE DEMONSTRATION APPROACH

This ASD report includes:

- Background information (**Section 2.0**).
- Evaluation of potential that SSIs are due to methodology or analysis (**Section 3.0**).
- Evaluation of potential that SSIs are due to natural sources or man-made sources other than the CCR Units (**Section 4.0**).
- ASD conclusions (**Section 5.0**).
- Monitoring recommendations (**Section 6.0**).

Historical monitoring results from background and compliance sampling for the CCR Rule constituents with SSIs are provided in **Table 2**. The laboratory report for the October 2024 event will be included in the 2025 Annual Groundwater Monitoring and Corrective Action Report to be completed in January 2026. Complete laboratory reports for the background monitoring events and previous detection monitoring events were included in the previous annual groundwater monitoring and corrective action reports.

2.0 BACKGROUND

To provide context for the ASD evaluation, the following background information is provided in this section of the report, prior to the ASD evaluation sections:

- Geologic and hydrogeologic setting
- CCR Rule monitoring system
- Other monitoring wells

A more detailed discussion of the background information for the site is provided in the ASD for the October 2017 event (SCS, 2018).

2.1 GEOLOGIC AND HYDROGEOLOGIC SETTING

2.1.1 Regional Information

The uppermost geologic formation beneath the NED site is the surficial alluvial aquifer. The alluvial aquifer consists of Mississippi River valley sand and gravel deposits, and is the uppermost aquifer as defined in section 257.53 of the CCR Rule. This deposit is prevalent along the edges of the entire Mississippi River valley in southwestern Wisconsin.

The alluvial aquifer is underlain by dolomitic bedrock of the Prairie du Chien Group. The dolomite bedrock is also an aquifer and is likely hydraulically connected to the alluvial aquifer above.

Regionally, groundwater flow is generally to the southwest and discharges to the Mississippi River.

Additional details on the regional geology were provided in the October 2017 ASD (SCS, 2018).

2.1.2 Site Information

The thickness of the alluvium in the immediate vicinity of the site is over 125 feet, as evidenced by local water supply well logs (SCS, 2018). These logs are also evidence that the alluvial aquifer yields useable quantities of groundwater for supply wells in the area. Soil boring logs for monitoring wells installed at the site also generally indicate sand and gravel soils within the monitored depths.

The groundwater flow direction in the vicinity of the plant is generally southwest toward the Mississippi River, except when influenced by high river levels as discussed below. Historically, infiltration at the former Slag Pond, the former fly ash basin, and the former Wisconsin Pollutant Discharge Elimination System (WPDES) ponds caused groundwater mounding to be present around these features; however, these ponds have now all been closed and are no longer sources of infiltration.

While site water level measurements typically indicate that groundwater flow is to the southwest, discharging to the Mississippi River, the local flow directions are influenced by changes in the river level. During periods of high river water levels, the flow temporarily reverses, and the river discharges to the shallow sand and gravel aquifer. The groundwater flow direction during the October 2024 detection monitoring event was generally to the south and west, toward the Mississippi River (**Figure 4**). The groundwater elevations are provided in **Table 3**. The groundwater elevations measured in October 2024 were the lowest recorded in the last 10 years at several wells, and the second lowest at others. The surface water elevation of the Mississippi River as measured from SG-12 was the lowest recorded since the point was established in 2018 (**Table 3**).

2.2 COAL COMBUSTION RESIDUALS RULE MONITORING SYSTEM

The groundwater monitoring system established in accordance with the CCR Rule consists of one upgradient (background) monitoring well and six downgradient monitoring wells. The background well is B-26. The downgradient wells include B-7R, B-11A, B-11B, B-11R, B-31A, and B-31R. The CCR Rule wells are installed within the surficial alluvium aquifer. Well depths range from approximately 23 to 114 feet, measured from the top of the well casing.

2.3 OTHER MONITORING WELLS

There are several additional groundwater monitoring wells at the NED facility that are part of the monitoring system developed for the state monitoring program. All of the wells included in the CCR monitoring well network were already in use for the state monitoring program. The well locations are shown on **Figure 3**. The state program monitoring wells and two private wells are used to monitor groundwater conditions at the site under DNR License Number 2525, which includes the closed CCR landfill and the closed Slag Pond. Monitoring wells for the state monitoring program are installed in the surficial sand and gravel aquifer, which is the uppermost aquifer as defined under 40 CFR 257.53.

3.0 METHODOLOGY AND ANALYSIS REVIEW

To evaluate the potential that an SSI is due to a source other than the regulated CCR Unit, SCS used a two-step evaluation process. First, the sample collection, field and laboratory analysis, and statistical evaluation were reviewed to identify any potential error or analysis that led to an exceedance of the benchmark. Second, potential alternative sources, including natural variation and man-made sources other than the CCR Unit, were evaluated. This section of the report provides the findings of the methodology and analysis review. **Section 4.0** of the report addresses the potential alternative sources.

3.1 SAMPLING AND FIELD ANALYSIS REVIEW

Field notes and sampling results were reviewed to determine if a sampling error may have caused or contributed to the observed SSIs. Potential field sampling errors or issues could include mislabeling of samples, improper sample handling, missed holding times, cross contamination during sampling, or other field error. Field blank sample results were also reviewed for any indication of potential contamination from sampling equipment or containers. Based on the review of the field notes and results, SCS did not identify any indication that the SSIs were due to a sampling error.

SCS did not identify any issues with the field sampling or field analysis based on review of the data and field notes.

3.2 LABORATORY ANALYSIS REVIEW

The laboratory reports for the October 2024 detection monitoring events were reviewed to evaluate whether any laboratory analysis error or issue may have caused or contributed to the observed SSIs. The laboratory report review included reviewing the laboratory quality control flags and narrative, verifying that correct methods were used and desired detection limits were achieved, and checking the field and laboratory blank sample results. Laboratory reports for the background monitoring events were reviewed for the October 2017 ASD. Laboratory reports for subsequent detection monitoring events were reviewed as part of the ASD preparation for each event.

Based on the review of the laboratory reports, SCS did not identify any indication that any SSI was due to a laboratory analysis error. There were no laboratory quality control flags or issues identified

in the laboratory reports that affect the usability of the data for detection monitoring; however, some results were flagged by the laboratory as follows:

- Sampling results for monitoring wells B-11R, B-11A, and B-11B included D3 flags for fluoride, and the sampling result for monitoring well B-7R included D3 flags for both fluoride and chloride. D3 flags indicate the samples were diluted due to the presence of high levels of non-target analytes or other matrix interference. The detection limits for the results with the D3 flag were elevated due to the dilution, but were similar to previously reported detection limits for the same wells. The detected parameters were within the range of previously observed results, and there was no indication that the dilution required for analysis affected the usability of the groundwater data.
- Sampling results for B-26 included M0 flags for both chloride and sulfate, indicating that the matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits. The matrix spike duplicate percent recovery for these parameters at B-26 were slightly higher than the recommended percent recovery limits. This is not expected to affect the reliability of the sample results.
- Sampling results for the field blank included a 1q flag for TDS, indicating that the analyte was measured in the associated method blank at a concentration of -10 mg/L. The TDS concentration in the field blank was below the limit of detection, which is the expected result for TDS in lab-supplied blank water.

Based on this review of the laboratory flags, the laboratory results were accepted as usable data.

Time series plots for the parameters with SSIs were also reviewed for any anomalous results that might indicate a possible sampling or laboratory error (e.g., dilution error or incorrect sample labeling). The time series plots are provided in **Appendix A**. None of the time series plots included anomalous results that appeared to indicate a sampling or laboratory error. An increase in calcium, sulfate, and TDS concentrations was noted at wells B-7R, B-11R, and B-11A between the April 2024 and October 2024 events. Given the low water table conditions noted in **Section 2.1.2**, higher concentrations of these parameters may reflect lower than typical infiltration of precipitation.

3.3 STATISTICAL EVALUATION REVIEW

The review of the statistical results and methods included a quality control check of the following:

- Input analytical data vs. laboratory analytical reports
- Statistical method and process for each SSI

Based on the review of the statistical evaluation, SCS did not identify any errors or issues in the statistical evaluation that caused or contributed to the determination of interwell SSIs at the downgradient monitoring wells.

3.4 SUMMARY OF METHODOLOGY AND ANALYSIS REVIEW FINDINGS

In summary, there were no changes to the SSI determinations for the October 2024 detection monitoring events based on the methodology and analysis review. No errors or issues causing or contributing to the reported SSIs were identified.

4.0 ALTERNATIVE SOURCES

This section of the report discusses the potential alternative sources for the SSI constituents at the downgradient wells, identifies the most likely alternative source(s), and presents the lines of evidence indicating that an alternative source is the most likely cause of the observed SSIs.

4.1 POTENTIAL CAUSES OF STATISTICALLY SIGNIFICANT INCREASES

4.1.1 Natural Variation

The statistical analysis was completed using an interwell approach, comparing the October 2024 detection monitoring results to the UPLs calculated based on sampling of the background well (B-26). If concentrations of a constituent that is naturally present in the aquifer vary spatially, then the potential exists that the downgradient concentrations may be higher than upgradient concentrations due to natural variation.

Although natural variation is present in the shallow aquifer, it does not appear likely that natural variation is the primary source causing the boron, field pH, sulfate, and TDS SSIs. These parameters were detected at higher concentrations than would likely be present naturally.

Natural variation may have caused or contributed to the SSIs for calcium at B-11B, B-11R, and B-31R. As discussed in **Section 2.1.1**, the alluvial aquifer is underlain by dolomitic bedrock of the Prairie du Chien Group. The dolomite aquifer is also present in the bluffs northeast of the site, and groundwater from the dolomite likely discharges to the alluvial aquifer. Calcium is a typical constituent of groundwater in dolomite aquifers. The calcium concentrations in upgradient well B-26 have exceeded those in at least three of the downgradient wells, suggesting that natural variability may contribute to the calcium concentrations observed in the downgradient monitoring wells.

4.1.2 Man-Made Alternative Sources

Man-made alternative sources that could potentially contribute to the boron, calcium, field pH, sulfate, and TDS SSIs could include the closed CCR landfill, the coal storage area, or other plant operations. Based on the groundwater flow directions and on previous investigations at the site, the closed landfill appears to be the most likely man-made cause of the SSIs for the downgradient wells B-7R, B-11A, B-11B, B-11R, B-31A, and B-31R.

4.2 LINES OF EVIDENCE

The lines of evidence indicating that the SSIs for boron, calcium, field pH, sulfate, and TDS in one or more compliance wells relative to the background well are more likely due to the closed landfill and prior fly ash sluicing than to the Slag Pond include:

1. A previous Environmental Contamination Assessment completed for the ash disposal facility indicated that the fly ash sluicing and landfill were the primary source of the groundwater impacts in the area, based on multiple lines of evidence.
2. Sampling performed in preparation for the Slag Pond closure indicated that the slag and the Slag Pond sediment had little potential to cause the SSIs for boron, sulfate, and TDS.
3. Past and current groundwater monitoring performed under the state monitoring program show that groundwater quality has improved since the 1990s in response to termination of fly ash sluicing and closure and capping of the ash landfill. Recent concentration increases at some

wells in the state monitoring program appear to be attributable to the closed CCR landfill source and to changes in groundwater flow at the site in response to closure of the Slag Pond.

The data supporting these lines of evidence are discussed below. Most of these lines of evidence and the supporting data were discussed in detail in the ASD for the October 2017 detection monitoring event (SCS, 2018) for the same parameters, with the exception of TDS. For lines of evidence included in previous ASDs, the discussion focuses on any updated information collected since the previous ASD, with references to the previous ASD for additional details.

4.2.1 Previous CCR Pond and Landfill Study

A previous investigation titled *Environmental Contamination Assessment: Nelson Dewey Generating Station Ash Disposal Facility*, completed by RMT in 1994, found that groundwater impacts were associated with disposal of fly ash in the now-closed CCR landfill located immediately north of the Slag Pond (**Figure 3**). The purpose of the 1994 Environmental Contamination Assessment (ECA) was to investigate the impacts to groundwater at the NED landfill. The ECA was used to evaluate the feasibility of possible remedial alternatives. The remedial alternative that was ultimately selected was to convert the plant to dry fly ash handling.

The primary lines of evidence from the 1994 report that support the current ASD for boron, calcium, field pH, sulfate, and TDS include:

- Water leaching tests for ash and slag indicated that boron and sulfate concentrations in the slag leachate were orders of magnitude lower than in the fly ash leachate (**Appendix B, Table 5**). Higher pH values were also reported for leach samples of Western coal fly ash in 1990 to 1992 than for the slag samples.
- Surface water samples from the then active fly ash sluice pond and the Slag Pond indicated that boron and sulfate concentrations in the Slag Pond were one or more orders of magnitude lower than in the ash sluice pond. The surface water pH measurement was also higher in the ash sluice pond. The surface water boron and sulfate concentrations in the Slag Pond were higher than leach test results, which was attributed to infiltration of ash sluice pond water through the berm between the ponds into the Slag Pond (**Appendix B, Table 6**).
- Groundwater sampling at monitoring wells B-38 and B-38A (now abandoned), which were installed through and screened below the ash disposal area (now closed landfill), indicated that groundwater affected by ash sluicing was characterized by high pH and elevated concentrations of boron, fluoride, sulfate, and TDS (**Appendix B, Site Map, and Table 8**).

Although calcium was not included in the historical state groundwater monitoring program or evaluated in the 1994 report, hardness was monitored and provides an indication of relative calcium concentrations. Surface water samples from the then active ash sluice pond and the Slag Pond indicated that hardness in the Slag Pond was lower than in the ash sluice pond (**Appendix B, Table 6**). These results suggest that if the calcium SSI is not solely due to natural variation, then the closed CCR landfill is the most likely man-made source of calcium.

The results of the 1994 ECA were reported to DNR in November 1994. The ECA investigation was then used for a feasibility study to determine appropriate ash disposal operation on site. Following the ECA, the plant converted to a dry ash handling system. Dry ash was placed in the CCR landfill

through the 1990s, and the landfill was capped and closed in phases in 1996 through 2001. After that time, fly ash was not disposed of at the facility.

4.2.2 Slag Pond Closure Sampling Results

Results of leaching test analysis performed for slag, ash, soil, and sediment were submitted as part of a Low Hazard Exemption Request to the DNR in March 2017 (SCS, 2017). The Exemption Request was submitted as part of the Closure Plan for the site and requested DNR approval to consolidate materials from decommissioning activities in the Slag Pond and Slag Handling Area, which would then be capped with a composite final cover system. The sediment and soil samples were collected to characterize the materials that would remain on site under the Closure Plan. Leaching tests were performed using ASTM water leach test methods. The leaching test analytical results for parameters with SSIs that were included in the leaching test program (boron, sulfate, and TDS) are summarized in **Appendix C**.

The sampling results in the Exemption Request indicated that the materials to be consolidated and capped were not likely to cause groundwater standard exceedances for boron, fluoride, sulfate, or TDS. The leach test results for slag, Slag Pond sediment, and soil in the Slag Handling Area were below the state groundwater standards for boron, fluoride, and sulfate. The parameter TDS does not currently have a state standard but the leach test results for slag, Slag Pond sediment, and soil in the Slag Handling Area were all below the calculated TDS UPL for the site (**Table 1** and **Appendix C**). The boron, sulfate, and TDS results were also below the concentrations in the downgradient CCR wells with SSIs, and well below the historical results for former well B-38, which was located within the CCR landfill area, upgradient from the Slag Pond (**Appendix B, Table 8**).

The Low Hazard Exemption was granted by the DNR based on the sampling results and other information presented.

4.2.3 State Program Groundwater Monitoring Results

Past and current groundwater monitoring performed under the state monitoring program shows that groundwater quality has improved substantially since the 1990s in response to termination of fly ash sluicing and closure and capping of the ash landfill (SCS, 2018). The long-term trends show that concentrations of boron and sulfate in groundwater have decreased or stabilized since termination of fly ash sluicing and closure of the landfill, in some cases by an order of magnitude or more. Graphs showing historical boron and sulfate trends in state monitoring wells were included in the Biennial Groundwater Monitoring Report for 2022-2023 dated January 31, 2024 (SCS Engineers, 2024). The results suggest that current pH levels and boron, sulfate, and TDS concentrations likely represent residual contamination from historical ash disposal in the CCR landfill area. Increases in boron, sulfate, and TDS concentrations at B-11B beginning in 2018 appear to be attributable to the closed CCR landfill and to changes in groundwater flow at the site related to a decrease in the volume of water discharged to the Slag Pond and subsequent closure of the Slag Pond. Concentrations of boron in samples from B-11B increased to a peak in April 2019 and have been lower since that event. Sulfate concentrations in samples from B-11B peaked in April 2022 and have been lower since that event. A summary of state analytical groundwater results is provided in **Table 4**.

5.0 ALTERNATIVE SOURCE DEMONSTRATION CONCLUSIONS

The lines of evidence discussed above regarding the SSIs reported for boron, calcium, field pH, sulfate, and TDS results in downgradient monitoring wells demonstrate that the SSIs are likely primarily due to sources other than the closed Slag Pond. The SSIs for boron, calcium, field pH,

sulfate, and TDS appear to be due to historical ash disposal in the closed CCR landfill, which is not subject to the requirements of 40 CFR 257.50-107. The landfill is regulated by the DNR under the solid waste program (License 02525). Natural variation in groundwater quality in the aquifer may also contribute to the SSIs for calcium.

6.0 SITE GROUNDWATER MONITORING RECOMMENDATIONS

In accordance with section 257.94(e)(2) of the CCR Rule, the NED Slag Pond site may continue with detection monitoring based on this ASD. The ASD report will be included in the 2025 Annual Report due January 31, 2026.

7.0 REFERENCES

RMT, 1994, Environmental Contamination Assessment: Nelson Dewey Generating Station Ash Disposal Facility, November 1994.

SCS Engineers, 2017, Low Hazard Exemption Request, Nelson Dewey Generating Station, Cassville, WI, March 2017.

SCS Engineers, 2018, 2017 Alternative Source Demonstration, October 2017 Monitoring Event, Nelson Dewey Generating Station, April 2018.

SCS Engineers, 2024, Biennial Groundwater Monitoring Report for 2022-2023, Wisconsin Power and Light Company – Nelson Dewey Ash Disposal Facility, Cassville, WI, January 31, 2024.

U.S. Environmental Protection Agency (U.S. EPA), 2015, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule, April 2015.

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Tables

- 1 Groundwater Analytical Results Summary – October 2024
- 2 Historical Analytical Results for Parameters with SSIs
- 3 Water Level Summary
- 4 Analytical Results – State Monitoring Program

**Table 1. Groundwater Analytical Results Summary
Nelson Dewey Slag Pond, Cassville, WI / SCS Engineers Project #25224071.00**

Parameter Name	UPL	Background Well	Compliance Wells					
		B-26	B-7R	B-11A	B-11B	B-11R	B-31A	B-31R
		10/8/2024	10/7/2024	10/7/2024	10/7/2024	10/7/2024	10/8/2024	10/8/2024
Groundwater Elevation, ft amsl		603.93	604.02	603.52	603.46	603.54	603.59	603.72
Appendix III								
Boron, ug/L	70.5	35.9	139	471	3,560	2420	197	845
Calcium, ug/L	104,000	84,300	83,500	57,000	142,000	152,000	45,500	134,000
Chloride, mg/L	72.7	44.2 M0	7.8 J, D3	42.7	20.7	19.9	50.5	15.2
Fluoride, mg/L	0.2	0.11 J	<0.48 D3	<0.48 D3	0.60 J, D3	<0.48 D3	0.22 J	0.31 J
Field pH, Std. Units	7.64	7.19	6.40	7.67	7.57	6.74	7.73	6.6
Sulfate, mg/L	47.1	36 M0	157	96.1	405	162	23.4	187
Total Dissolved Solids, mg/L	536	448	398	424	954	766	260	666

7.81 Blue shaded cell indicates the compliance well result exceeds the UPL (background) and the Limit of Quantitation (LOQ).

Abbreviations:

UPL = Upper Prediction Limit ug/L = micrograms per liter LOD = Limit of Detection Std. Units = Standard Units
 SSI = Statistically Significant Increase mg/L = milligrams per liter LOQ = Limit of Quantitation ft amsl = feet above mean sea level

Lab Notes:

J = Estimated concentration at or above the LOD and below the LOQ.
 D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
 M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Notes:

1. An individual result above the UPL may not constitute an SSI above background. See the accompanying letter text for identification of statistically significant results.
2. Interwell UPLs calculated based on results from background well B-26. UPLs are based on a 1-of-2 retesting approach.
3. Interwell UPLs updated July 2023 based on background well results from December 2015 through April 2023.

Last revision by: BLR Date: 11/14/2024
 Checked by: BAS Date: 11/25/2024

I:\25224071.00\Deliverables\2024 October ASD NED\Tables\[Table 1_2410_NED_CCR GW Screening Summary.xlsx]Current Event - Updated UPL

Table 2. Historical Analytical Results for Parameters with SSIs
Nelson Dewey Generating Station - Cassville, Wisconsin / SCS Engineers Project #25224071.00

Well Group	Well	Collection Date	Boron (µg/L)	Calcium (µg/L)	Field pH (Std. Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
Background	B-26	12/9/2015	29.6	81,300	7.35	37.1	424
		4/12/2016	33.7	86,200	7.43	38.0	456
		7/19/2016	28.6	82,400	7.14	36.2	504
		10/20/2016	33.0	82,700	7.19	35.0	466
		1/12/2017	35.2	89,400	7.57	35.0	446
		4/17/2017	50.1	89,000	7.54	32.4	468
		6/7/2017	45.8	105,000	7.22	31.0	538
		8/2/2017	54.6	98,100	7.21	28.5	496
		10/19/2017	47.4	102,000	7.50	25.3	542
		4/2/2018	48.0	88,100	7.64	19.1	464
		10/8/2018	53.4	78,700	7.20	25.1	450
		4/22/2019	41.6	75,300	7.10	26.7	458
		10/15/2019	<3.00	<76.2	7.24	36.0	404
		4/14/2020	66.1	88,500	7.27	30.2	464
		10/13/2020	63.6	76,500	7.34	37.0	448
		4/21/2021	63.6	78,700	7.27	35.3	470
		10/8/2021	48.4	84,900	7.18	43.8	440
		4/25/2022	52.5	75,900	7.19	34.2	470
		10/18/2022	48.8	80,300	7.15	47.6	472
		4/5/2023	38.6	77,400	7.05	34.3	448
10/3/2023	44.8	85,100	7.47	42.5	418		
4/24/2024	44.8	79,600	7.23	29.8	448		
10/8/2024	35.9	84,300	7.19	36 M0	448		
Compliance	B-11A	12/9/2015	124	58,800	7.70	3.20 J	338
		4/13/2016	116	60,100	7.75	3.80 J	362
		7/19/2016	104	54,000	7.42	2.70 J	336
		10/19/2016	112	54,600	7.47	3.00 J	340
		1/12/2017	106	54,500	7.89	2.30 J	322
		4/17/2017	100	54,800	7.38	<1.00	326
		6/8/2017	102	57,800	7.78	1.40 J	338
		8/1/2017	105	54,500	7.67	2.40 J	326
		10/19/2017	116	55,000	7.96	5.10	322
		4/2/2018	91.0	53,300	8.04	12.3 M0	336
		10/9/2018	94.2	48,600	7.43	6.00	332
		4/22/2019	93.9	60,400	7.62	1.90 J	386
		10/14/2019	80.7	56,600	7.66	<1.00	348
		4/13/2020	86.3	57,500	7.75	1.40 J	394
		10/12/2020	99.3	55,600	7.74	1.00 J	364
		4/19/2021	88.1	50,600	7.65	2.9	366
		10/8/2021	85.4	51,400	7.57	7.0	356
		4/26/2022	88.6	51,600	7.53	8.5	350
		10/18/2022	95.2	46,000	7.61	22.7	332
		4/4/2023	119	51,700	7.62	70.8	394
	10/3/2023	231	60,300	7.66	86.0	352	
	4/24/2024	715	63,900	7.82	155	478	
	10/7/2024	471	57,000	7.67	96.1	424	
	B-11B	12/9/2015	1,140	64,100	8.06	134	494
		4/13/2016	1,360	65,400	8.14	148	512
		7/19/2016	1,210	59,000	7.77	165	520
		10/20/2016	1,460	59,100	7.91	178	496
		1/12/2017	1,540	63,900	8.18	182	488
		4/17/2017	1,760	67,400	7.83	181	502
		6/8/2017	1,880	68,200	8.07	191	516
		8/1/2017	1,800	61,400	7.77	179	498
		10/19/2017	1,500	52,400	7.77	175	510
		4/2/2018	2,020	59,000	8.42	200	550
		10/9/2018	3,620	66,300	7.74	197	602
		11/12/2018	--	--	8.05	--	594
		4/22/2019	6,830	83,300	7.91	303	742
		10/14/2019	4,630	91,400	7.92	339	728
		4/13/2020	5,380	115,000	7.89	378	872
		10/12/2020	3,350	91,200	7.80	388	906
		4/19/2021	4,440	93,400	8.07	379 M0	910
10/8/2021		2,480	100,000	7.81	466	884	
4/26/2022		2,590	97,100	7.63	513	1000	
10/18/2022		3,010	75,100	7.74	429	920	
4/4/2023	4,740	84,400	7.68	436	980		
10/3/2023	5,040	80,600	7.84	403	918		
4/23/2024	5,630	171,000	7.36	435	1,010		
10/7/2024	3,560	142,000	7.57	405	954		

Table 2. Historical Analytical Results for Parameters with SSIs
Nelson Dewey Generating Station - Cassville, Wisconsin / SCS Engineers Project #25224071.00

Well Group	Well	Collection Date	Boron (µg/L)	Calcium (µg/L)	Field pH (Std. Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
Compliance	B-11R	12/9/2015	4,170	126,000	7.07	75.4	616
		4/13/2016	3,410	141,000	6.78	18.4	682
		7/19/2016	3,530	130,000	6.69	115	698
		10/20/2016	4,120	128,000	6.77	118	660
		1/12/2017	3,530	126,000	6.98	108	616
		4/17/2017	3,520	123,000	7.11	108	620
		6/7/2017	3,420	128,000	6.80	98.2	630
		8/1/2017	2,040	139,000	6.70	126	738
		10/19/2017	3,120	117,000	7.22	97.7	586
		4/2/2018	3,180	124,000	7.14	88.1	638
		10/9/2018	576	49,900	6.55	15.1	266
		4/22/2019	1,360	82,400	6.82	34.6	406
		10/14/2019	1,440	66,000	6.83	40.7	310
		4/13/2020	2,140	117,000	6.80	41.9	570
		10/12/2020	2,870	120,000	6.83	22.8	600
		4/19/2021	3,010	115,000	7.11	61.2	578
		10/8/2021	2,940	119,000	6.86	61.8	576
		4/26/2022	2,330	114,000	7.01	58.1	560
		10/18/2022	3,090	116,000	6.76	65.3	572
		4/4/2023	3,110	105,000	6.81	57.0	554
	10/3/2023	3,120	90,600	6.80	58.0	456	
	4/24/2024	2,640	96,700	6.89	64.8	536	
	10/7/2024	2,420	152,000	6.74	162	766	
	B-31A	12/9/2015	59.0	48,400	7.65	26.2	274
		4/13/2016	79.2	51,900	7.63	22.6	302
		7/19/2016	67.2	48,900	7.25	24.2	280
		10/20/2016	63.7	45,800	7.54	27.2	292
		1/12/2017	76.4	46,600	7.82	29.8	284
		4/17/2017	69.9	46,900	7.83	31.0	318
		6/8/2017	58.5	49,400	7.74	31.2	296
		8/1/2017	56.3	46,000	7.56	26.6	284
		10/19/2017	63.9	49,600	7.92	26.1	290
		4/2/2018	74.8	49,300	8.00	27.4	282
		10/9/2018	71.8	46,600	7.48	24.8	278
		4/22/2019	86.2	48,200	7.61	21.6	284
		10/14/2019	98.5	52,200	7.69	22.3	272
		4/13/2020	132	50,900	7.71	16.6	298
		10/13/2020	127	47,700	7.78	16.8	300
		4/19/2021	172	52,100	7.90	15.8	330
		10/8/2021	178	53,500	7.44	14.9	294
		4/26/2022	198	55,300	7.82	15.4	316
		10/18/2022	213	45,300	7.63	23.0	310
		4/4/2023	193	46,100	7.59	15.9	324
	10/2/2023	191	48,300	7.67	20.0	274	
	4/23/2024	187	46,000	7.74	19.0	306	
10/8/2024	197	45,500	7.73	23.4	260		
B-31R	12/9/2015	851	77,400	6.79	28.8	374	
	4/13/2016	838	84,900	6.76	34.1	404	
	7/19/2016	641	76,100	6.44	38.5	406	
	10/20/2016	1,020	84,200	6.53	49.7	452	
	1/12/2017	749	73,900	6.80	34.9	380	
	4/17/2017	929	85,600	6.80	43.0	416	
	6/8/2017	895	90,700	6.67	41.1	426	
	8/1/2017	1,550	93,400	6.56	55.6	432	
	10/19/2017	645	75,700	7.19	19.2	358	
	4/2/2018	540	72,900	6.76	22.0	374	
	10/9/2018	1,430	125,000	6.41	186	668	
	11/12/2018	--	--	6.59	162	596	
	4/22/2019	906	105,000	6.62	121	516	
	10/14/2019	915	110,000	6.72	146	480	
	4/13/2020	730	93,800	6.79	89.4	464	
	10/12/2020	702	95,700	6.89	49.4	462	
	4/19/2021	621	91,400	6.91	45.3	454	
	10/8/2021	353	79,000	6.63	24.9	372	
	4/25/2022	454	81,100	6.77	60.0	428	
	10/18/2022	327	78,500	6.83	29.6	386	
4/4/2023	589	88,300	6.62	50.0	440		
10/2/2023	519	114,000	6.82	103	536		
4/23/2024	659	89,300	6.73	113	506		
10/8/2024	845	134,000	6.6	187	666		

**Table 2. Historical Analytical Results for Parameters with SSIs
Nelson Dewey Generating Station - Cassville, Wisconsin / SCS Engineers Project #25224071.00**

Well Group	Well	Collection Date	Boron (µg/L)	Calcium (µg/L)	Field pH (Std. Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	
Compliance	B-7R	12/9/2015	110	31,700	6.74	17.0 J	198	
		4/13/2016	115	42,300	6.80	2.50 J	218	
		7/18/2016	164	44,400	6.29	2.40 J	220	
		10/19/2016	154	56,600	6.55	<5.00	288	
		1/12/2017	159	56,700	7.43	<5.00	240	
		4/17/2017	129	61,400	6.60	<5.00	278	
		6/7/2017	110	51,600	6.65	<5.00	240	
		8/1/2017	129	50,400	6.28	3.70	220	
		10/19/2017	159	56,200	6.88	<5.00 D3	242	
		4/2/2018	121	49,200	6.57	<5.00 D3	220	
		10/9/2018	73.0	38,500	6.23	3.20	186	
		4/22/2019	93.5	59,400	6.63	<5.00 D3	254	
		10/14/2019	139	57,700	6.62	<5.00 D3	208	
		4/13/2020	96.0	58,700	6.60	7.50 J, D3	306	
		10/13/2020	145	41,900	6.35	<2.20	208	
		4/20/2021	104	56,100	6.54	<2.2 D3	248	
		10/8/2021 ⁽¹⁾	--	--	--	--	--	--
		4/26/2022	98.1	59,200	6.43	3.7 J, D3	318	
		10/18/2022 ⁽²⁾	--	--	--	--	--	--
		4/3/2023	120	48,800	6.18	<2.2 D3	224	
10/3/2023	144	41,000 P6	3.60	4.5	184			
4/23/2024	134	52,300	6.33	<2.2 D3	232			
10/7/2024	139	83,500	6.40	157	398			

Abbreviations:

µg/L = micrograms per liter or parts per billion (ppb)

-- = Not applicable.

mg/L = milligrams per liter or parts per million (ppm)

Std. Units = Standard Units

Flags:

J = Estimated concentration at or above the LOD and below the LOQ.

D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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

R1 = Relative Percent Difference (RPD) value was outside control limits

Notes:

(1) B-7R could not be sampled on 10/8/2021 or during an attempted resampling event on 10/28/2021 due to low water levels.

(2) B-7R could not be sampled on 10/18/2022 due to low water levels.

Created by: RM
Last revision by: BR
Checked by: KMV

Date: 9/19/2023
Date: 12/4/2024
Date: 12/5/2024

Table 3. Water Level Summary
Nelson Dewey Closed Ash Disposal Facility / SCS Engineers Project #25224071.00

Ground Water Elevation in feet above mean sea level (amsl)																														
Well Number	B-7R	B-8R	B-11R	B-11A	B-11B	B-21R	B-26	B-26A	B-28	B-30R	B-30AR	B-31R	B-31A	B-32	B-32A	B-35	B-35A	B-36	B-36A	B-37	B-37A	B-39	B-40	MW-301	MW-302	MW-303	Barge Gauge (SG-12) ^{^^}	Pond Gauge (SG-13)		
Top of Casing Elevation (feet amsl)	623.35	627.51	622.62	622.12	621.89	623.31	626.40	626.40	616.81	621.81	622.4	622.42	622.69	614.18	614.4	620.78	621.09	621.11	621.33	614.85	614.85	626.48	623.84	619.09	619.21	618.49	622.34	See notes		
Screen Length (ft)	10	10	10	5	5	10	10	5	10	10	5	10	5	10	5	10	5	9	4.5	10	5	10	10	10	10	10				
Total Depth (ft from top of casing)	23.05	27.25	24.15	52.00	113.90	22.78	31.67	45.78	16.70	22.20	46.90	22.82	35.52	14.79	52.00	16.60	47.00			19.95	48.20	26.90	27.00	21.11	21.27	20.15				
Top of Well Screen Elevation (ft)	610.30	610.26	608.47	575.12	512.99	610.53	604.73	585.62	610.11	609.61	580.50	609.60	592.17	609.39	567.40	614.18	579.20	609.60	575.50	604.90	571.65	609.58	606.84	607.98	607.94	608.34				
Measurement Date																														
April 10, 2014	607.42	608.97	607.45	607.28	607.26	--	607.22	607.23	--	--	--	607.37	607.28	--	--	607.46	607.39	--	--	607.25	607.26		--	--	--	--	--	--	--	
October 14-15, 2014	605.67	606.82	605.17	604.90	604.91	614.92	605.00	605.01	605.13	604.92	604.92	606.36	605.54	605.41	605.45	605.36	605.33	--	--	604.94	604.99		--	--	--	--	--	--	--	
April 16, 2015	607.26	608.50	607.11	607.15	607.05	--	606.40	606.41	--	--	--	607.37	607.09	--	--	606.73	606.78	--	--	606.99	606.88		--	--	--	--	--	--	--	
October 1-2, 2015	605.14	604.66	604.53	604.42	604.38	604.36	604.43	604.50	604.54	604.34	604.32	605.13	604.38	604.76	604.82	604.76	604.75	--	--	604.30	604.39		--	--	--	--	--	--	--	
December 8, 2015	606.69	--	606.71	606.30	606.26	--	606.80	--	--	--	--	607.40	606.39	--	--	--	--	--	--	--	--	607.54	--	--	--	--	--	--	--	
April 12, 2016	609.32	609.36	609.32	608.71	608.68	--	609.81	609.72	--	--	--	609.34	609.01	--	--	609.73	609.65	--	--	608.79	608.79	610.23	--	--	--	--	--	--	--	
July 18-19, 2016	606.54	--	606.14	606.76	606.74	--	606.09	--	--	--	--	606.55	606.73	--	--	--	--	--	--	--	--	606.28	--	--	--	--	--	--	--	
October 19-20, 2016	608.59	608.46	608.35	608.21	608.19	608.37	608.84	608.76	608.63	608.45	608.46	608.51	608.20	608.69	608.73	608.78	608.74	--	--	608.20	608.18	609.09	--	--	--	--	--	--	--	
January 11-12, 2017	608.02	--	607.96	607.83	607.78	--	608.56	--	--	--	--	607.90	607.84	--	--	--	--	--	--	--	--	608.92	--	--	--	--	--	--	--	
April 17, 2017	609.08	608.82	608.34	609.05	608.99	NM	608.59	608.54	609.94	608.57	608.64	607.20	608.98	608.96	608.98	609.00	609.02	--	--	609.02	609.02	610.23	--	--	--	--	--	--	--	
June 8, 2017	610.74	--	610.42	609.81	610.08	--	611.25	--	--	--	--	609.63	610.50	--	--	--	--	--	--	--	--	611.53	--	--	--	--	--	--	--	
August 1-2, 2017	607.02	--	606.73	605.57	605.50	--	607.39	--	--	--	--	606.84	605.69	--	--	--	--	--	--	--	--	608.71	--	--	--	--	--	--	--	
October 9-10, 2017	606.93	606.51	606.25	607.01	606.94	--	606.22	606.13	606.33	606.44	606.45	606.68	606.93	606.57	606.61	606.65	606.71	--	--	--	--	--	--	--	--	--	--	--	--	
October 19, 2017	609.60	--	609.42	609.58	609.65	--	608.84	--	--	--	--	609.47	609.43	--	--	--	--	--	--	609.40	609.40	608.55	--	--	--	--	--	--	--	
November 17, 2017	--	--	--	--	--	606.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
December 19, 2017	--	--	--	--	--	604.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
February 7, 2018	605.37	--	605.33	604.96	604.92	--	--	--	616.81	--	--	605.31	605.01	--	--	--	--	--	--	--	--	606.19	--	605.08	605.05	605.00	--	--	--	
March 16, 2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	604.64	604.6	604.56	--	--	--	
April 203, 2018 **	604.82	606.61	606.27	606.63	606.55	606.52	606.49	606.37	606.39	606.46	606.43	604.44	606.46	606.58	606.66	606.68	606.70	--	--	606.77	606.83	606.19	--	--	--	--	--	--	--	
May 23, 2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	610.68	610.78	610.61	--	--	--	
October 8-10, 2018	610.76	610.68	610.67	610.28	610.24	610.02	610.34	610.28	610.83	610.09	610.05	610.39	610.27	611.05	610.94	610.72	610.54	--	--	--	--	611.44	--	--	--	--	--	--	--	--
November 11, 2018	--	--	--	--	609.14	--	--	--	--	--	--	609.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	608.40	
April 22-23, 2019	615.28	615.66	615.28	615.29	615.28	614.98	615.49	615.31	615.40	615.36	615.35	615.01	615.33	--	--	615.87	615.98	--	--	--	--	615.40	--	--	--	--	615.17	<615.06		
October 14-16, 2019	613.43	613.11	613.06	613.29	613.18	612.47	613.10	613.10	612.71	612.83	612.78	612.50	613.20	613.10	613.00	613.10	613.15	--	--	--	--	613.35	--	--	--	--	612.33	<615.06		
April 13-14, 2020	614.12	613.76	614.39	613.88	613.86	613.22	613.76	613.73	613.68	613.60	613.56	613.80	613.79	--	--	614.04	614.00	--	--	--	--	613.71	--	--	--	--	612.89	613.10		
October 12-13, 2020	605.09	604.88	604.57	604.54	604.44	604.28	604.92	604.83	604.86	604.72	604.72	604.66	604.54	605.07	605.06	605.00	605.08	--	--	--	--	605.06	--	--	--	--	603.89	DRY		
April 19-21, 2021	608.83	608.66	608.57	608.72	608.67	607.93	608.55	608.49	608.27	608.38	608.35	608.66	608.63	608.68	608.74	608.86	608.85	608.40	608.39	608.74	608.75	608.48	--	--	--	--	608.15	608.48	<609.00	
October 6-8, 2021	604.05	604.04	603.85	603.79	603.74	603.56	604.21	604.13	604.11	604.00	603.97	603.98	603.84	604.32	604.38	604.35	604.34	603.93	603.92	NM	NM	604.23	--	--	--	--	602.90	<609.00		
April 25-26, 2022	609.84	610.25	609.75	610.00	609.98	609.70	610.12	610.08	609.99	610.11	610.09	610.27	609.95	610.26	610.40	610.44	610.32	609.94	609.90	AB	AB	610.22	--	--	--	--	NM	609.25		
October 18-19, 2022	603.81	603.82	603.59	603.63	603.57	603.39	603.99	603.81	603.84	603.78	603.77	603.69	603.61	604.07	604.09	604.12	604.05	603.64	603.65	AB	AB	603.91	--	--	--	--	601.29	<609.00		
April 3-5, 2023	607.51	607.58	607.83	607.92	607.90	--	607.36	607.34	607.19	607.38	607.41	607.88	607.85	607.40	607.40	607.67	607.71	607.34	607.34	AB	AB	606.92	--	--	--	--	606.24	<609.00		
October 2-3, 2023	604.39	604.06	603.93	603.97	603.91	--	604.20	604.15	604.12	604.07	604.05	603.98	603.95	604.23	604.29	604.34	599.49	603.81	603.86	AB	AB	604.04	--	--	--	--	603.29	<609.00		
April 23-24, 2024	606.66	606.80	606.72	606.86	606.66	AB	606.51	606.41	DRY	606.44	606.45	606.61	606.63	606.56	606.62	606.71	606.73	606.31	606.36	AB	AB	606.25	606.22	--	--	--	605.34	--		
October 7-8, 2024	604.02	603.79	603.54	603.52	603.46	AB	603.93	603.85	603.91	603.75	603.72	603.72	603.59	604.13	604.16	DRY	604.07	603.66	603.66	AB	AB	604.15	603.43	--	--	--	601.05	DRY		
Bottom of Well Elevation (ft)	600.30	600.26	598.47	570.12	507.99	600.53	594.73	580.62	600.11	599.61	575.50	599.60	587.17	599.39	562.40	604.18	574.20	600.6	571	594.90	566.65	599.58		597.98	597.94	598.34				

Notes:
 -- = not measured
 *The PVC casing at B-35A was cut down on June 28, 2018 to allow the protective cover to close. Groundwater elevations prior to 6/28/18 are calculated using the old top of casing (TOC) elevation of 621.20 ft amsl. Groundwater elevations after 6/28/18 are calculated using the new TOC elevation (621.09 ft amsl).
 ** The PVC casing at B-21R was extended in 2018 following well rehabilitation. The well was resurveyed on April 22, 2019. The old top of casing elevation was 621.03 ft. The new TOC elevation is 623.31 ft.
 ^ One pond staff gauge was installed on April 22, 2019. The base of the gauge (0 reading) is at 615.056 ft amsl. Two additional gauges were installed on March 24, 2020. These gauge bases are at 609' and 612' amsl.
 ^^SG-12 reestablished in 2022 following barge slip construction work. Previous elevation (applies to measurements before October 2022) was 616.60. New elevation (top of metal pipe) is 622.34'
 #B-21R was found knocked over during the April 2023 sampling event.

Created by: MDB Date: 4/1/2013
 Last revision by:

**Table 4. Analytical Results - State Monitoring Program
Nelson Dewey Generating Station
Cassville, Wisconsin / SCS Engineers Project #25224071.00**

WELL ID	SAMPLE MONTH	BORON, DISSOLVED (UG/L)	SULFATE, DISSOLVED (MG/L)	PH, FIELD (STANDARD UNITS)
B-7R	2016-Apr	110	7.40	6.80
	2016-Oct	147	<20.0	6.55
	2017-Apr	127	<5.00	6.60
	2017-Oct	159	<5.00	6.61
	2018-Apr	115	<5.00 D3	6.57
	2018-Oct	89.8	3.40	6.23
	2019-Apr	95.7	<5.00 D3	6.63
	2019-Oct	140	<5.00 D3	6.62
	2020-Apr	90.8	5.20 J, D3	6.60
	2020-Oct	145	<2.20 D3	6.35
	2021-Apr	121	<2.20 D3	6.54
	2021-Oct	--	--	--
	2022-Apr	93.1	5.0 J, D3	6.43
	2022-Oct	--	--	--
	2023-Apr	120	2.3 J, D3	6.18
	2023-Oct	151	4.3	6.30
2024-Apr	133	<2.2 D3	6.33	
2024-Oct	152	157	6.40	
B-8R	2016-Apr	2,250	30.0	6.64
	2016-Oct	2,130	47.0	6.38
	2017-Apr	1,970	30.5	6.83
	2017-Oct	2,490	32.5	6.87
	2018-Apr	1,700	28.7	7.02
	2018-Oct	1,500	30.6	6.18
	2019-Apr	1,560	39.8	6.65
	2019-Oct	1,110	23.6	6.85
	2020-Apr	1,340	20.9	6.61
	2020-Oct	1,600	63.9	6.60
	2021-Apr	1,310	25.0	6.54
	2021-Oct	1,730	42.3	6.48
	2022-Apr	1,320	23.8	6.52
	2022-Oct	1,690	41.4	6.45
	2023-Apr	1,290	20.0	6.43
	2023-Oct	1,360	28.7	6.88
2024-Apr	1,280	17.9	6.71	
2024-Oct	1,370	47.1	6.34	
B-11A	2016-Apr	110	3.80 J	7.75
	2016-Oct	111	2.80 J	7.47
	2017-Apr	106	<1.00	7.38
	2017-Oct	97.7	8.30	7.91
	2018-Apr	89.4	12.70	8.04
	2018-Oct	142	5.30	7.43
	2019-Apr	94.0	1.90 J	7.62
	2019-Oct	82.3	<1.00	7.66
	2020-Apr	83.3	1.50 J	7.75
	2020-Oct	94.3	1.0 J	7.74
	2021-Apr	92.9	3.5	7.65
	2021-Oct	97.6	7.3	7.49
	2022-Apr	87.0	9.1	7.53
	2022-Oct	98.4	24.2	7.61
	2023-Apr	119	72.0	7.62
	2023-Oct	240	88.5	7.66
2024-Apr	697	153	7.82	
2024-Oct	484	94.5	7.67	

**Table 4. Analytical Results - State Monitoring Program
Nelson Dewey Generating Station
Cassville, Wisconsin / SCS Engineers Project #25224071.00**

WELL ID	SAMPLE MONTH	BORON, DISSOLVED (UG/L)	SULFATE, DISSOLVED (MG/L)	PH, FIELD (STANDARD UNITS)
B-11B	2016-Apr	1,240	153	8.14
	2016-Oct	1,410	181	7.91
	2017-Apr	1,720	186	7.83
	2017-Oct	1,900	169	7.80
	2018-Apr	2,020	195	8.42
	2018-Oct	3,910	195	7.74
	2019-Apr	6,670	289	7.91
	2019-Oct	4,860	335	7.92
	2020-Apr	5,080	362	7.89
	2020-Oct	3,190	422	7.80
	2021-Apr	4,590	389	8.07
	2021-Oct	2,480	468	7.72
	2022-Apr	2,690	494	7.63
	2022-Oct	3,190	446	7.74
	2023-Apr	4,320	459	7.68
	2023-Oct	4,940	409	7.84
2024-Apr	5,860	449	7.36	
2024-Oct	3,880	411	7.57	
B-11R	2016-Apr	3,290	93.9	6.98
	2016-Oct	4,070	115	6.77
	2017-Apr	3,710	111	7.11
	2017-Oct	3,400	94.0	6.75
	2018-Apr	2,790	78.6	7.14
	2018-Oct	635	15.6	6.55
	2019-Apr	1,310	34.5	6.82
	2019-Oct	1,500	39.2	6.83
	2020-Apr	2,250	39.8	6.80
	2020-Oct	2,690	23.0	6.83
	2021-Apr	2,890	59.9	7.11
	2021-Oct	3,050	61.6	6.86
	2022-Apr	2,330	58.1	7.01
	2022-Oct	3,250	59.9	6.76
	2023-Apr	3,010	62.7	6.81
	2023-Oct	3,020	58.4	6.80
2024-Apr	2,960	66.2	6.89	
2024-Oct	2,640	145.0	6.74	
B-26	2016-Apr	37.0	40.1	7.43
	2016-Oct	48.7	34.4	7.19
	2017-Apr	37.3	32.3	7.54
	2017-Oct	44.5	25.0	7.35
	2018-Apr	46.8	19.2	7.64
	2018-Oct	55.2	24.9	7.20
	2019-Apr	41.8	26.4	7.10
	2019-Oct	50.8	37.0	7.24
	2020-Apr	49.2	29.1	7.27
	2020-Oct	61.4	37.1	7.34
	2021-Apr	67.1	35.5	7.27
	2021-Oct	56.0	43.0	7.18
	2022-Apr	50.3	33.5	7.19
	2022-Oct	51.5	46.1	7.15
	2023-Apr	48.3	34.4	7.05
	2023-Oct	40.8	43.7	7.47
2024-Apr	45.2	29.9	7.23	
2024-Oct	41.0	40.5	7.19	

**Table 4. Analytical Results - State Monitoring Program
Nelson Dewey Generating Station
Cassville, Wisconsin / SCS Engineers Project #25224071.00**

WELL ID	SAMPLE MONTH	BORON, DISSOLVED (UG/L)	SULFATE, DISSOLVED (MG/L)	PH, FIELD (STANDARD UNITS)
B-26A	2016-Apr	33.1	40.1	7.06
	2016-Oct	30.5	39.9	7.26
	2017-Apr	52.6	42.3	7.96
	2017-Oct	28.4	38.4	7.44
	2018-Apr	27.6	37.0	7.47
	2018-Oct	18.4	33.3	7.38
	2019-Apr	27.6	27.0	7.35
	2019-Oct	47.0	35.6	7.31
	2020-Apr	37.7	39.2 M0	7.38
	2020-Oct	33.5	44.7	7.51
	2021-Apr	42.7	45.5	7.26
	2021-Oct	36.4	49.7	7.45
	2022-Apr	29.8	53.2	7.39
	2022-Oct	26.3	47.1	7.48
	2023-Apr	31.0	47.0	7.15
	2023-Oct	36.9	50.9	7.54
2024-Apr	29.7	42.8	7.60	
2024-Oct	26.6	49.7	7.27	
B-31A	2016-Apr	69.4	22.8	7.63
	2016-Oct	81.0	27.9	7.54
	2017-Apr	80.3	30.8	7.83
	2017-Oct	61.5	26.2	7.60
	2018-Apr	69.3	28.1	8.00
	2018-Oct	103	26.2	7.48
	2019-Apr	86.0	21.6	7.61
	2019-Oct	112	22.5	7.69
	2020-Apr	121	17.7	7.71
	2020-Oct	146	16.8	7.78
	2021-Apr	168	17.1	7.90
	2021-Oct	188	15.0	7.58
	2022-Apr	179	15.3	7.82
	2022-Oct	202	22.8	7.63
	2023-Apr	196	16.1	7.59
	2023-Oct	195	21.3	7.67
2024-Apr	182	19.1	7.74	
2024-Oct	212	23.4	7.73	
B-31R	2016-Apr	759	34.3	6.76
	2016-Oct	956	48.5	6.53
	2017-Apr	910	42.9	6.80
	2017-Oct	618	23.2	6.78
	2018-Apr	520	23.3	6.76
	2018-Oct	1,530	179	6.41
	2019-Apr	892	114	6.62
	2019-Oct	1,000	145	6.72
	2020-Apr	765	97.6 M0	6.79
	2020-Oct	696	50.8	6.89
	2021-Apr	597	44.9	6.91
	2021-Oct	356	25.1	6.83
	2022-Apr	425	57.4	6.77
	2022-Oct	341	30.2	6.83
	2023-Apr	553	50.5	6.62
	2023-Oct	532	105	6.82
2024-Apr	691	118	6.73	
2024-Oct	865	197	6.6	

**Table 4. Analytical Results - State Monitoring Program
Nelson Dewey Generating Station
Cassville, Wisconsin / SCS Engineers Project #25224071.00**

WELL ID	SAMPLE MONTH	BORON, DISSOLVED (UG/L)	SULFATE, DISSOLVED (MG/L)	PH, FIELD (STANDARD UNITS)
B-35	2016-Apr	38.7	8.10	6.89
	2016-Oct	46.4	6.50	6.86
	2017-Apr	54.4	7.70	6.68
	2017-Oct	40.8	3.80	7.65
	2018-Apr	28.9	4.80 M0	7.01
	2018-Oct	40.0	3.60	6.58
	2019-Apr	33.6	4.90	7.26
	2019-Oct	41.0	5.60	7.07
	2020-Apr	27.0	4.20	6.87
	2020-Oct	28.1	5.60	6.85
	2021-Apr	23.8	5.90	6.89
	2021-Oct	--	--	--
	2022-Apr	22.7	7.7	6.95
	2022-Oct	--	--	--
	2023-Apr	20.6	4.5	6.74
	2023-Oct	--	--	--
2024-Apr	26.8	11.8	6.92	
2024-Oct	DRY	DRY	DRY	
B-35A	2016-Apr	21.7	26.2	6.96
	2016-Oct	23.4	27.4	7.17
	2017-Apr	29.9	25.4	7.27
	2017-Oct	51.4	4.00	7.44
	2018-Apr	28.9	23.1	7.45
	2018-Oct	59.8	6.00 J, D3	6.95
	2019-Apr	30.3	16.7	7.30
	2019-Oct	33.7	18.9	7.30
	2020-Apr	32.1	20.2	7.29
	2020-Oct	70.7	17.8	7.39
	2021-Apr	46.8	18.9	7.26
	2021-Oct	52.7	18.7	7.27
	2022-Apr	46.5	16.2	7.17
	2022-Oct	55.6	5.6	7.23
	2023-Apr	47.2	5.4	7.04
	2023-Oct	96.5	14.0	7.54
2024-Apr	93	19.7	7.60	
2024-Oct	42.1	6.9	7.29	
B-36	2021-Oct	24.7	2.80	7.34
	2022-Apr	27.2	3.2	7.23
	2022-Oct	28.3	3.1	6.71
	2023-Apr	25.1	3.1	6.88
	2023-Oct	26.8	3.4	6.66
	2024-Apr	25.1	3.5	6.87
2024-Oct	37.8	3.9	6.75	
B-36A	2021-Oct	20.7	17.6	7.43
	2022-Apr	29.5	13.7	7.26
	2022-Oct	33.1	16.7	7.18
	2023-Apr	35.7	8.1	7.28
	2023-Oct	27.9	22.8	6.80
	2024-Apr	24.4	25.6	7.32
2024-Oct	26.5	3.3	7.37	

Laboratory Abbreviations:

J: Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

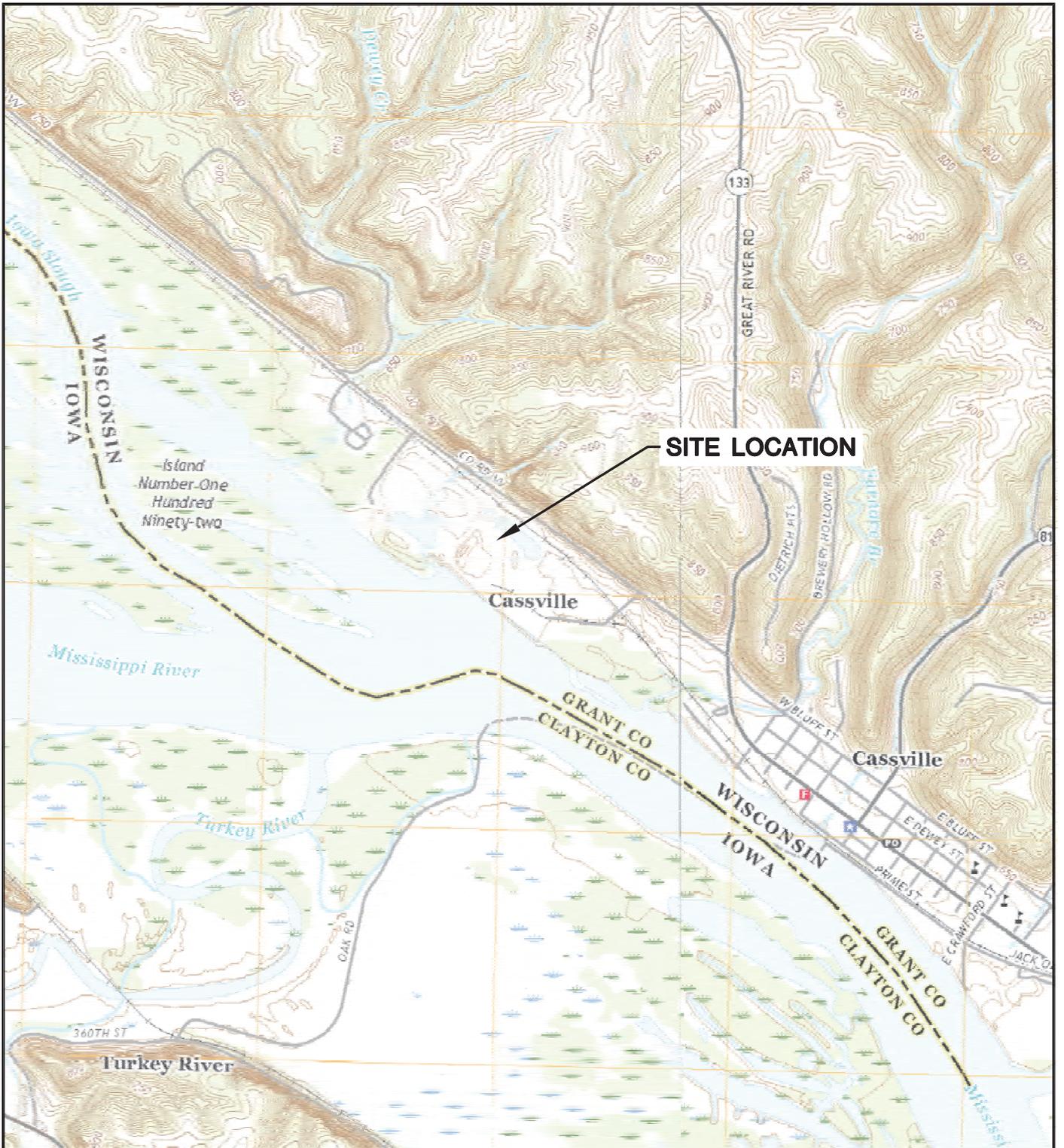
Notes:

- (1) B-7R and B-35 were dry during October 2021 and 2022 sampling events.
- (2) B-37 and B-37A were abandoned 12/6/2022. B-36 and B-36A were installed prior to the October 2021 sampling event.

Created by: <u>RM</u>	Date: <u>9/19/2023</u>
Last revision by: <u>BLR</u>	Date: <u>12/4/2024</u>
Checked by: <u>KMV</u>	Date: <u>12/5/2024</u>

Figures

- 1 Site Location Map
- 2 Aerial View
- 3 Site Plan and Monitoring Well Locations
- 4 Water Table Flow Map – October 2024



SITE LOCATION

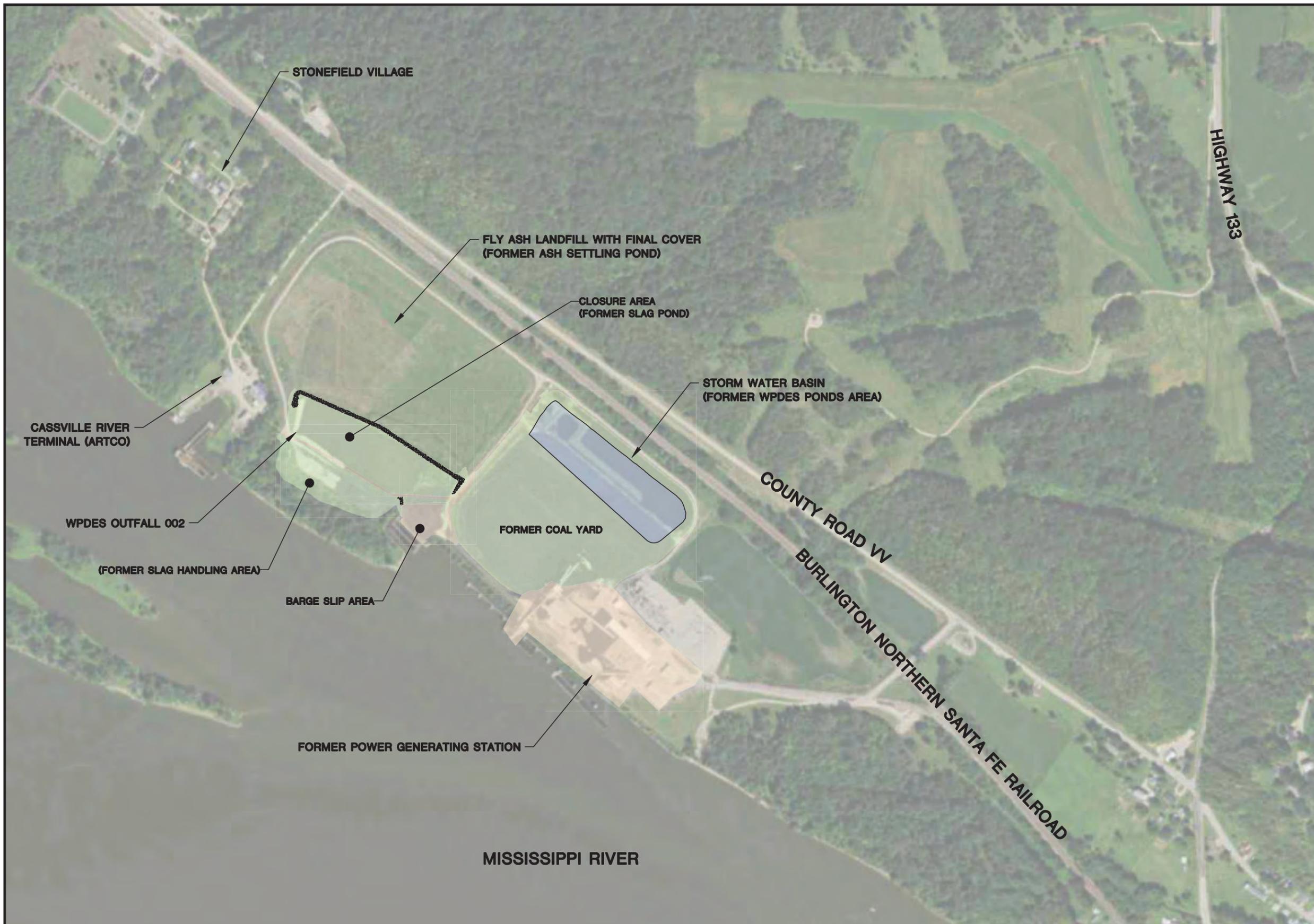


CASSVILLE AND TURKEY RIVER QUADRANGLES
 WISCONSIN-IOWA
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 2018
 SCALE: 1" = 2,000'



CLIENT	ALLIANT ENERGY 4902 N. BILTMORE LANE, #1000 MADISON, WI 53718		SITE	ALLIANT ENERGY NELSON DEWEY GENERATING STATION CASSVILLE, WISCONSIN		ENGINEER	SITE LOCATION MAP	
	PROJECT NO.	25220071.00		DRAWN BY:	BSS		SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE
	DRAWN:	11/27/2019		CHECKED BY:	MDB			1
REVISED:	01/14/2020	APPROVED BY:	TK 04/10/2020					

I:\25220071.00\Drawings\ASD\Site Location Map.dwg, 4/12/2020 7:11:31 PM



NOTES:

1. AERIAL PHOTOGRAPH FROM THE NATIONAL AGRICULTURE IMAGERY PROGRAM AND PUBLISHED BY THE USDA FSA AERIAL PHOTOGRAPHY FIELD OFFICE. DATE OF IMAGE IS AUGUST 24, 2015.

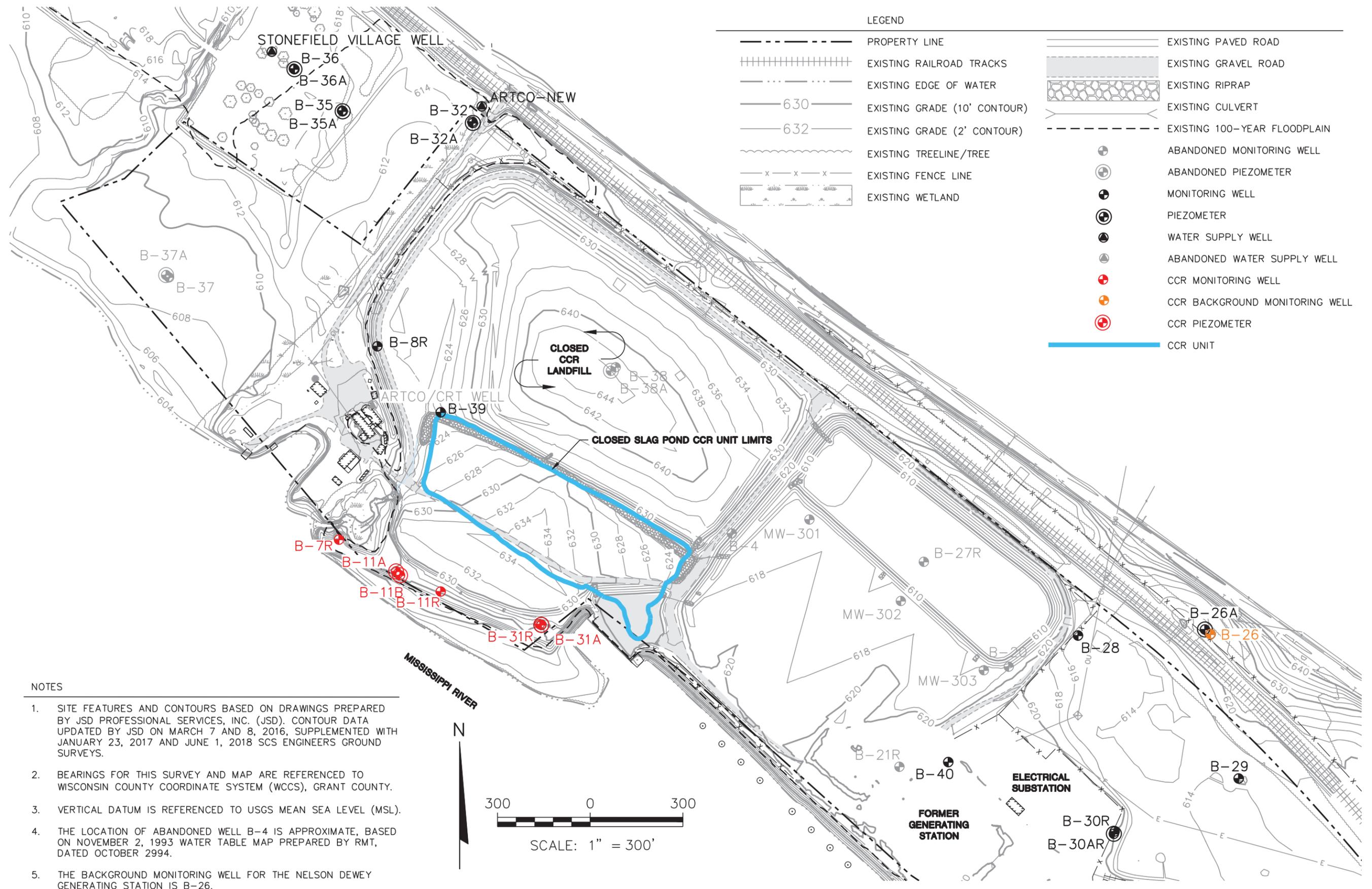


SCALE: 1" = 500'

PROJECT NO.	25220071.00	DRAWN BY:	BJM	<p>2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830</p>	<p>CLIENT WISCONSIN POWER AND LIGHT CO. NELSON DEWEY GENERATING STATION 11999 COUNTY HIGHWAY VV CASSVILLE WI, 53806</p>	<p>SITE WISCONSIN POWER AND LIGHT NELSON DEWEY GENERATING STATION CASSVILLE WISCONSIN</p>	<p>AERIAL VIEW</p>	FIGURE
DRAWN:	12/18/13	CHECKED BY:	KAK					2
REVISED:	01/22/20	APPROVED BY:	TK 04/10/2020					

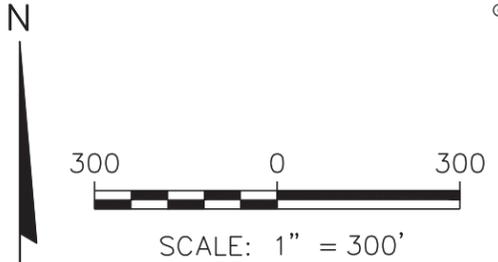
I:\25220071.00\Drawings\ASD\Site Aerial.dwg, 4/12/2020 7:18:26 PM

I:\25224071_001\Drawings\Site Plan and Monitoring Well Locations.dwg, 6/21/2024 11:18:22 AM



LEGEND	
	PROPERTY LINE
	EXISTING RAILROAD TRACKS
	EXISTING EDGE OF WATER
	EXISTING GRADE (10' CONTOUR)
	EXISTING GRADE (2' CONTOUR)
	EXISTING TREELINE/TREE
	EXISTING FENCE LINE
	EXISTING WETLAND
	EXISTING PAVED ROAD
	EXISTING GRAVEL ROAD
	EXISTING RIPRAP
	EXISTING CULVERT
	EXISTING 100-YEAR FLOODPLAIN
	ABANDONED MONITORING WELL
	ABANDONED PIEZOMETER
	MONITORING WELL
	PIEZOMETER
	WATER SUPPLY WELL
	ABANDONED WATER SUPPLY WELL
	CCR MONITORING WELL
	CCR BACKGROUND MONITORING WELL
	CCR PIEZOMETER
	CCR UNIT

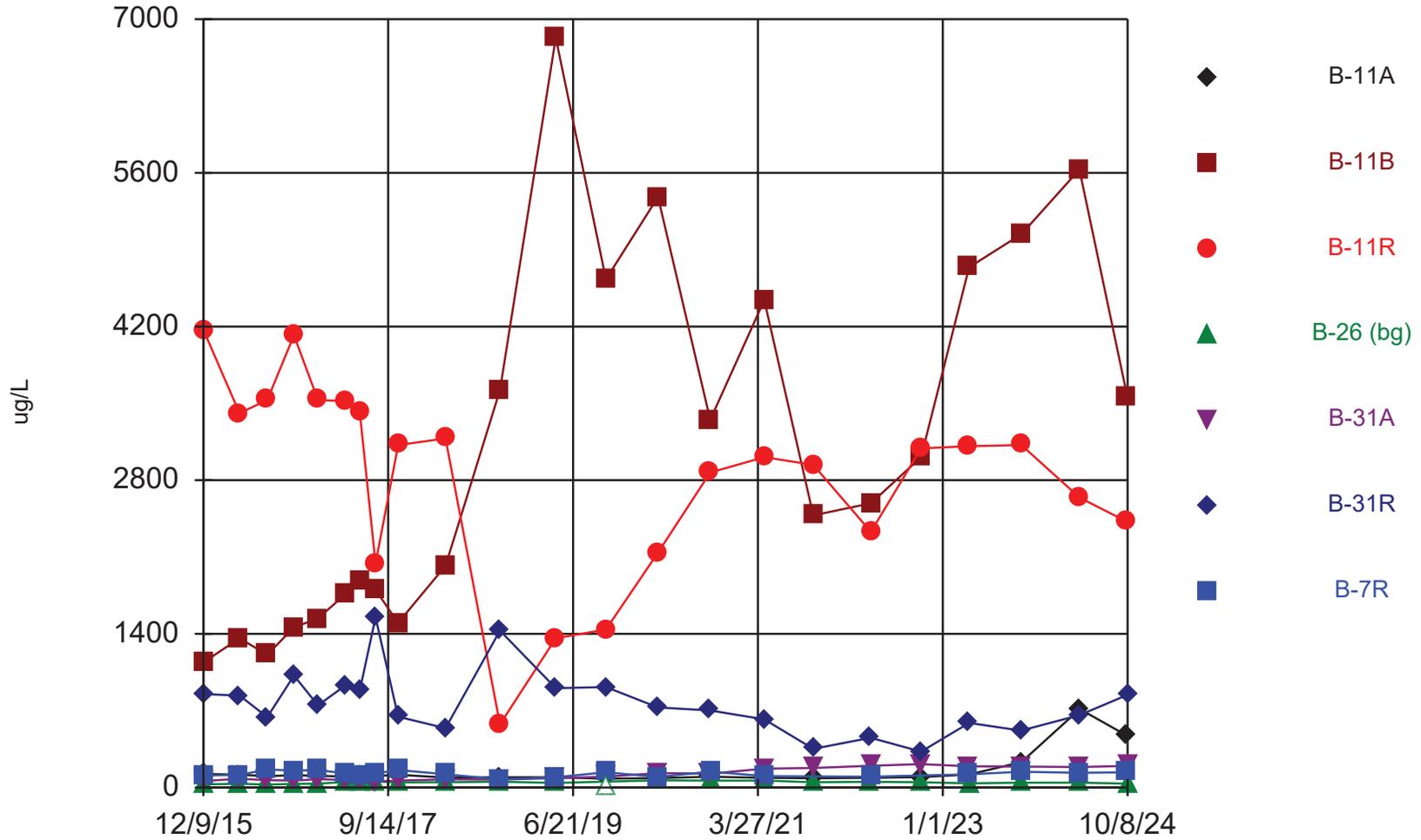
- NOTES
- SITE FEATURES AND CONTOURS BASED ON DRAWINGS PREPARED BY JSD PROFESSIONAL SERVICES, INC. (JSD). CONTOUR DATA UPDATED BY JSD ON MARCH 7 AND 8, 2016, SUPPLEMENTED WITH JANUARY 23, 2017 AND JUNE 1, 2018 SCS ENGINEERS GROUND SURVEYS.
 - BEARINGS FOR THIS SURVEY AND MAP ARE REFERENCED TO WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), GRANT COUNTY.
 - VERTICAL DATUM IS REFERENCED TO USGS MEAN SEA LEVEL (MSL).
 - THE LOCATION OF ABANDONED WELL B-4 IS APPROXIMATE, BASED ON NOVEMBER 2, 1993 WATER TABLE MAP PREPARED BY RMT, DATED OCTOBER 2994.
 - THE BACKGROUND MONITORING WELL FOR THE NELSON DEWEY GENERATING STATION IS B-26.



CLIENT	ALLIANT ENERGY 4902 N. BILTMORE LANE, #1000 MADISON, WI 53718	SITE	ALLIANT ENERGY NELSON DEWEY GENERATING STATION CASSVILLE, WISCONSIN	ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE, MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE	3
	PROJECT NO.		25223071.00		DRAWN BY:		BSS/SB
DRAWN:	11/27/2019	CHECKED BY:	NLB	APPROVED BY:	TK 11/8/2024		

Appendix A
CCR Well Trend Plots

Boron



Time Series Analysis Run 12/4/2024 11:45 AM

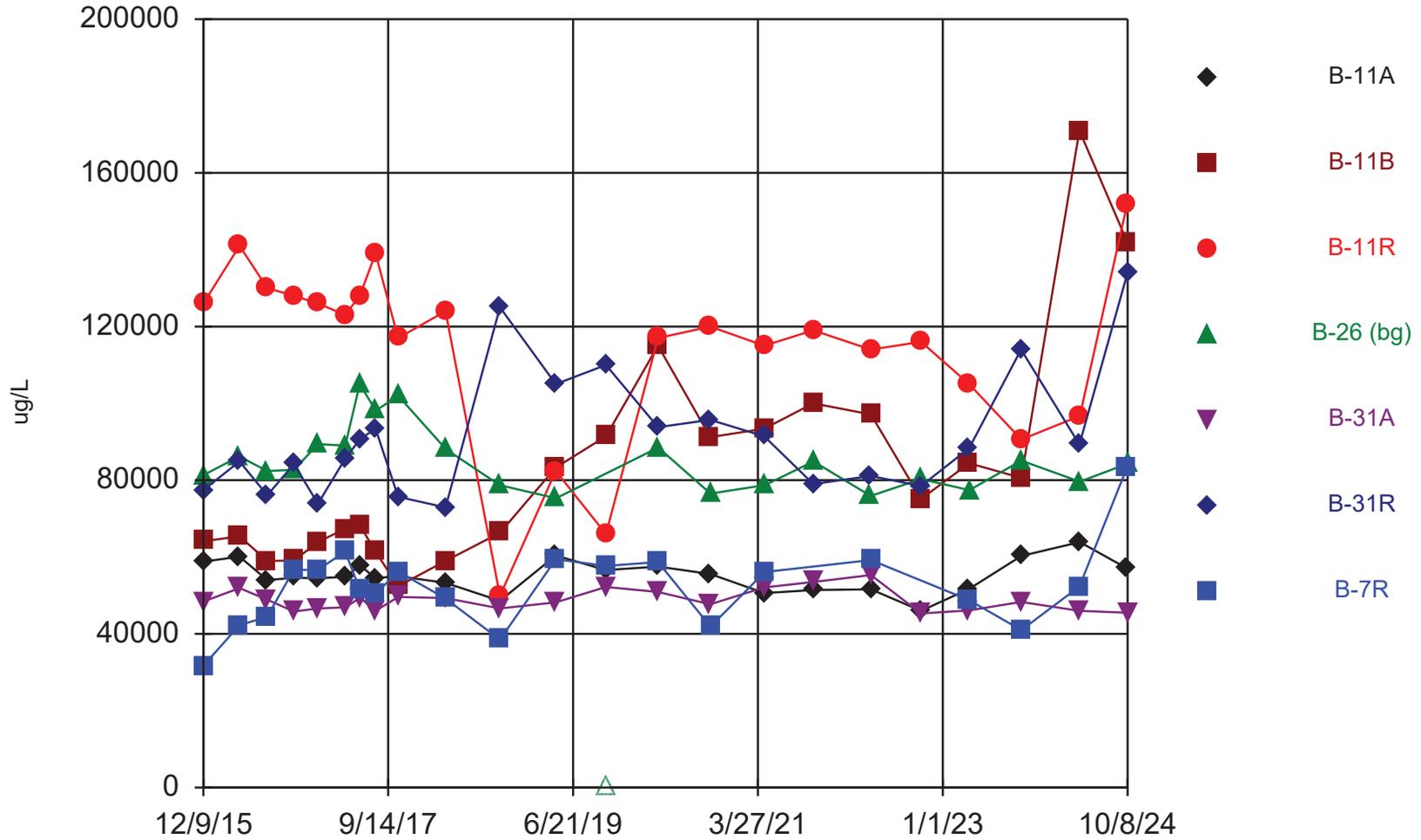
Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

Time Series

Constituent: Boron (ug/L) Analysis Run 12/4/2024 11:46 AM
 Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	124	1140	4170	29.6	59	851	110
4/12/2016				33.7			
4/13/2016	116	1360	3410		79.2	838	115
7/18/2016							164
7/19/2016	104	1210	3530	28.6	67.2	641	
10/19/2016	112						154
10/20/2016		1460	4120	33	63.7	1020	
1/12/2017	106	1540	3530	35.2	76.4	749	159
4/17/2017	100	1760	3520	50.1	69.9	929	129
6/7/2017			3420	45.8			110
6/8/2017	102	1880			58.5	895	
8/1/2017	105	1800	2040		56.3	1550	129
8/2/2017				54.6			
10/19/2017	116	1500	3120	47.4	63.9	645	159
4/2/2018	91	2020	3180		74.8	540	121
4/3/2018				48			
10/8/2018				53.4			
10/9/2018	94.2	3620	576		71.8	1430	73
4/22/2019	93.9	6830	1360		86.2	906	93.5
4/23/2019				41.6			
10/14/2019	80.7	4630	1440		98.5	915	139
10/15/2019				<3 (UX)			
4/13/2020	86.3	5380	2140		132	730	96
4/14/2020				66.1			
10/12/2020	99.3	3350	2870		127	702	
10/13/2020				63.6			145
4/19/2021	88.1	4440	3010		172	621	
4/20/2021							104
4/21/2021				63.6			
10/7/2021	85.4	2480	2940		178	353	
10/8/2021				48.4			
4/25/2022				52.5		454	
4/26/2022	88.6	2590	2330		198		98.1
10/18/2022	95.2	3010	3090	48.8	213	327	
4/3/2023							120
4/4/2023	119	4740	3110		193	589	
4/5/2023				38.6			
10/2/2023					191	519	
10/3/2023	231	5040	3120	44.8			144
4/23/2024		5630			187	659	134
4/24/2024	715		2640	44.8			
10/7/2024	471	3560	2420				139
10/8/2024				35.9	197	845	

Calcium



Time Series Analysis Run 12/4/2024 11:46 AM

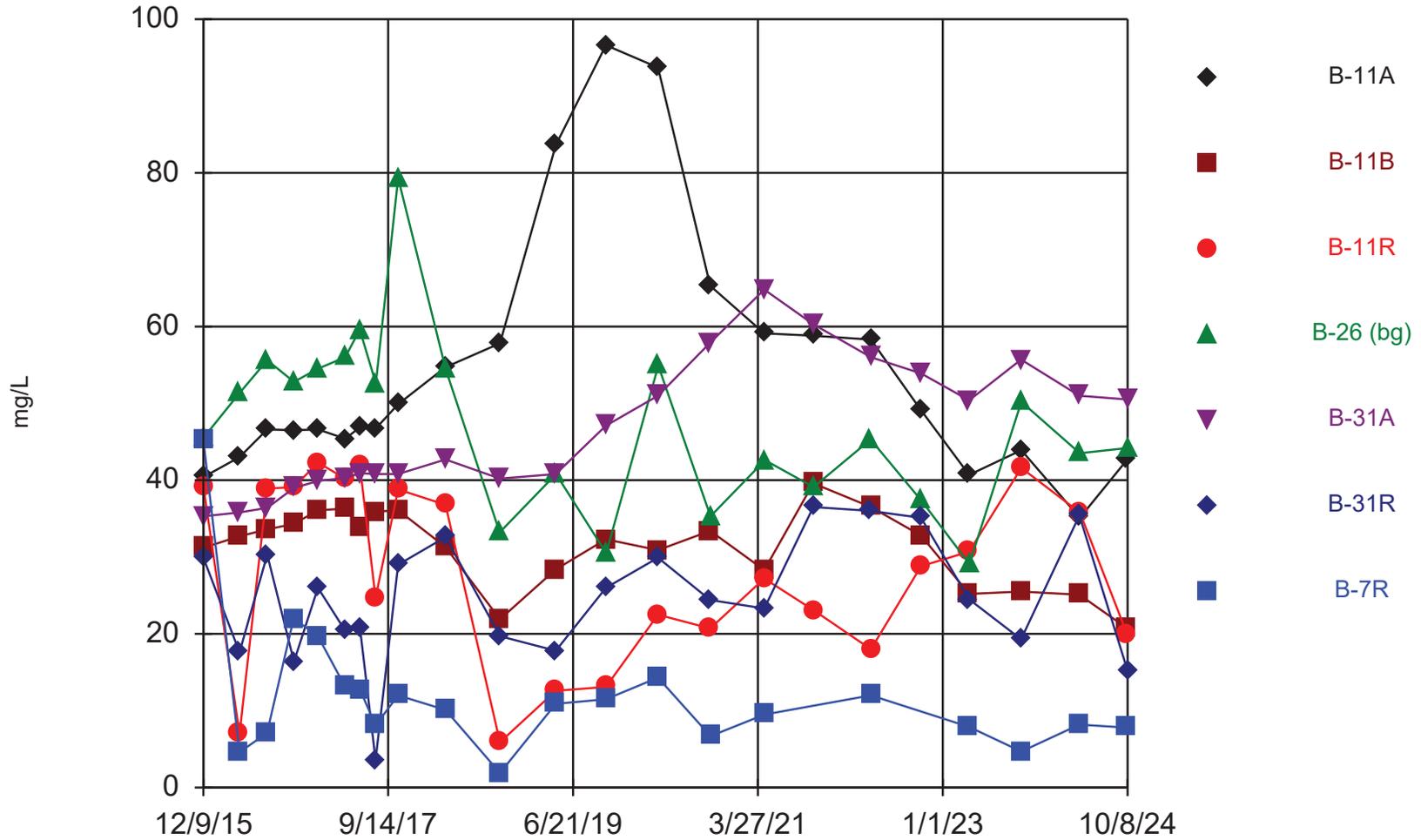
Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

Time Series

Constituent: Calcium (ug/L) Analysis Run 12/4/2024 11:46 AM
 Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	58800	64100	126000	81300	48400	77400	31700
4/12/2016				86200			
4/13/2016	60100	65400	141000		51900	84900	42300
7/18/2016							44400
7/19/2016	54000	59000	130000	82400	48900	76100	
10/19/2016	54600						56600
10/20/2016		59100	128000	82700	45800	84200	
1/12/2017	54500	63900	126000	89400	46600	73900	56700
4/17/2017	54800	67400	123000	89000	46900	85600	61400
6/7/2017			128000	105000			51600
6/8/2017	57800	68200			49400	90700	
8/1/2017	54500	61400	139000		46000	93400	50400
8/2/2017				98100			
10/19/2017	55000	52400	117000	102000	49600	75700	56200
4/2/2018	53300	59000	124000		49300	72900	49200
4/3/2018				88100			
10/8/2018				78700			
10/9/2018	48600	66300	49900		46600	125000	38500
4/22/2019	60400	83300	82400		48200	105000	59400
4/23/2019				75300			
10/14/2019	56600	91400	66000		52200	110000	57700
10/15/2019				<76.2 (UX)			
4/13/2020	57500	115000	117000		50900	93800	58700
4/14/2020				88500			
10/12/2020	55600	91200	120000		47700	95700	
10/13/2020				76500			41900
4/19/2021	50600	93400	115000		52100	91400	
4/20/2021							56100
4/21/2021				78700			
10/7/2021	51400	100000	119000		53500	79000	
10/8/2021				84900			
4/25/2022				75900		81100	
4/26/2022	51600	97100	114000		55300		59200
10/18/2022	46000	75100	116000	80300	45300	78500	
4/3/2023							48800
4/4/2023	51700	84400	105000		46100	88300	
4/5/2023				77400			
10/2/2023					48300	114000	
10/3/2023	60300	80600	90600	85100			41000
4/23/2024		171000			46000	89300	52300
4/24/2024	63900		96700	79600			
10/7/2024	57000	142000	152000				83500
10/8/2024				84300	45500	134000	

Chloride



Time Series Analysis Run 12/4/2024 11:46 AM

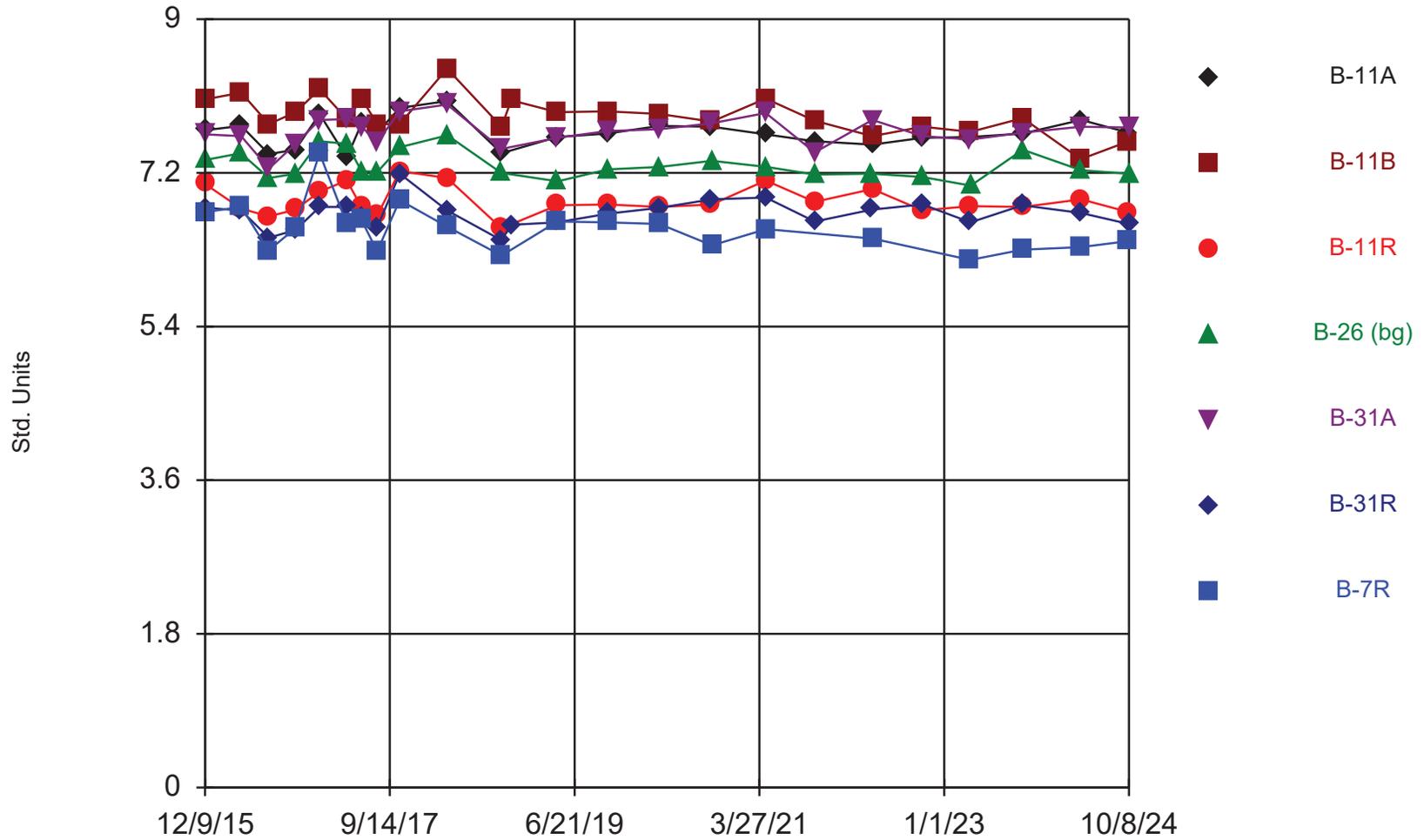
Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

Time Series

Constituent: Chloride (mg/L) Analysis Run 12/4/2024 11:46 AM
 Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	40.4	31.2	39.2	45.5	35.3	29.9	45.2
4/12/2016				51.3			
4/13/2016	43	32.7	7		35.8	17.6	4.6
7/18/2016							7.1
7/19/2016	46.6	33.6	38.9	55.6	36.4	30.3	
10/19/2016	46.5						22
10/20/2016		34.3	39.1	52.8	39	16.4	
1/12/2017	46.6	36.1	42.3	54.5	39.9	26	19.7
4/17/2017	45.4	36.3	40.2	56	40.3	20.4	13.1
6/7/2017			42	59.6			12.8
6/8/2017	46.9	33.9			40.9	20.7	
8/1/2017	46.7	35.9	24.7		40.8	3.6	8.1
8/2/2017				52.6			
10/19/2017	49.9	36.1	38.8	79.3	40.8	29	12
4/2/2018	54.7	31.3	36.8		42.7	32.6	10.1
4/3/2018				54.4			
10/8/2018				33.2			
10/9/2018	57.8	21.9	5.9		40.2	19.7	1.9 (J)
4/22/2019	83.6	28.4	12.6		40.8	17.8	10.9
4/23/2019				40.8			
10/14/2019	96.6	32.3	13.1		47.1	26	11.5
10/15/2019				30.5			
4/13/2020	93.7	30.9	22.5		51	29.9	14.3
4/14/2020				54.9			
10/12/2020	65.3	33.4	20.7		57.9	24.4	
10/13/2020				35.3			6.7 (J)
4/19/2021	59.1	28.3	27.2		64.8	23.3	
4/20/2021							9.5 (J)
4/21/2021				42.6			
10/7/2021	58.8	39.6	23.1		60.3	36.5	
10/8/2021				39.1			
4/25/2022				45.3		36	
4/26/2022	58.3	36.5	18		56		12
10/18/2022	49.1	32.8	28.8	37.4	53.9	35.1	
4/3/2023							7.9 (J)
4/4/2023	40.7	25.2	30.7		50.4	24.5	
4/5/2023				29.1			
10/2/2023					55.7	19.3	
10/3/2023	43.9	25.5	41.6	50.2			4.7
4/23/2024		25.1			51	35.4	8.2 (J)
4/24/2024	35.1		35.8	43.5			
10/7/2024	42.7	20.7	19.9				7.8 (J)
10/8/2024				44.2	50.5	15.2	

Field pH



Time Series Analysis Run 12/4/2024 11:46 AM

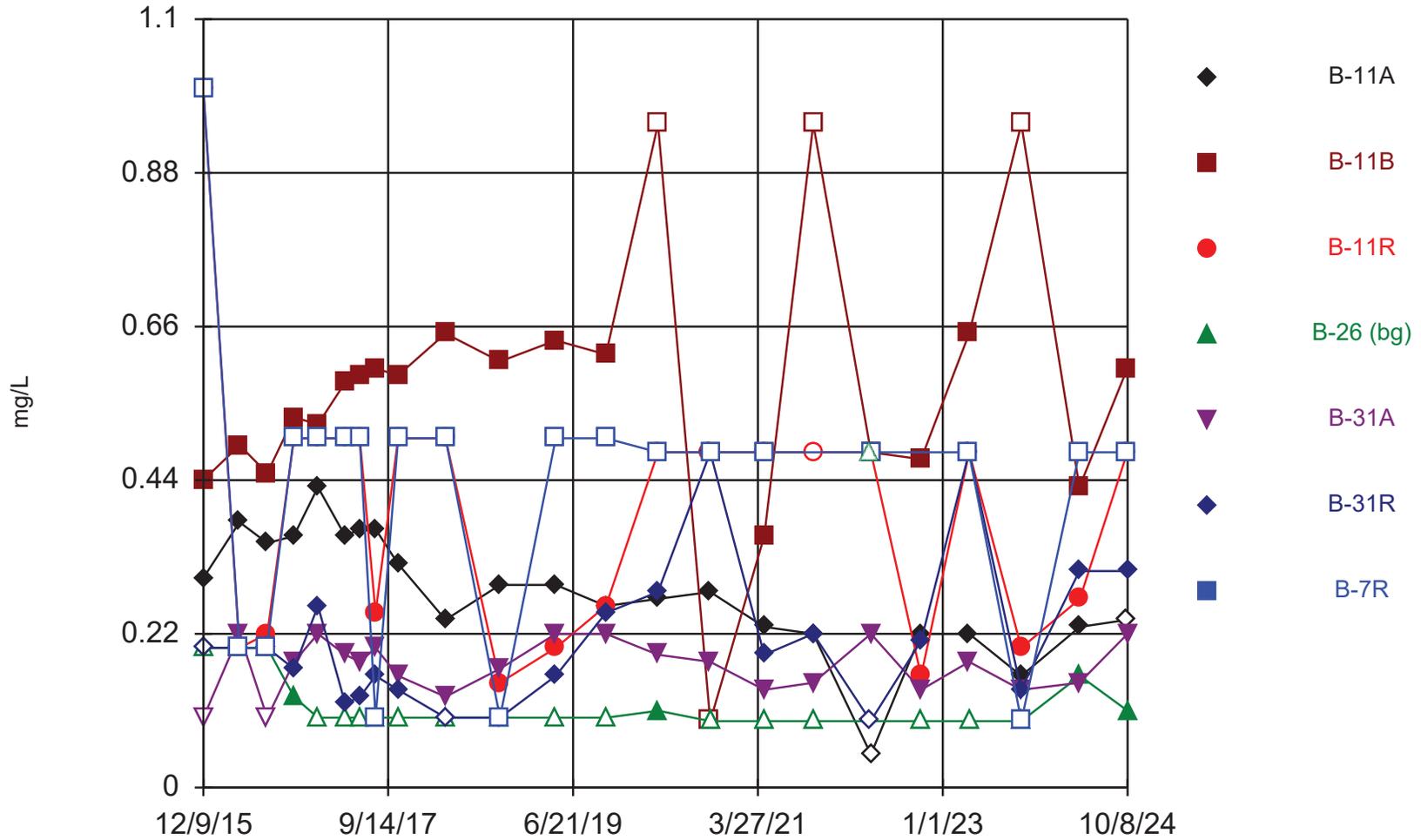
Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

Time Series

Constituent: Field pH (Std. Units) Analysis Run 12/4/2024 11:46 AM
 Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	7.7	8.06	7.07	7.35	7.65	6.79	6.74
4/12/2016				7.43			
4/13/2016	7.75	8.14	6.78		7.63	6.76	6.8
7/18/2016							6.29
7/19/2016	7.42	7.77	6.69	7.14	7.25	6.44	
10/19/2016	7.47						6.55
10/20/2016		7.91	6.77	7.19	7.54	6.53	
1/12/2017	7.89	8.18	6.98	7.57	7.82	6.8	7.43
4/17/2017	7.38	7.83	7.11	7.54	7.83	6.8	6.6
6/7/2017			6.8	7.22			6.65
6/8/2017	7.78	8.07			7.74	6.67	
8/1/2017	7.67	7.77	6.7		7.56	6.56	6.28
8/2/2017				7.21			
10/19/2017	7.96	7.77	7.22	7.5	7.92	7.19	6.88
4/2/2018	8.04	8.42	7.14		8	6.76	6.57
4/3/2018				7.64			
10/8/2018				7.2			
10/9/2018	7.43	7.74	6.55		7.48	6.41	6.23
11/12/2018		8.05				6.59	
4/22/2019	7.62	7.91	6.82		7.61	6.62	6.63
4/23/2019				7.1			
10/14/2019	7.66	7.92	6.83		7.69	6.72	6.62
10/15/2019				7.24			
4/13/2020	7.75	7.89	6.8		7.71	6.79	6.6
4/14/2020				7.27			
10/12/2020	7.74	7.8	6.83		7.78	6.89	
10/13/2020				7.34			6.35
4/19/2021	7.65	8.07	7.11		7.9	6.91	
4/20/2021							6.54
4/21/2021				7.27			
10/7/2021	7.57	7.81	6.86		7.44	6.63	
10/8/2021				7.18			
4/25/2022				7.19		6.77	
4/26/2022	7.53	7.63	7.01		7.82		6.43
10/18/2022	7.61	7.74	6.76	7.15	7.63	6.83	
4/3/2023							6.18
4/4/2023	7.62	7.68	6.81		7.59	6.62	
4/5/2023				7.05			
10/2/2023					7.67	6.82	
10/3/2023	7.66	7.84	6.8	7.47			6.3
4/23/2024		7.36			7.74	6.73	6.33
4/24/2024	7.82		6.89	7.23			
10/7/2024	7.67	7.57	6.74				6.4
10/8/2024				7.19	7.73	6.6	

Fluoride



Time Series Analysis Run 12/4/2024 11:46 AM

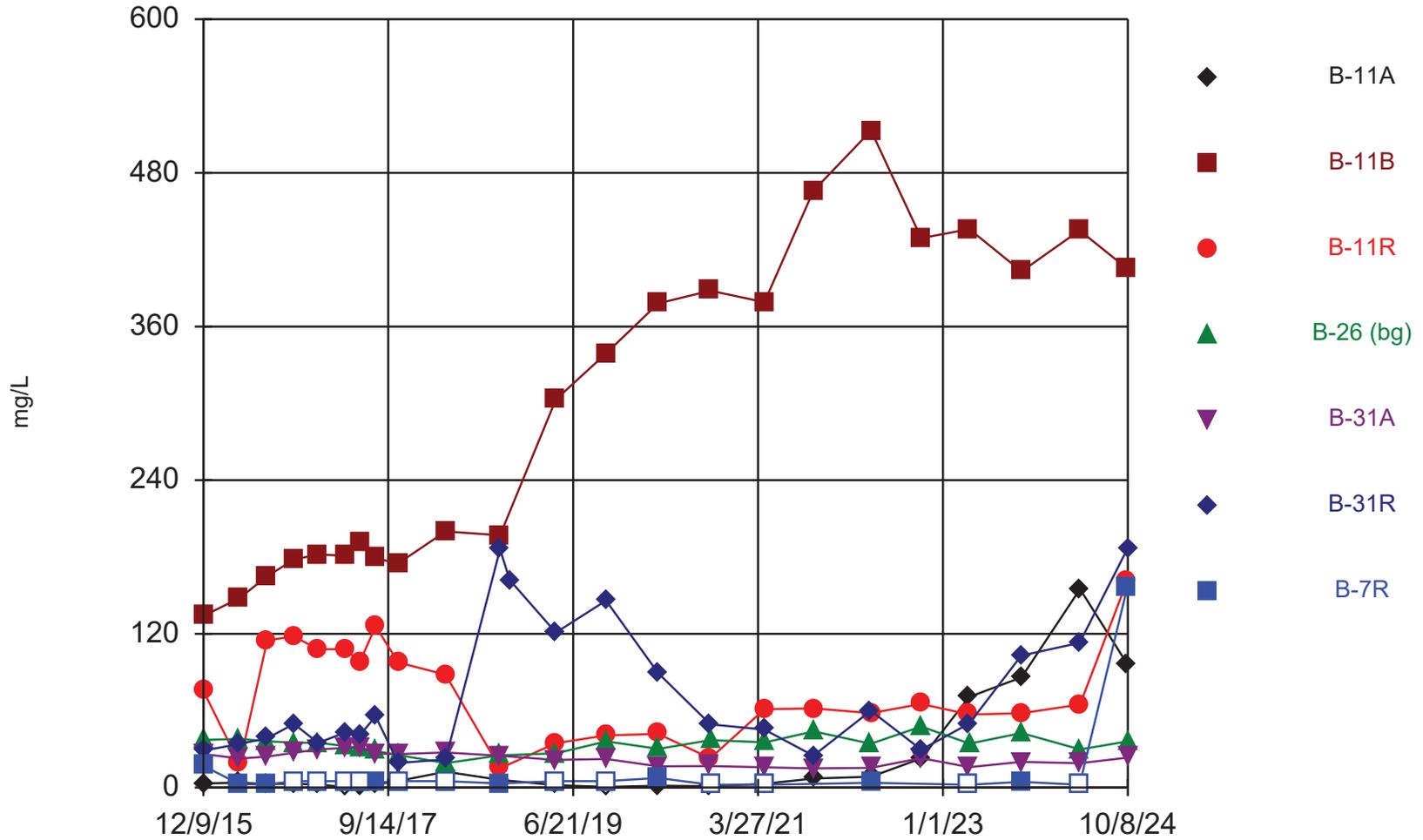
Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/4/2024 11:46 AM
 Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	0.3 (J)	0.44	<1 (U)	<0.2 (U)	<0.2 (U)	<0.2 (U)	<1 (U)
4/12/2016				<0.2 (U)			
4/13/2016	0.38 (J)	0.49	<0.2 (U)		0.22 (J)	<0.2 (U)	<0.2 (U)
7/18/2016							<0.2 (U)
7/19/2016	0.35 (J)	0.45	0.22 (J)	<0.2 (U)	<0.2 (U)	<0.2 (U)	
10/19/2016	0.36						<0.5 (U)
10/20/2016		0.53	<0.5 (U)	0.13 (J)	0.18 (J)	0.17 (J)	
1/12/2017	0.43	0.52	<0.5 (U)	<0.1 (U)	0.22 (J)	0.26 (J)	<0.5 (U)
4/17/2017	0.36	0.58	<0.5 (U)	<0.1 (U)	0.19 (J)	0.12 (J)	<0.5 (U)
6/7/2017			<0.5 (U)	<0.1 (U)			<0.5 (U)
6/8/2017	0.37	0.59			0.18 (J)	0.13 (J)	
8/1/2017	0.37	0.6	0.25 (J)		0.2 (J)	0.16 (J)	<0.1 (U)
8/2/2017				<0.1 (U)			
10/19/2017	0.32	0.59	<0.5 (U)	<0.1 (U)	0.16 (J)	0.14 (J)	<0.5 (U)
4/2/2018	0.24 (J)	0.65	<0.5 (U)		0.13 (J)	<0.1 (U)	<0.5 (U)
4/3/2018				<0.1 (U)			
10/8/2018				<0.1 (U)			
10/9/2018	0.29 (J)	0.61	0.15 (J)		0.17 (J)	<0.1 (U)	<0.1 (U)
4/22/2019	0.29 (J)	0.64	0.2 (J)		0.22 (J)	0.16 (J)	<0.5 (U)
4/23/2019				<0.1 (U)			
10/14/2019	0.26 (J)	0.62	0.26 (J)		0.22 (J)	0.25 (J)	<0.5 (U)
10/15/2019				<0.1 (U)			
4/13/2020	0.27 (J)	<0.95 (U)	<0.48 (U)		0.19 (J)	0.28 (J)	<0.48 (U)
4/14/2020				0.11 (J)			
10/12/2020	0.28 (J)	<0.095 (U)	<0.48 (U)		0.18 (J)	<0.48 (U)	
10/13/2020				<0.095 (U)			<0.48 (U)
4/19/2021	0.23 (J)	0.36	<0.48		0.14 (J)	0.19 (J)	
4/20/2021							<0.48
4/21/2021				<0.095 (U)			
10/7/2021	0.22 (J)	<0.95 (U)	<0.48 (U)		0.15 (J)	0.22 (J)	
10/8/2021				<0.095 (U)			
4/25/2022				<0.48 (UX)		<0.095 (U)	
4/26/2022	<0.095 (U)	<0.48 (U)	<0.48 (U)		0.22 (J)		<0.48 (U)
10/18/2022	0.22 (J)	0.47	0.16 (J)	<0.095 (U)	0.14 (J)	0.21 (J)	
4/3/2023							<0.48 (U)
4/4/2023	0.22 (J)	0.65 (J)	<0.48 (U)		0.18 (J)	<0.48 (U)	
4/5/2023				<0.095 (U)			
10/2/2023					0.14 (J)	0.14 (J)	
10/3/2023	0.16 (J)	<0.95 (U)	0.2 (J)	<0.095 (U)			<0.095 (U)
4/23/2024		0.43			0.15 (J)	0.31 (J)	<0.48
4/24/2024	0.23 (J)		0.27 (J)	0.16 (J)			
10/7/2024	<0.48	0.6 (J)	<0.48				<0.48
10/8/2024				0.11 (J)	0.22 (J)	0.31 (J)	

Sulfate



Time Series Analysis Run 12/4/2024 11:46 AM

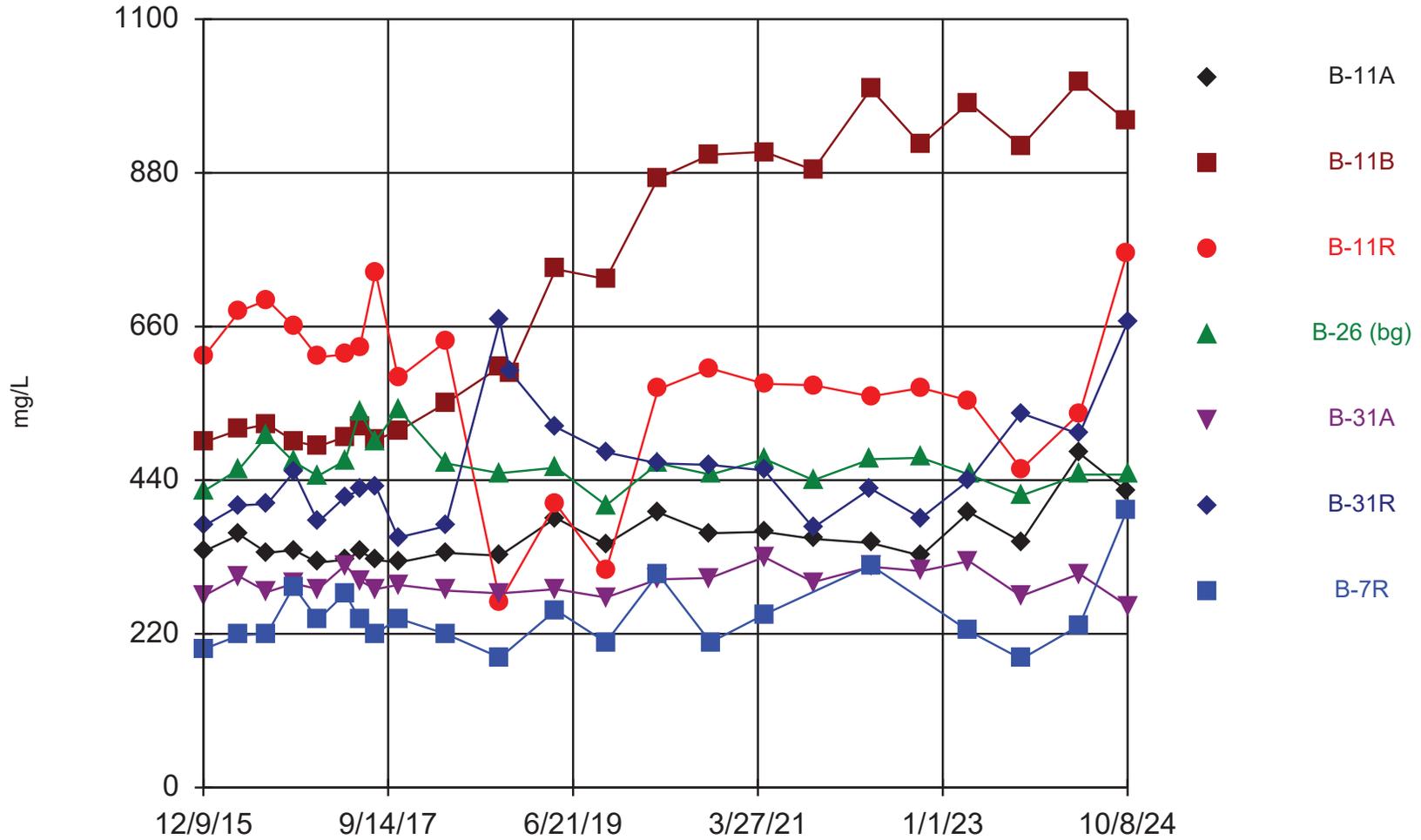
Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/4/2024 11:46 AM
 Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	3.2 (J)	134	75.4	37.1	26.2	28.8	17 (J)
4/12/2016				38			
4/13/2016	3.8 (J)	148	18.4		22.6	34.1	2.5 (J)
7/18/2016							2.4 (J)
7/19/2016	2.7 (J)	165	115	36.2	24.2	38.5	
10/19/2016	3 (J)						<5 (U)
10/20/2016		178	118	35	27.2	49.7	
1/12/2017	2.3 (J)	182	108	35	29.8	34.9	<5 (U)
4/17/2017	<1 (U)	181	108	32.4	31	43	<5 (U)
6/7/2017			98.2	31			<5 (U)
6/8/2017	1.4 (J)	191			31.2	41.1	
8/1/2017	2.4 (J)	179	126		26.6	55.6	3.7
8/2/2017				28.5			
10/19/2017	5.1	175	97.7	25.3	26.1	19.2	<5 (U)
4/2/2018	12.3	200	88.1		27.4	22	<5 (U)
4/3/2018				19.1			
10/8/2018				25.1			
10/9/2018	6	197	15.1		24.8	186	3.2
11/12/2018						162	
4/22/2019	1.9 (J)	303	34.6		21.6	121	<5 (U)
4/23/2019				26.7			
10/14/2019	<1 (U)	339	40.7		22.3	146	<5 (U)
10/15/2019				36			
4/13/2020	1.4 (J)	378	41.9		16.6	89.4	7.5 (J)
4/14/2020				30.2			
10/12/2020	1 (J)	388	22.8		16.8	49.4	
10/13/2020				37			<2.2 (U)
4/19/2021	2.9	379	61.2		15.8	45.3	
4/20/2021							<2.2
4/21/2021				35.3			
10/7/2021	7	466	61.8		14.9	24.9	
10/8/2021				43.8			
4/25/2022				34.2		60	
4/26/2022	8.5	513	58.1		15.4		3.7 (J)
10/18/2022	22.7	429	65.3	47.6	23	29.6	
4/3/2023							<2.2 (U)
4/4/2023	70.8	436	57		15.9	50	
4/5/2023				34.3			
10/2/2023					20	103	
10/3/2023	86	403	58	42.5			4.5
4/23/2024		435			19	113	<2.2
4/24/2024	155		64.8	29.8			
10/7/2024	96.1	405	162				157
10/8/2024				36	23.4	187	

Total Dissolved Solids



Time Series Analysis Run 12/4/2024 11:46 AM

Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

Time Series

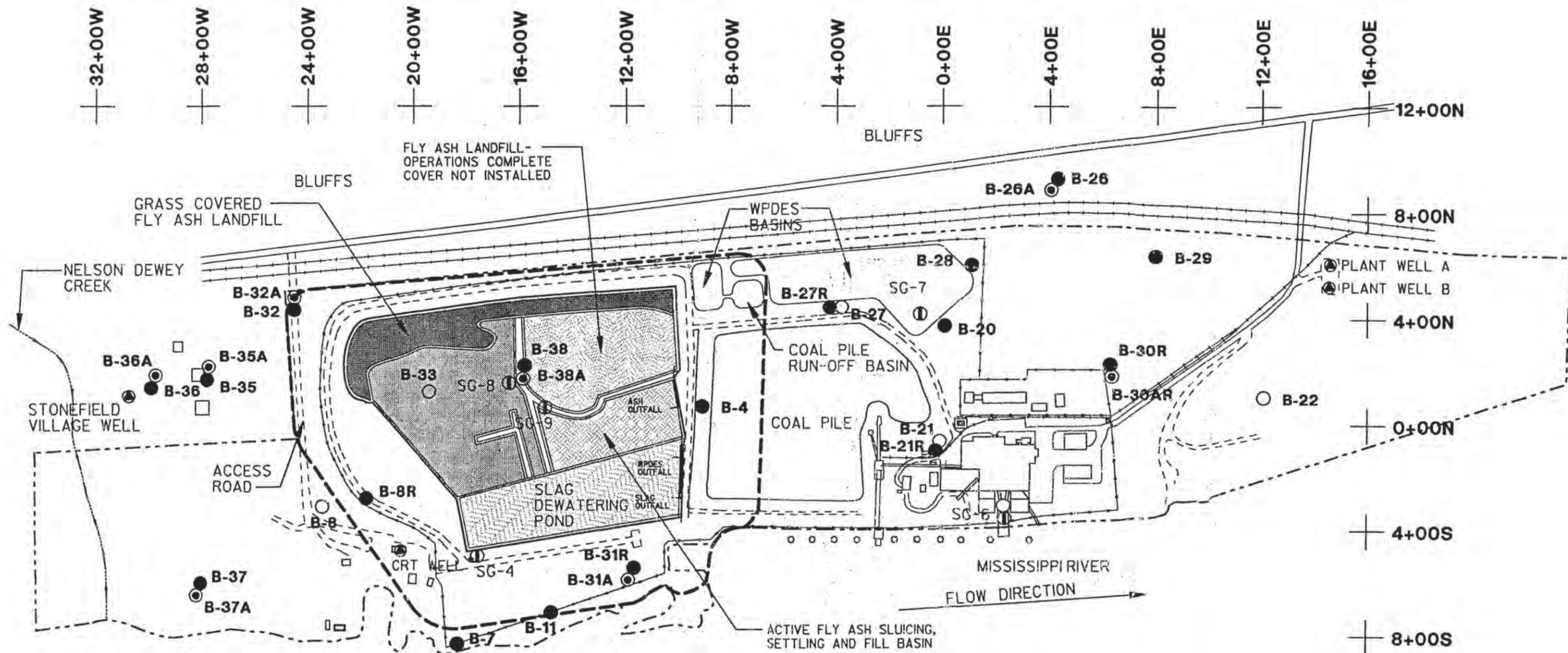
Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/4/2024 11:46 AM

Nelson Dewey Generating Station Data: NED - Chempoint- export-Dec2020

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	338	494	616	424	274	374	198
4/12/2016				456			
4/13/2016	362	512	682		302	404	218
7/18/2016							220
7/19/2016	336	520	698	504	280	406	
10/19/2016	340						288
10/20/2016		496	660	466	292	452	
1/12/2017	322	488	616	446	284	380	240
4/17/2017	326	502	620	468	318	416	278
6/7/2017			630	538			240
6/8/2017	338	516			296	426	
8/1/2017	326	498	738		284	432	220
8/2/2017				496			
10/19/2017	322	510	586	542	290	358	242
4/2/2018	336	550	638		282	374	220
4/3/2018				464			
10/8/2018				450			
10/9/2018	332	602	266		278	668	186
11/12/2018		594				596	
4/22/2019	386	742	406		284	516	254
4/23/2019				458			
10/14/2019	348	728	310		272	480	208
10/15/2019				404			
4/13/2020	394	872	570		298	464	306
4/14/2020				464			
10/12/2020	364	906	600		300	462	
10/13/2020				448			208
4/19/2021	366	910	578		330	454	
4/20/2021							248
4/21/2021				470			
10/7/2021	356	884	576		294	372	
10/8/2021				440			
4/25/2022				470		428	
4/26/2022	350	1000	560		316		318
10/18/2022	332	920	572	472	310	386	
4/3/2023							224
4/4/2023	394	980	554		324	440	
4/5/2023				448			
10/2/2023					274	536	
10/3/2023	352	918	456	418			184
4/23/2024		1010			306	506	232
4/24/2024	478		536	448			
10/7/2024	424	954	766				398
10/8/2024				448	260	666	

Appendix B

1994 RMT Environmental Contamination Assessment Information

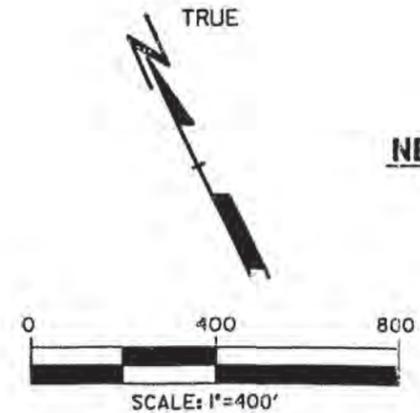


LEGEND

● B-28	WATER TABLE OBSERVATION WELL
⊙ B-28A	PIEZOMETER
○ B-33	ABANDONED WELL
⊙ CRT WELL	WATER SUPPLY WELL
Ⓢ SG-4	STAFF GAUGE
---	APPROXIMATE LIMITS OF LICENSED LANDFILL
---	RAILROAD TRACK
---	ROAD
---	PROPERTY LINE
---	DESIGN MANAGEMENT ZONE
+	LOCAL GRID
□	BUILDINGS
○	PILINGS

- NOTES**
1. BASE MAP WELLHEAD LOCATIONS SURVEYED BY SCHMITT ENGINEERING IN OCTOBER 1993.
 2. OTHER SITE INFORMATION PROVIDED BY WP&L.

**WISCONSIN POWER & LIGHT
NELSON DEWEY GENERATING STATION
EXISTING CONDITIONS
OCTOBER 1993**



	Drawn By	CCH
	Approved By	ELM
	Date	OCTOBER 1994
	Proj. No.	2767.03
	File No.	276703OLDGN

OCT 31 1994

FIGURE 4

TABLE 5

SUMMARY OF LEACHING TEST RESULTS

Year	Fly Ash		Slag
	1983	1990 to 1992	1987 to 1992
Coal Type	Eastern (and Western)	Western (and Eastern)	Western (and Eastern) ¹
Water:Solid Ratio	2:1	4:1	4:1
Extraction Time	24 hours	48 hours	48 hours
Number of Samples	1	3	6
Arsenic (mg/L)	< 0.001	0.05 to 2.02	< 0.002 to 0.081
Selenium (mg/L)	NA	0.42 to 160	< 0.002 to 0.045
Boron (mg/L)	420	4.63 to 37.34	< 0.010 to 1.05
Iron (mg/L)	NA	NA	< 0.02 to 0.98
Sulfate (mg/L)	13,070	2,000 to 16,700	2.0 to < 5.0
pH (SU)	6.6	10.3 to 12.5	5.6 to 9.9

NOTES:

1. 1983 fly ash leaching data from RMT (1984); remaining leaching data provided by WP&L.
2. NA = Not Analyzed.

PROJECT NUMBER: 1831.28
 BEGINNING DATE: 01-JUN-93
 ENDING DATE: 07-SEP-93

TABLE 6
 SLAG AND ASH BASIN CHEMISTRY

PARAMETER	UNITS	FLY ASH BASIN	SLAG BASIN
		07-SEP-93 3302-011	07-SEP-93 3302-010
COLOR, FIELD		CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	5190	400
ODOR, FIELD		NONE	NONE
PH, FIELD	SU	8.1	7.4
TEMPERATURE	DEG C	17	18
TURBIDITY, FIELD		SLIGHT	SLIGHT
ALKALINITY AS CaCO3	MG/L	230	160
HARDNESS AS CaCO3	MG/L	930	200
SOLIDS, TOTAL DISSOLVED	MG/L	410	300
SULFATE	MG/L	3300	50
ARSENIC, TOTAL	UG/L	60	8.0
BARIUM, TOTAL	UG/L	270	150
BORON, TOTAL	UG/L	2300	210
CADMIUM, TOTAL	UG/L	5.4	< 0.30
CHROMIUM, TOTAL	UG/L	11	< 10
IRON, TOTAL	UG/L	1600	2000
LEAD, TOTAL	UG/L	< 3.0	< 3.0
MERCURY, TOTAL	UG/L	< 0.20	< 0.20
SELENIUM, TOTAL	UG/L	36	2.1
SILVER, TOTAL	UG/L	< 1.0	< 1.0

PROJECT NUMBER: 1831.28
 BEGINNING DATE: 01-JUN-93
 ENDING DATE: 29-OCT-93

TABLE 8
 GROUNDWATER CHEMISTRY

PARAMETER	UNITS	B-04	B-04	B-07 ND	B-07 ND	B-08	B-08R
		01-JUN-93 1670-015	07-SEP-93 3293-010	01-JUN-93 1670-020	07-SEP-93 3302-004	01-JUN-93 1670-001	07-SEP-93 3293-009
COLOR, FIELD		CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	1160	1240	460	550	670	1160
DEPTH TO WATER	FEET	9.90	12.75	12.83	16.12	5.68	20.13
ODOR, FIELD		NONE	NONE	NONE	NONE	NONE	NONE
PH, FIELD	SU	7.3	7.5	7.0	6.9	7.1	6.8
TEMPERATURE	DEG C	15	10	14	12	15	7
TURBIDITY, FIELD		NONE	SLIGHT	NONE	SLIGHT	NONE	MODERATE
WATER ELEVATION	FEET	610.68	607.83	610.97	607.68	610.51	
ALKALINITY AS CaCO3	MG/L	72	92	160	190	220	440
CHLORIDE	MG/L	18	23	17	15	9.4	2.8
COD	MG/L						
FLUORIDE	MG/L	0.58	5.5	0.26	0.32	< 0.10	0.12
HARDNESS AS CaCO3	MG/L	220	120	210	250	370	620
NITROGEN, NITRATE + NITRITE	MG/L	0.15	0.33	< 0.050	< 0.050	< 0.050	4.2
SOLIDS, TOTAL DISSOLVED	MG/L	900	940	300	360	460	770
SULFATE	MG/L	500	560	74	100	180	180
ARSENIC, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
BARIUM, DISSOLVED	UG/L	68	< 50	61	73	63	50
BORON, DISSOLVED	UG/L	1900	4200	230	< 200	2200	9400
CADMIUM, DISSOLVED	UG/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	0.38
CHROMIUM, DISSOLVED	UG/L	< 10	< 10	< 10	< 10	< 10	< 10
COPPER, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	< 20
IRON, DISSOLVED	UG/L	720	890	2800	4100	< 100	< 100
LEAD, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L	1200	720	970	1500	17	3400
MERCURY, DISSOLVED	UG/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L	6.9	3.2	< 1.0	< 1.0	< 1.0	34
SILVER, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L	1000	100	22	< 20	220	< 20

PROJECT NUMBER: 1831.28
 BEGINNING DATE: 01-JUN-93
 ENDING DATE: 29-OCT-93

TABLE 8
 GROUNDWATER CHEMISTRY

PARAMETER	UNITS	B-11	B-11	B-20	B-26	B-26	B-26A
		07-SEP-93 X0001	29-OCT-93 3485-001	07-SEP-93 X0002	01-JUN-93 1670-022	07-SEP-93 3302-005	01-JUN-93 1670-023
COLOR, FIELD					CLEAR	CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	1500		310	610	670	660
DEPTH TO WATER	FEET	15.91		10.81	16.22	18.85	16.20
ODOR, FIELD					NONE	NONE	NONE
PH, FIELD	SU				7.1	7.2	7.0
TEMPERATURE	DEG C	13	13	14	14	11	15
TURBIDITY, FIELD					NONE	SLIGHT	NONE
WATER ELEVATION	FEET				610.18	607.55	610.19
ALKALINITY AS CaCO3	MG/L		470		320	300	340
CHLORIDE	MG/L				21	43	33
COD	MG/L						
FLUORIDE	MG/L				< 0.10	0.15	< 0.10
HARDNESS AS CaCO3	MG/L		810		390	410	400
NITROGEN, NITRATE + NITRITE	MG/L				2.6	4.9	2.0
SOLIDS, TOTAL DISSOLVED	MG/L		520		440	450	450
SULFATE	MG/L		360		34	34	33
ARSENIC, DISSOLVED	UG/L		8.4		< 3.0	< 3.0	< 3.0
BARIUM, DISSOLVED	UG/L		100		62	68	96
BORON, DISSOLVED	UG/L		5100		< 200	< 200	< 200
CADMIUM, DISSOLVED	UG/L		< 0.30		< 0.30	< 0.30	< 0.30
CHROMIUM, DISSOLVED	UG/L		< 10		< 10	< 10	< 10
COPPER, DISSOLVED	UG/L				< 20	< 20	< 20
IRON, DISSOLVED	UG/L		55000		< 100	< 100	< 100
LEAD, DISSOLVED	UG/L		< 3.0		< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L				< 5.0	< 5.0	< 5.0
MERCURY, DISSOLVED	UG/L		< 0.20		< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L		< 1.0	LNP	< 1.0	< 1.0	< 1.0
SILVER, DISSOLVED	UG/L		< 10		< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L				< 20	< 20	< 20

PROJECT NUMBER: 1831.28
 BEGINNING DATE: 01-JUN-93
 ENDING DATE: 29-OCT-93

TABLE 8
 GROUNDWATER CHEMISTRY

PARAMETER	UNITS	B-26A 07-SEP-93 3302-006	B-27R 07-SEP-93 X0003	B-28 01-JUN-93 1670-014	B-28 07-SEP-93 3302-003	B-29 07-SEP-93 X0004	B-30AR 01-JUN-93 1670-013
COLOR, FIELD		CLEAR		CLEAR	CLEAR		CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	440	370	190	230	360	220
DEPTH TO WATER	FEET	18.84	14.67	6.40	9.08	9.57	12.33
ODOR, FIELD		NONE		NONE	NONE		NONE
PH, FIELD	SU	7.2		6.1	6.0		7.2
TEMPERATURE	DEG C	11	14	17	15	15	17
TURBIDITY, FIELD		NONE		SLIGHT	MODERATE		NONE
WATER ELEVATION	FEET	607.55		610.46	607.74	607.26	610.11
ALKALINITY AS CaCO3	MG/L	340		26	54		200
CHLORIDE	MG/L	25		4.6	11		13
COD	MG/L						7.3
FLUORIDE	MG/L	0.15		< 0.10	< 0.10		0.10
HARDNESS AS CaCO3	MG/L	410		82	110		220
NITROGEN, NITRATE + NITRITE	MG/L	1.8		2.7	0.60		< 0.050
SOLIDS, TOTAL DISSOLVED	MG/L	440		140	160		280
SULFATE	MG/L	38		45	42		27
ARSENIC, DISSOLVED	UG/L	< 3.0		< 3.0	< 3.0		< 3.0
BARIUM, DISSOLVED	UG/L	86		< 50	52		< 50
BORON, DISSOLVED	UG/L	< 200		< 200	< 200		< 200
CADMIUM, DISSOLVED	UG/L	< 0.30		< 0.30	< 0.30		< 0.30
CHROMIUM, DISSOLVED	UG/L	< 10		< 10	< 10		< 10
COPPER, DISSOLVED	UG/L	< 20		< 20	< 20		< 20
IRON, DISSOLVED	UG/L	< 100		210	< 100		< 100
LEAD, DISSOLVED	UG/L	< 3.0		< 3.0	< 3.0		< 3.0
MANGANESE, DISSOLVED	UG/L	< 5.0		8.6	< 5.0		< 5.0
MERCURY, DISSOLVED	UG/L	< 0.20		< 0.20	< 0.20		< 0.20
SELENIUM, DISSOLVED	UG/L	< 1.0	LN	< 1.0	< 1.0	L	< 1.0
SILVER, DISSOLVED	UG/L	< 1.0		< 1.0	< 1.0		< 1.0
ZINC, DISSOLVED	UG/L	< 20		< 20	< 20		< 20

PROJECT NUMBER: 1831.28
 BEGINNING DATE: 01-JUN-93
 ENDING DATE: 29-OCT-93

TABLE 8
 GROUNDWATER CHEMISTRY

PARAMETER	UNITS	B-30AR	B-30R	B-30R	B-31A	B-31A	B-31R
		07-SEP-93 3302-002	01-JUN-93 1670-012	07-SEP-93 3302-001	01-JUN-93 1670-019	07-SEP-93 3293-011	01-JUN-93 1670-018
COLOR, FIELD		CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	410	420	360	700	800	640
DEPTH TO WATER	FEET	15.37	12.25	15.17	12.21	15.93	11.56
ODOR, FIELD		NONE	NONE	NONE	NONE	NONE	NONE
PH, FIELD	SU	7.3	7.0	6.8	6.9	7.3	6.8
TEMPERATURE	DEG C	12	16	14	17	14	17
TURBIDITY, FIELD		NONE	MODERATE	MODERATE	NONE	SLIGHT	SLIGHT
WATER ELEVATION	FEET	607.07	610.10	607.18	610.46	606.74	610.85
ALKALINITY AS CaCO3	MG/L	190	160	140	170	160	240
CHLORIDE	MG/L	14	13	6.6	16	17	11
COD	MG/L		9.7				
FLUORIDE	MG/L	0.16	< 0.10	< 0.10	0.39	0.43	< 0.10
HARDNESS AS CaCO3	MG/L	230	210	210	120	160	330
NITROGEN, NITRATE + NITRITE	MG/L	< 0.050	8.5	8.8	< 0.050	< 0.050	< 0.050
SOLIDS, TOTAL DISSOLVED	MG/L	280	280	230	510	570	510
SULFATE	MG/L	25	25	26	250	250	150
ARSENIC, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
BARIUM, DISSOLVED	UG/L	< 50	< 50	< 50	54	66	110
BORON, DISSOLVED	UG/L	< 200	< 200	< 200	2900	2100	2900
CADMIUM, DISSOLVED	UG/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	2.7
CHROMIUM, DISSOLVED	UG/L	< 10	< 10	< 10	< 10	< 10	< 10
COPPER, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	110
IRON, DISSOLVED	UG/L	< 100	< 100	< 100	210	300	450
LEAD, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L	< 5.0	< 5.0	< 5.0	4600	6000	440
MERCURY, DISSOLVED	UG/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L	< 1.0	1.3	3.2	< 1.0	< 1.0	1.2
SILVER, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	27

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TABLE 8
 GROUNDWATER CHEMISTRY

PARAMETER	UNITS	B-31R	B-32	B-32	B-32A	B-32A	B-35
		07-SEP-93 3293-012	01-JUN-93 1670-002	07-SEP-93 3293-016	01-JUN-93 1670-003	07-SEP-93 3293-017	01-JUN-93 1670-004
COLOR, FIELD		CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	L YLW/BM
CONDUCTANCE, SPECIFIC	UMHOS/CM	480	300	330	610	1320	1070
DEPTH TO WATER	FEET	14.44	3.37	6.22	3.59	6.46	10.10
ODOR, FIELD		NONE	NONE	NONE	NONE	NONE	NONE
PH, FIELD	SU	7.0	6.3	5.6	7.0	6.8	6.3
TEMPERATURE	DEG C	15	13	14	13	14	12
TURBIDITY, FIELD		MODERATE	SLIGHT	MODERATE	NONE	SLIGHT	SLIGHT
WATER ELEVATION	FEET	607.97	610.80	607.95	610.81	607.94	610.66
ALKALINITY AS CaCO3	MG/L	190	140	140	330	320	190
CHLORIDE	MG/L	11	6.7	6.9	7.0	7.6	110
COD	MG/L						
FLUORIDE	MG/L	0.18	< 0.10	0.12	0.12	0.19	< 0.10
HARDNESS AS CaCO3	MG/L	240	160	180	350	390	260
NITROGEN, NITRATE + NITRITE	MG/L	< 0.050	0.68	1.2	1.1	1.3	36
SOLIDS, TOTAL DISSOLVED	MG/L	340	200	240	380	420	800
SULFATE	MG/L	71	11	16	29	30	35
ARSENIC, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	7.4
BARIUM, DISSOLVED	UG/L	81	100	120	98	91	100
BORON, DISSOLVED	UG/L	1100	< 200	< 200	< 200	< 200	210
CADMIUM, DISSOLVED	UG/L	1.1	< 0.30	0.38	< 0.30	0.35	< 0.30
CHROMIUM, DISSOLVED	UG/L	< 10	< 10	< 10	< 10	< 10	< 10
COPPER, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	21
IRON, DISSOLVED	UG/L	210	< 100	< 100	< 100	< 100	< 100
LEAD, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L	360	< 5.0	280	6.9	33	< 5.0
MERCURY, DISSOLVED	UG/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SILVER, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	< 20

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TABLE 8
 GROUNDWATER CHEMISTRY

PARAMETER	UNITS	B-35	B-35A	B-35A	B-36	B-36	B-36A
		07-SEP-93 3293-002	01-JUN-93 1670-005	07-SEP-93 3293-003	01-JUN-93 1670-007	07-SEP-93 3293-004	01-JUN-93 1670-006
COLOR, FIELD		YELLOW	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	1050	620	680	430	500	620
DEPTH TO WATER	FEET	13.13	10.55	13.57	10.86	13.97	11.11
ODOR, FIELD		NONE	NONE	NONE	NONE	NONE	NONE
PH, FIELD	SU	6.8	7.0	7.1	6.3	7.0	7.1
TEMPERATURE	DEG C	14	13	12	12	13	13
TURBIDITY, FIELD		SLIGHT	NONE	NONE	SLIGHT	MODERATE	NONE
WATER ELEVATION	FEET	607.63	610.63	607.61	610.60	607.49	610.35
ALKALINITY AS CaCO3	MG/L	210	330	320	230	210	330
CHLORIDE	MG/L	80	26	24	4.4	25	12
COO	MG/L						
FLUORIDE	MG/L	0.19	< 0.10	0.13	< 0.10	0.14	< 0.10
HARDNESS AS CaCO3	MG/L	290	380	400	240	280	350
NITROGEN, NITRATE + NITRITE	MG/L	39	1.7	2.0	< 0.050	1.4	0.83
SOLIDS, TOTAL DISSOLVED	MG/L	770	480	460	280	350	400
SULFATE	MG/L	43	33	37	15	18	36
ARSENIC, DISSOLVED	UG/L	3.6	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
BARIUM, DISSOLVED	UG/L	120	< 50	54	110	120	68
BORON, DISSOLVED	UG/L	220	< 200	< 200	< 200	< 200	< 200
CADMIUM, DISSOLVED	UG/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
CHROMIUM, DISSOLVED	UG/L	< 10	< 10	< 10	< 10	< 10	< 10
COPPER, DISSOLVED	UG/L	24	< 20	< 20	< 20	< 20	< 20
IRON, DISSOLVED	UG/L	< 100	< 100	< 100	< 100	< 100	< 100
LEAD, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L	< 5.0	< 5.0	< 5.0	< 5.0	55	< 5.0
MERCURY, DISSOLVED	UG/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	1.0	2.6	< 1.0
SILVER, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	< 20

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TABLE 8
 GROUNDWATER CHEMISTRY

PARAMETER	UNITS	B-36A	B-37	B-37A	B-38	B-38	B-38A
		07-SEP-93 3293-005	07-SEP-93 3302-007	07-SEP-93 3302-008	01-JUN-93 1670-016	07-SEP-93 3293-006	01-JUN-93 1670-017
COLOR, FIELD		CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	620	510	770	3630	2830	2760
DEPTH TO WATER	FEET	14.18	8.13	8.14	18.53	20.19	24.87
ODOR, FIELD		NONE	NONE	NONE	NONE	NONE	NONE
PH, FIELD	SU	7.1	7.3	7.3	8.3	9.9	7.7
TEMPERATURE	DEG C	11	13	11	20	20	15
TURBIDITY, FIELD		NONE	SLIGHT	NONE	NONE	SLIGHT	NONE
WATER ELEVATION	FEET	607.51	606.69	606.69	617.29	615.63	610.96
ALKALINITY AS CaCO3	MG/L	330	200	190	100	420	80
CHLORIDE	MG/L	13	6.8	11	26	24	23
COD	MG/L						
FLUORIDE	MG/L	0.14	< 0.10	< 0.10	1.8	2.6	1.1
HARDNESS AS CaCO3	MG/L	390	290	410	620	21	500
NITROGEN, NITRATE + NITRITE	MG/L	0.85	1.2	< 0.050	1.7	0.29	1.6
SOLIDS, TOTAL DISSOLVED	MG/L	420	380	590	3000	2200	2300
SULFATE	MG/L	36	100	240	2600	1200	2000
ARSENIC, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	180	90	38
BARIUM, DISSOLVED	UG/L	68	< 50	< 50	110	< 50	58
BORON, DISSOLVED	UG/L	< 200	3100	7400	2500	2600	2200
CADMIUM, DISSOLVED	UG/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
CHROMIUM, DISSOLVED	UG/L	< 10	< 10	< 10	68	< 10	52
COPPER, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	< 20
IRON, DISSOLVED	UG/L	< 100	< 100	< 100	< 100	< 100	< 100
LEAD, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L	< 5.0	< 5.0	55	< 5.0	< 5.0	< 5.0
MERCURY, DISSOLVED	UG/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L	< 1.0	L	< 1.0	L	57	320
SILVER, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	< 20

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TABLE 8
 GROUNDWATER CHEMISTRY

PARAMETER	UNITS	B-38A 07-SEP-93 3293-007
COLOR, FIELD		CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	3280
DEPTH TO WATER	FEET	27.59
ODOR, FIELD		NONE
PH, FIELD	SU	9.0
TEMPERATURE	DEG C	16
TURBIDITY, FIELD		NONE
WATER ELEVATION	FEET	608.24
ALKALINITY AS CaCO ₃	MG/L	90
CHLORIDE	MG/L	21
COD	MG/L	
FLUORIDE	MG/L	3.4
HARDNESS AS CaCO ₃	MG/L	390
NITROGEN, NITRATE + NITRITE	MG/L	0.59
SOLIDS, TOTAL DISSOLVED	MG/L	2600
SULFATE	MG/L	1800
ARSENIC, DISSOLVED	UG/L	51
BARIUM, DISSOLVED	UG/L	54
BORON, DISSOLVED	UG/L	3300
CADMIUM, DISSOLVED	UG/L	< 0.30
CHROMIUM, DISSOLVED	UG/L	11
COPPER, DISSOLVED	UG/L	< 20
IRON, DISSOLVED	UG/L	< 100
LEAD, DISSOLVED	UG/L	< 3.0
MANGANESE, DISSOLVED	UG/L	< 5.0
MERCURY, DISSOLVED	UG/L	< 0.20
SELENIUM, DISSOLVED	UG/L	57
SILVER, DISSOLVED	UG/L	< 1.0
ZINC, DISSOLVED	UG/L	< 20

Appendix C

2016 Low-Hazard Waste Exemption Leaching Test Results – Slag and Ash

Sediment and Soil Analytical Results - Water Leach Test Results
WPL Nelson Dewey

Sample	Date	Depth (feet)	Material Type	Lab Notes	Boron (ug/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)
WPDES POND								
SED-1	8/3/2016	0-1.3	Fly Ash	--	240	4.3	4.4	54
SED-2	8/3/2016	0-1.0	Fly Ash	--	200	4.3	11.5	60
QC-3 (SED-2)	8/3/2016	0-1	Fly Ash	--	240	3.5 J	6.1	52
SED-3	7/20/2016	0-4.5	Slag	--	130	2.7 J	5	28
	7/20/2016	4.5-5.5	SP	--	<50	2.5 J	<2.0	14 J
SED-4	7/19/2016	0-4.8	ML	--	510	10.5 J	11.9 J	86
	7/19/2016	4.8-5.5		--	74 J	NA	NA	NA
GP-19	8/4/2016	8-12	SM	--	62 J	2.4 J	2 J	16 J
SLAG POND								
SED-5	7/20/2016	0-1.6	ML-OL	--	54 J	3.2 J	33.3	90
SED-6	7/20/2016	0-1.0	ML	--	60 J	3.7 J	59.1	130
SED-7	8/4/2016	0-3.0	Fly Ash	--	88 J	4	10.5	76
SED-8	8/4/2016	1.0-1.5	Fly Ash	--	82 J	3.7 J	12.1	74
COAL YARD								
TP-CY-1	7/19/2016	0-0.5	Coal	--	140	<20.0	<20.0	32
	7/19/2016	3.0-3.5	SM	--	100 J	2.8 J	<2.0	20
TP-CY-3	7/20/2016	1.9-2.1	GM	--	<50	3.9 J	2.8 J	50
	7/20/2016	4.8-5.5	SM	--	NA	NA	NA	NA
TP-CY-4	7/19/2016	0-2.8	Coal	--	190	<20.0	<20.0	38
	7/19/2016	2.8-3.2	GP & SM	--	<50	<10.0	<10.0	34
	7/19/2016	3.6-4.8	Slag	--	<50	<20.0	<20.0	10 J
	7/19/2016	4.8-5.0		--	NA	NA	NA	NA
TP-CY-6	7/19/2016	0-0.5	Coal	--	190	<20.0	<20.0	54
	7/19/2016	0.7-1.0	SP	--	<50	2.5 J	2.3 J	30
TP-CY-10	7/19/2016	0-0.5	Coal	--	120	2.4 J	11.6	48
	7/19/2016	1.0-2.0	SM	--	<50	2.2 J	2.3 J	28
TP-CY-12	7/20/2016	0-0.3	Coal	--	160	<20.0	<20.0	44
	7/20/2016	0.3-2.0	SP	--	<50	2.2 J	2.2 J	24
	7/20/2016	2.0-2.7	SP	--	<50	2.3 J	27.5	50
QC-1 (TP-CY-12)	7/20/2016	0.3-2.0	SP	--	<50	2.6 J	2.5 J	24
SLAG HANDLING AREA								
GP-5	8/3/2016	12.5-15	Fly Ash	--	100	<2.0	3.0 J	22
	8/3/2016	18-24	ML & SM	--	99 J	3.3 J	<2.0	24
GP-7	8/3/2016	7.5-18	Slag	--	<50	2.2 J	<2.0	<8.7
QC-2 (GP-7)	8/3/2016	7.5-18	Slag	--	<50	2.2 J	<2.0	10 J
GP-14	8/4/2016	12.5-15	Fly Ash	--	120	<2.0	13.4	96
SLAG SAMPLES¹								
Slag O1 ²	6/3/2013	--	Slag	--	NA	NA	NA	NA
Slag O1	12/23/2013	--	Slag	--	12.5 AB	0.277 B	0.218	NA
NED Slag Composite 2014	7/1/2014	--	Slag	--	11.7 AB*^	< 0.142	0.457 B	98 H
Slag Sample	4/14/2015	--	Slag	--	< 1020 A	0.751	0.427	NA

Sediment and Soil Analytical Results - Water Leach Test Results
WPL Nelson Dewey

Sample	Date	Depth (feet)	Material Type	Lab Notes	Boron (ug/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)
FLY ASH SAMPLES¹								
NED Flyash Composite ²	2/14/2014	--	Fly Ash	--	NA	NA	6,530 B	NA
Week of 062815 ²	7/3/2015	--	Fly Ash	--	NA	NA	6,260	NA
Week of 010916	1/4/2016	--	Fly Ash	--	NA	NA	NA	NA
NR 140 Preventative Action Limits (PALs)					200	125	125	NE
NR 140 Enforcement Standards (ESs)					1000	250	250	NE
40 CFR Part 141.62 Maximum Contaminant Levels (MCL)					NE	NE	NE	NE
NR 538 Table 1A Standards					190	125	125	NE
NR 538 Table 2A Standards					1900	1,250	1,250	NE

Abbreviations:

mg/L = micrograms per liter
 ML = Silt
 ML-OL = Silty Organic Clay

NE = No Standard Established
 ML-CL = Silty Clay
 SP = Poorly Graded Sand

NA = Not Analyzed
 SM = Silty Sand
 ML-OL = Silty Organic Clay

GM = Silty Gravel
 GP = Poorly Graded Gravel
 TDS = Total Dissolved Solids

Notes:

- Slag and Fly Ash samples were collected by the plant as part of permit requirements.
 - Sample was analyzed using the SPLP Leach Method rather than the ASTM Water Leach Method for tested parameters except for Sulfate.
- NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.
- NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.

Laboratory Notes/Qualifiers:

- J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
- A = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
- B = Compound was found in the blank and sample.
- F1 = MS and/or MSD Recovery is outside acceptance limits.
- H = Sample was prepped or analyzed beyond the specified holding time.
- ^ = ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
- * = LCS or LCSD is outside acceptance limits.

Created by: RJG Date: 3/14/2016
 Last revision by: RJG Date: 10/24/2016
 Checked by: BSS Date: 10/24/2016

Original table prepared for Slag Pond Closure Low Hazard Waste Exemption Request (SCS Project #25216054.00).
 Reformatted for the Alternative Source Demonstration to include only the parameters with SSIs that were included in the leach testing by NDK, 9/14/2020; SCC 10/1/2021.

I:\25223071.00\Deliverables\April 2023 ASD NED\Appendix C 2016 Leachate Results Slag and Ash\[Table 4. Sediment_Soil_Water Leach Results-Updated.xlsx]Leach Test - SSI Parameters

Table 4a. Sediment and Soil Analytical Results - Water Leach Test Metals
WPL Nelson Dewey / SCS Engineers Project #25216054.00
(Results are in µg/L, except where noted otherwise)

Sample	Date	Depth (feet)	Material Type	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium (Total)	Cobalt	Copper	Iron	Lead	Lithium	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Zinc		
WPDES POND																											
SED-1	8/3/2016	0-1.3	Fly Ash	<250	<25	<25	650	<25	240	<2.5	6,100	<25	<25	<25	<250	<3.8	7.9	<25	<0.13	130	<25	<25	<25	<25	<25		
SED-2	8/3/2016	0-1.0	Fly Ash	<250	<25	<25	550	<25	200	<2.5	5,900	<25	<25	<25	<250	<3.8	12	<25	0.18 J	120	25 J	<25	<25	<25	<25		
QC-3 (SED-2)	8/3/2016	0-1	Fly Ash	<250	<25	<25	520	<25	240	<2.5	5,900 J	<25	<25	<25	<250	<3.8	7.7	<25	<0.13	56	<25	<25	<25	<25	<25		
SED-3	7/20/2016	0-4.5	Slag	<250	<25	<25	<250	<25	130	<2.5	2,200	<25	<25	<25	<250	<3.8	3.4	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/20/2016	4.5-5.5	SP	<250	<25	<25	<250	<25	<50	<2.5	<500	<25	<25	<25	<250	<3.8	0.81 J	<25	<0.13	<25	<25	<25	<25	<25	<25		
SED-4	7/19/2016	0-4.8	ML	<250	<25	130	280 J	<25	510	<2.5	4,100	<25	<25	<25	<250	<3.8	1.2	<25	<0.13	410	<25	<25	<25	<25	<25		
	7/19/2016	4.8-5.5	SP	NA	NA	NA	<25	<250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	44 J	NA	NA	NA	NA	NA		
GP-19	8/4/2016	8-12	SM	<250	<25	<25	<250	<25	62 J	<2.5	<500	<25	<25	<25	<250	<3.8	<0.11	<25	<0.13	<25	<25	<25	<25	<25	<25		
SLAG POND																											
SED-5	7/20/2016	0-1.6	ML-OL	<250	<25	<25	390 J	<25	54 J	<2.5	18,200	<25	<25	<25	<250	<3.8	3.4	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/20/2016	3.7-5.3	SM	NA	NA	NA	<250	NA	93 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SED-6	7/20/2016	0-1.0	ML	<250	<25	<25	310 J	<25	60 J	<2.5	17,500	<25	<25	<25	<250	<3.8	1.5	<25	<0.13	<25	<25	<25	<25	<25	<25		
SED-7	8/4/2016	0-3.0	Fly Ash	<250	<25	<25	440 J	<25	88 J	<2.5	11,300	<25	<25	<25	<250	<3.8	2.1	<25	<0.13	75	<25	<25	<25	<25	<25		
SED-8	8/4/2016	1.0-1.5	Fly Ash	<250	<25	<25	410 J	<25	82 J	<2.5	11,400	<25	<25	<25	<250	<3.8	2.2	70	<0.13	27 J	<25	<25	<25	<25	<25		
COAL YARD																											
TP-CY-1	7/19/2016	0-0.5	Coal	<250	<25	<25	<250	<25	140	<2.5	<500	<25	<25	<25	<250	<3.8	1.9	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	3.0-3.5	SM	<250	<25	<25	<250	<25	100 J	<2.5	<500	<25	<25	<25	<250	<3.8	0.21 J	<25	<0.13	<25	<25	<25	<25	<25	<25		
TP-CY-3	7/20/2016	1.9-2.1	GM	<250	<25	<25	<250	<25	<50	<2.5	7,600	<25	<25	<25	<250	<3.8	2.5	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/20/2016	4.8-5.5		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
TP-CY-4	7/19/2016	0-2.8	Coal	<250	<25	<25	<250	<25	190	<2.5	<500	<25	<25	<25	<250	<3.8	1.1	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	2.8-3.2	GP & SM	<250	<25	<25	<250	<25	<50	<2.5	4,500	<25	<25	<25	<250	<3.8	1.9	4.25	0.24 J	<25	<25	<25	<25	<25	<25		
	7/19/2016	3.6-4.8	Slag	<250	<25	<25	<250	<25	<50	<2.5	<500	<25	<25	<25	<250	<3.8	1.3	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	4.8-5.0		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
TP-CY-6	7/19/2016	0-0.5	Coal	<250	<25	<25	<250	<25	190	<2.5	<500	<25	<25	<25	<250	<3.8	4.3	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	0.7-1.0	SP	<250	<25	<25	<250	<25	<50	<2.5	2,600	<25	<25	<25	<250	<3.8	2.3	<25	<0.13	<25	<25	<25	<25	<25	<25		
TP-CY-10	7/19/2016	0-0.5	Coal	<250	<25	<25	<250	<25	120	<2.5	<25	<25	<25	<25	<250	<3.8	3.5	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	1.0-2.0	SM	<250	<25	<25	<250	<25	<50	<2.5	2,000	<25	<25	<25	<250	<3.8	1.4	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	6.5-7.0		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
TP-CY-12	7/20/2016	0-0.3	Coal	<250	<25	<25	<250	<25	160	<2.5	<500	<25	<25	<25	<250	<3.8	3.8	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/20/2016	0.3-2.0	SP	<250	<25	<25	<250	<25	<50	<2.5	2,600	<25	<25	<25	<250	<3.8	1.7	<25	<0.13	<25	<25	<25	<25	<25	<25		
QC-1 (TP-CY-12)	7/20/2016	0.3-2.0	SP	<250	<25	<25	<250	<25	<50	<2.5	700 J	<25	<25	<25	<250	<3.8	1.7	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/20/2016	2.0-2.7	SP	<250	<25	<25	<250	<25	<50	<2.5	11,000	<25	<25	<25	<250	<3.8	1.6	<25	<0.13	<25	<25	<25	<25	<25	<25		
SLAG HANDLING AREA																											
GP-5	8/3/2016	12.5-1.5	Fly Ash	<250	<25	<25	<250	<25	100	<2.5	3,000	<25	<25	<25	<250	<3.8	5.5	<25	<0.13	<25	<25	<25	<25	<25	<25		
	8/3/2016	18-24	ML & SM	<250	<25	<25	<250	<25	99 J	<2.5	2,300	<25	<25	<25	<250	<3.8	0.42 J	<25	<0.13	56	<25	<25	<25	<25	<25		
GP-7	8/3/2016	7.5-18	Slag	<250	<25	<25	<250	<25	<50	<2.5	720 J	<25	<25	<25	<250	<3.8	0.85 J	<25	<0.13	<25	<25	<25	<25	<25	<25		
QC-2 (GP-7)	8/3/2016	7.5-18	Slag	<250	<25	<25	<250	<25	<50	<2.5	710 J	<25	<25	<25	<250	<3.8	0.84 J	<25	<0.13	<25	<25	<25	<25	<25	<25		
GP-14	8/4/2016	12.5-1.5	Fly Ash	<250	<25	<25	320 J	<25	120	<2.5	25,200	<25	<25	<25	<250	<3.8	3.0	<25	<0.13	52	<25	<25	<25	<25	<25		
	8/4/2016	17.5-20	SM	<250	<25	<25	<250	<25	120	<2.5	2,500	<25	<25	<25	<250	<3.8	NA	<25	NA	69	<25	<25	<25	<25	36 J		
SLAG SAMPLES¹																											
Slag 01 ²	6/3/2013	--	Slag	NA	< 2.93	< 0.925	< 100	< 10	NA	< 10	NA	< 20	NA	< 100	NA	< 100	NA	NA	< 0.250	NA	NA	< 1.50	NA	< 2.62	NA		
Slag 01	12/23/2013	--	Slag	312	0.92 A B	0.95 A B	43 B	0.166 A	12.5 A B	0.602 A	1,240	1.0 A B	NA	1.48 A B	238 B	0.621 A	NA	2.99 A	< 0.020	< 0.81	1.5 A B	0.425 A	0.05 A B	< 0.40	3.8 A B		
NED Slag Composite 2014	7/1/2014	--	Slag	809	< 0.11	0.34 A B	65.6	0.29 A B	11.7 AB ^{AA}	< 0.026	879 A	0.764 A	NA	1.78 A B	394	0.177 A	NA	4.49 A	< 0.071	< 0.81	0.4 A	< 0.340	0.01 A B	< 0.40	5.7 A B		
Slag Sample	4/14/2015	--	Slag	788 B	0.69 A B	0.99 A B	49.3 B	0.221 A	< 1020 A	0.067 A	1,140 A	1.65 A B	NA	1.87 A	493 B	< 1.01	NA	3.96 A	< 1.84	1.05 A B	< 0.23	0.903 A	0.02 A B	0.19 A	7.3 A		
FLY ASH SAMPLES¹																											
NED Flyash Composite ²	2/14/2014	--	Fly Ash	NA	5.99 A	52.6	497	< 30	NA	< 722	NA	265	NA	< 300	NA	< 1.02	NA	NA	< 0.710	NA	NA	< 4.50	NA	< 2.38	NA		
Week of 062815 ²	7/3/2015	--	Fly Ash	NA	27.5 A	278	626 B	< 9.36	NA	< 12	NA	282	NA	< 11	NA	< 59.4	NA	NA	< 0.926	NA	NA	< 98.7	NA	< 2.98 F1	NA		
Week of 010916	1/4/2016	--	Fly Ash	NA	< 3.37 F1	61.3 F1	482 B	< 9.36	NA	< 12	NA	250	NA	< 11	NA	< 59.4	NA	NA	< 0.926	NA	NA	434 A	NA	< 1.79 F1	NA		
NR 140 Preventative Action Limits (PALs)				40	1.2	1	400	0.4	200	0.5	NE	10	8	130	150	1.5	NE	60	0.2	8	20	10	10	0.4	2,500		
NR 140 Enforcement Standards (ESs)				200	6	10	2,000	4	1,000	5	NE	100	40	1,300	300	15	NE	3									

Table 4a. Sediment and Soil Analytical Results - Water Leach Test Metals
WPL Nelson Dewey / SCS Engineers Project #25216054.00

Abbreviations:

µg/L = micrograms per liter or parts per billion (ppb)
 ML = Silt

NA = Not Analyzed
 ML-CL = Silty Clay

NE = No Standard Established
 SM = Silty Sand

GM = Silty Gravel
 SP = Poorly Graded Sand

GP = Poorly Graded Gravel

Notes:

1. Slag and Fly Ash samples were collected by the plant as part of permit requirements.
 2. Sample was analyzed using the SPLP Leach Method rather than the ASTM Water Leach Method for tested parameters except for Sulfate.
- NR 140 ES - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.
 NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.

Bold+underlined values meet or exceed NR 140 enforcement standards.

Italic+underlined values meet or exceed NR 140 preventive action limits.

Shaded values exceed NR 538 Table 1A Standards.

Red text exceeds NR 538 Table 2A Standards.

Laboratory Notes/Qualifiers:

- J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
- A = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
- B = Compound was found in the blank and sample.
- F1 = HFS and/or HSD Recovery is outside acceptance limits.
- ^ = ICV, CCV, ICB, CCS, ISA, ISB, CR1, CRA, DLCK or MRL standard; Instrument related QC is outside acceptance limits.
- * = LCS or LCSD is outside acceptance limits.

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Table 4b. Sediment and Soil Analytical Results - Water Leach Test Additional Parameters
WPL Nelson Dewey / SCS Engineers Project #25216054.00
 (Results are in mg/L, except where noted otherwise)

Sample	Date	Depth (feet)	Material Type	Lab Notes	Chloride	Fluoride	Nitrite+ Nitrate	Total Kjeldahl Nitrogen	Sulfate	TDS
WPDES POND										
SED-1	8/3/2016	0-1.3	Fly Ash	--	4.3	<1.0	<0.095	0.69 J	4.4	54
SED-2	8/3/2016	0-1.0	Fly Ash	--	4.3	<1.0	<0.095	0.75	11.5	60
QC-3 (SED-2)	8/3/2016	0-1	Fly Ash	--	3.5 J	<1.0	<0.095	0.59 J	6.1	52
SED-3	7/20/2016	0-4.5	Slag	--	2.7 J	<1.0	<0.095	0.22 J	5	28
	7/20/2016	4.5-5.5	SP	--	2.5 J	<0.20	<0.095	0.22 J	<2.0	14 J
SED-4	7/19/2016	0-4.8	ML	--	10.5 J	<10.0	<0.095	1.4	11.9 J	86
GP-19	8/4/2016	8-12	SM	--	2.4 J	<1.0	<0.095	0.23 J	2 J	16 J
SLAG POND										
SED-5	7/20/2016	0-1.6	ML-OL	--	3.2 J	<1.0	<0.095	<0.22	33.3	90
SED-6	7/20/2016	0-1.0	ML	--	3.7 J	0.36 J	1.0	<0.22	59.1	130
SED-7	8/4/2016	0-3.0	Fly Ash	--	4	<1.0	<0.095	1.1	10.5	76
SED-8	8/4/2016	1.0-1.5	Fly Ash	--	3.7 J	<1.0	<0.095	1.1	12.1	74
COAL YARD										
TP-CY-1	7/19/2016	0-0.5	Coal	--	<20.0	<2.0	<0.095	0.26 J	<20.0	32
	7/19/2016	3.0-3.5	SM	--	2.8 J	<1.0	<0.095	0.28 J	<2.0	20
TP-CY-3	7/20/2016	1.9-2.1	GM	--	3.9 J	<0.20	<0.095	<0.22	2.8 J	50
TP-CY-4	7/19/2016	0-2.8	Coal	--	<20.0	<2.0	<0.095	0.81	<20.0	38
	7/19/2016	2.8-3.2	GP & SM	--	<10.0	<1.0	<0.095	<0.22	<10.0	34
	7/19/2016	3.6-4.8	Slag	--	<20.0	<2.0	<0.095	<0.22	<20.0	10 J
TP-CY-6	7/19/2016	0-0.5	Coal	--	<20.0	<2.0	<0.095	0.23 J	<20.0	54
	7/19/2016	0.7-1.0	SP	--	2.5 J	<0.20	<0.095	<0.22	2.3 J	30
TP-CY-10	7/19/2016	0-0.5	Coal	--	2.4 J	<1.0	<0.095	<0.22	11.6	48
	7/19/2016	1.0-2.0	SM	--	2.2 J	<1.0	<0.095	<0.22	2.3 J	28
TP-CY-12	7/20/2016	0-0.3	Coal	--	<20.0	<2.0	<0.095	0.26 J	<20.0	44
	7/20/2016	0.3-2.0	SP	--	2.2 J	<0.20	<0.095	<0.22	2.2 J	24
	7/20/2016	2.0-2.7	SP	--	2.3 J	<0.20	<0.095	<0.22	27.5	50
QC-1 (TP-CY-12)	7/20/2016	0.3-2.0	SP	--	2.6 J	<0.20	<0.095	<0.22	2.5 J	24
SLAG HANDLING AREA										
GP-5	8/3/2016	12.5-15	Fly Ash	--	<2.0	<1.0	0.11 J	<0.22	3.0 J	22
	8/3/2016	18-24	ML & SM	--	3.3 J	<1.0	<0.095	0.48 J	<2.0	24
GP-7	8/3/2016	7.5-18	Slag	--	2.2 J	<1.0	<0.095	0.22 J	<2.0	<8.7
QC-2 (GP-7)	8/3/2016	7.5-18	Slag	--	2.2 J	<1.0	<0.095	0.24 J	<2.0	10 J
GP-14	8/4/2016	12.5-15	Fly Ash	--	<2.0	<1.0	0.1 J	<0.22	13.4	96
SLAG SAMPLES¹										
Slag 01 ²	6/3/2013	--	Slag	--	NA	NA	NA	NA	NA	NA
Slag 01	12/23/2013	--	Slag	--	0.277 B	NA	0.923	NA	0.218	NA
NED Slag Composite 2014	7/1/2014	--	Slag	--	< 0.142	NA	< 0.045	NA	0.457 B	98 H
Slag Sample	4/14/2015	--	Slag	--	0.751	NA	< 0.045	NA	0.427	NA
FLY ASH SAMPLES¹										
NED Flyash Composite ²	2/14/2014	--	Fly Ash	--	NA	NA	NA	NA	6,530 B	NA
Week of 062815 ²	7/3/2015	--	Fly Ash	--	NA	NA	NA	NA	6,260	NA
Week of 010916	1/4/2016	--	Fly Ash	--	NA	NA	NA	NA	NA	NA
NR 140 Preventative Action Limits (PALs)					125	0.8	2	NE	125	NE
NR 140 Enforcement Standards (ESs)					250	4	10	NE	250	NE
40 CFR Part 141.62 Maximum Contaminant Levels (MCL)					NE	4	10	NE	NE	NE
NR 538 Table 1A Standards					125	0.8	2	NE	125	NE
NR 538 Table 2A Standards					1,250	8	20	NE	1,250	NE

**Table 4b. Sediment and Soil Analytical Results - Water Leach Test Additional Parameters
WPL Nelson Dewey / SCS Engineers Project #25216054.00**

Abbreviations:

mg/L = micrograms per liter
ML = Silt

NE = No Standard Established
ML-CL = Silty Clay

NA = Not Analyzed
SM = Silty Sand

TDS = Total Dissolved Solids
SP = Poorly Graded Sand

GM = Silty Gravel
GP = Poorly Graded Gravel

Notes:

1. Slag and Fly Ash samples were collected by the plant as part of permit requirements.
 2. Sample was analyzed using the SPLP Leach Method rather than the ASTM Water Leach Method for tested parameters except for Sulfate.
- NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.
NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.

Bold+underlined values meet or exceed NR 140 enforcement standards.

Italic+underlined values meet or exceed NR 140 preventive action limits.

Shaded values exceed NR 538 Table 1A Standards.

Red text exceeds NR 538 Table 2A Standards.

Laboratory Notes/Qualifiers:

- J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
- A = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
- B = Compound was found in the blank and sample.
- F1 = MS and/or MSD Recovery is outside acceptance limits.
- H = Sample was prepped or analyzed beyond the specified holding time.
- ^ = ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
- * = LCS or LCSD is outside acceptance limits.

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Table 4c. Sediment and Soil Analytical Results - Water Leach Test Radiochemistry
WPL Nelson Dewey / SCS Engineers Project #25216054.00
 (Results are in pCi/L)

Sample	Date	Depth (feet)	Lab Notes	Radium-226	Radium-228	Total Radium
WPDES POND						
SED-4	7/19/2016	0-4.8	--	0.0858 ± 0.481 (0.922)	0.355 ± 0.483 (1.00)	0.441 ± 0.964 (1.92)
SLAG POND						
SED-6	7/20/2016	0-1.0	--	0.206 ± 0.905 (1.45)	2.97 ± 1.30 (2.14)	3.18 ± 2.21 (3.59)
COAL YARD						
TP-CY-10	7/19/2016	0-0.5	--	1.23 ± 0.996 (0.556)	0.915 ± 0.497 (0.891)	2.145 ± 1.493 (1.45)
SLAG HANDLING AREA						
GP-5	8/3/2016	12.5-15	--	0.0829 ± 0.586 (0.996)	0.447 ± 0.474 (0.981)	0.53 ± 1.06 (1.98)
GP-7	8/3/2016	7.5-18	--	-0.085 ± 0.683 (1.19)	0.446 ± 0.418 (0.843)	0.446 ± 1.1 (2.03)
NR 140 Preventive Action Limits (PALs)				NE	NE	NE
NR 140 Enforcement Standards (ESs)				NE	NE	NE
CFR 40 141.66 Maximum Contaminant Levels (MCL)				NE	NE	5
NR 538 Table 1A Standards				NE	NE	NE
NR 538 Table 2A Standards				NE	NE	NE

Abbreviations:

pCi/L = picocuries per liter NA = Not Analyzed NE = No Standard Established GM = Silty Gravel ML = Silt
 ML-CL = Silty Clay SM = Silty Sand SP = Poorly Graded Sand

Notes:

NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.

NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.

Bold+underlined values meet or exceed NR 140 enforcement standards.

Italic+underlined values meet or exceed NR 140 preventive action limits.

Shaded values exceed NR 538 Table 1A Standards.

Red text exceeds NR 538 Table 2A Standards.

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E2 Alternative Source Demonstration, April 2025 Detection Monitoring

Alternative Source Demonstration April 2025 Detection Monitoring

Slag Pond
Nelson Dewey Generating Station
Cassville, Wisconsin

Prepared for:



SCS ENGINEERS

25225071.00 | November 4, 2025

2830 Dairy Drive
Madison, WI 53718-6751
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PE CERTIFICATION

	<p>I, Sherren Clark, hereby certify that the information in this alternative source demonstration is accurate and meets the requirements of 40 CFR 257.94(e)(2). This certification is based on my review of the groundwater data and related site information available for the Nelson Dewey Generating Station Slag Pond facility. I am a duly licensed Professional Engineer under the laws of the State of Wisconsin.</p>
	
	<p>November 4, 2025</p>
	<p>(signature) (date)</p>
	<p>Sherren Clark, PE, PG</p>
	<p>(printed or typed name)</p>
	<p>License number <u> E-29863 </u></p> <p>My license renewal date is July 31, 2026.</p> <p>Pages or sheets covered by this seal:</p> <p>Alternative Source Demonstration, April 2025</p> <p>Detection Monitoring – Slag Pond</p> <p>Nelson Dewey Generating Station, Cassville</p> <p>(Entire Document)</p>

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1.0 INTRODUCTION

This Alternative Source Demonstration (ASD) was prepared to support compliance with the groundwater monitoring requirements of the “Coal Combustion Residuals (CCR) Final Rule” published by the U.S. Environmental Protection Agency (U.S. EPA) in the *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*, dated April 17, 2015 (U.S. EPA, 2015), and subsequent amendments. Specifically, this report was prepared to fulfill the requirements of 40 CFR 257.94(e)(2). The applicable sections of the Rule are provided below in *italics*.

1.1 §257.94(E)(2) ALTERNATIVE SOURCE DEMONSTRATION REQUIREMENTS

The owner and operator may demonstrate that a source other than the CCR Unit caused the statistically significant increase over background levels for a constituent or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The owner or operator must complete the written demonstration within 90 days of detecting a statistically significant increase over background levels.

An ASD is completed when there are exceedances of one or more benchmarks established within the groundwater monitoring program to determine if any other sources are likely causes of the identified exceedance(s) of established benchmark(s) at the site. This ASD was performed in response to results indicating a statistically significant increase (SSI) over background levels during detection monitoring under the CCR Rule.

This ASD report evaluates the SSIs observed in the statistical evaluation of the April 2025 detection monitoring event at the Nelson Dewey Generating Station (NED). The first ASD prepared for this facility evaluated the SSIs observed in the statistical evaluation of the October 2017 detection monitoring event (SCS Engineers [SCS], 2018). The October 2017 ASD and subsequent semiannual updates have included several lines of evidence demonstrating that SSIs reported for Appendix III parameters in the downgradient monitoring wells were likely due to man-made sources other than the slag pond CCR Unit and/or naturally occurring constituents in the alluvial aquifer. The conclusions of this ASD are consistent with previous ASDs.

1.2 SITE INFORMATION AND MAP

The NED site is located along the east bank of the Mississippi River, north of the Village of Cassville, in Grant County, Wisconsin (**Figure 1**). The facility includes a decommissioned coal-fired generating plant, a CCR landfill that was closed in 2001, a closed Slag Pond, and a closed wastewater treatment pond. The layout of the site on an aerial photograph base is shown on **Figure 2**. The closed landfill at the NED facility was permitted under Wisconsin Department of Natural Resources (DNR) License #02525.

The existing CCR Unit evaluated for this ASD is:

- Slag Pond (existing surface impoundment – closed January 2018)

A map showing the CCR Unit and all background (or upgradient) and downgradient monitoring wells with identification numbers for the CCR groundwater monitoring program and the state monitoring program is provided on **Figure 3**.

Operations at the facility began in the late 1950s, and a CCR impoundment that included what is now the Slag Pond closure area was commissioned at that time. The CCR landfill was initially licensed in 1976 and received fly ash from NED until it was closed in phases between 1996 and 2001. The CCR landfill was initially operated as a fly ash sluice basin, then transitioned to dry ash placement prior to closure. The wastewater ponds, now closed, were constructed in 1976 for the purpose of settling CCR from the NED process wastewater streams and sediment from storm water runoff prior to discharge. Both NED generating units were retired on December 31, 2015, and have since been decommissioned. The generating station was demolished in 2017. Closure of the slag pond was completed in January 2018.

1.3 STATISTICALLY SIGNIFICANT INCREASES IDENTIFIED

The statistical evaluation was completed in accordance with 40 CFR 257.93(f)(3) using a prediction interval procedure, in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper prediction limit (UPL). The initial evaluation was based on an interwell comparison. The UPLs were calculated based on a 1-of-2 resampling approach. The UPLs and the analytical results for the April 2025 monitoring event are summarized in the attached **Table 1**.

The initial evaluation indicated that the April 2025 monitoring event results represent an SSI over background for the following parameters and wells:

- Boron: B-7R, B-11R, B-11A, B-11B, B-31R, B-31A
- Calcium: B-11R, B-11B
- Field pH: B-11A, B-11B, B-31A
- Sulfate: B-11R, B-11A, B-11B, B-31R
- Total Dissolved Solids (TDS): B-11R, B-11B

The SSIs are generally consistent with SSIs identified in previous detection monitoring results.

1.4 OVERVIEW OF ALTERNATIVE SOURCE DEMONSTRATION APPROACH

This ASD report includes:

- Background information (**Section 2.0**).
- Evaluation of potential that SSIs are due to methodology or analysis (**Section 3.0**).
- Evaluation of potential that SSIs are due to natural sources or man-made sources other than the CCR Units (**Section 4.0**).
- ASD conclusions (**Section 5.0**).
- Monitoring recommendations (**Section 6.0**).

Historical monitoring results from background and compliance sampling for the CCR Rule constituents with SSIs are provided in **Table 2**. The laboratory report for the April 2025 event will be included in the 2025 Annual Groundwater Monitoring and Corrective Action Report to be completed in January 2026. Complete laboratory reports for background monitoring events and previous detection monitoring events were included in the previous annual groundwater monitoring and corrective action reports.

2.0 BACKGROUND

To provide context for the ASD evaluation, the following background information is provided in this section of the report, prior to the ASD evaluation sections:

- Geologic and hydrogeologic setting
- CCR Rule monitoring system
- Other monitoring wells

A more detailed discussion of the background information for the site is provided in the ASD for the October 2017 event (SCS, 2018).

2.1 GEOLOGIC AND HYDROGEOLOGIC SETTING

2.1.1 Regional Information

The uppermost geologic formation beneath the NED site is the surficial alluvial aquifer. The alluvial aquifer consists of Mississippi River valley sand and gravel deposits, and is the uppermost aquifer as defined in section 257.53 of the CCR Rule. This deposit is prevalent along the edges of the entire Mississippi River valley in southwestern Wisconsin.

The alluvial aquifer is underlain by dolomitic bedrock of the Prairie du Chien Group. The dolomite bedrock is also an aquifer and is likely hydraulically connected to the alluvial aquifer above.

Regionally, groundwater flow is generally to the southwest and discharges to the Mississippi River.

Additional details on the regional geology were provided in the October 2017 ASD (SCS, 2018).

2.1.2 Site Information

The thickness of the alluvium in the immediate vicinity of the site is over 125 feet, as evidenced by local water supply well logs (SCS, 2018). These logs are also evidence that the alluvial aquifer yields useable quantities of groundwater for supply wells in the area. Soil boring logs for monitoring wells installed at the site also generally indicate sand and gravel soils within the monitored depths.

The groundwater flow direction in the vicinity of the plant is generally southwest toward the Mississippi River, except when influenced by high river levels as discussed below. Historically, infiltration at the former Slag Pond, former fly ash basin, and the former Wisconsin Pollutant Discharge Elimination System (WPDES) ponds caused groundwater mounding to be present around these features; however, these ponds have now all been closed and are no longer sources of infiltration.

While site water level measurements typically indicate that groundwater flow is to the southwest, discharging to the Mississippi River, the local flow directions are influenced by changes in the river level. During periods of high river water levels, the flow temporarily reverses, and the river discharges to the shallow sand and gravel aquifer. The groundwater flow direction during the April 2025 detection monitoring event was generally to the southwest, toward the Mississippi River (**Figure 4**). The groundwater elevations are provided in **Table 3**.

2.2 COAL COMBUSTION RESIDUALS RULE MONITORING SYSTEM

The groundwater monitoring system established in accordance with the CCR Rule consists of one upgradient (background) monitoring well and six downgradient monitoring wells. The background well is B-26. The downgradient wells include B-7R, B-11R, B-11A, B-11B, B-31A, and B-31R. The CCR Rule wells are installed within the surficial alluvium aquifer. Well depths range from approximately 23 to 114 feet, measured from the top of the well casing.

2.3 OTHER MONITORING WELLS

There are several additional groundwater monitoring wells at the NED facility that are part of the monitoring system developed for the state monitoring program. All of the wells included in the CCR monitoring well network were already in use for the state monitoring program. The well locations are shown on **Figure 3**. The state program monitoring wells and two private wells are used to monitor groundwater conditions at the site under DNR License Number 2525, which includes the closed CCR landfill and the closed Slag Pond. Monitoring wells for the state monitoring program are installed in the surficial sand and gravel aquifer, which is the uppermost aquifer as defined under 40 CFR 257.53.

3.0 METHODOLOGY AND ANALYSIS REVIEW

To evaluate the potential that an SSI is due to a source other than the regulated CCR Unit, SCS used a two-step evaluation process. First, the sample collection, field and laboratory analysis, and statistical evaluation were reviewed to identify any potential error or analysis that led to an exceedance of the benchmark. Second, potential alternative sources, including natural variation and man-made sources other than the CCR Unit, were evaluated. This section of the report provides the findings of the methodology and analysis review. **Section 4.0** of the report addresses the potential alternative sources.

3.1 SAMPLING AND FIELD ANALYSIS REVIEW

Field notes and sampling results were reviewed to determine if a sampling error may have caused or contributed to the observed SSIs. Potential field sampling errors or issues could include mislabeling of samples, improper sample handling, missed holding times, cross contamination during sampling, or other field error. Field blank sample results were also reviewed for any indication of potential contamination from sampling equipment or containers. Based on the review of the field notes and results, SCS did not identify any indication that the SSIs were due to a sampling error.

SCS did not identify any issues with the field sampling or field analysis based on review of the data and field notes.

3.2 LABORATORY ANALYSIS REVIEW

The laboratory reports for the April 2025 detection monitoring events were reviewed to evaluate whether any laboratory analysis error or issue may have caused or contributed to the observed SSIs. The laboratory report review included reviewing the laboratory quality control flags and narrative, verifying that correct methods were used and desired detection limits were achieved, and checking the field and laboratory blank sample results. Laboratory reports for the background monitoring events were reviewed for the October 2017 ASD. Laboratory reports for subsequent detection monitoring events were reviewed as part of the ASD preparation for each event.

Based on the review of the laboratory reports, SCS did not identify any indication that any SSI was due to a laboratory analysis error. There were no laboratory quality control flags or issues identified

in the laboratory reports that affect the usability of the data for detection monitoring; however, some results were flagged by the laboratory as follows:

- Sampling results for monitoring wells B-11R, B-11A, and B-31R included D3 flags for fluoride, and the sampling results for monitoring wells B-7R and B-11B included D3 flags for both fluoride and chloride. D3 flags indicate the samples were diluted due to the presence of high levels of other analytes (such as sulfate) or other matrix interference. The detection limits for the results with the D3 flag were elevated due to the dilution, but were similar to previously reported detection limits for the same wells. The detected parameters were within the range of previously observed results.
- The sampling result for B-11R included an MO flag for sulfate, indicating that the matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits. The matrix spike duplicate percent recovery for this parameter at B-11R was slightly higher than the recommended percent recovery limits. The other quality control (QC) samples analyzed with this QC batch had percent recoveries within limits, including the laboratory control sample, the matrix spike sample for B-11R, and the other matrix spike and matrix spike duplicate associated with the QC batch.

Based on this review of the laboratory flags, the laboratory results were accepted as usable data.

Time series plots for the parameters with SSIs were also reviewed for any anomalous results that might indicate a possible sampling or laboratory error (e.g., dilution error or incorrect sample labeling). The time series plots are provided in **Appendix A**. None of the time series plots included anomalous results that appeared to indicate a sampling or laboratory error.

3.3 STATISTICAL EVALUATION REVIEW

The review of the statistical results and methods included a quality control check of the following:

- Input analytical data vs. laboratory analytical reports
- Statistical method and process for each SSI

Based on the review of the statistical evaluation, SCS did not identify any errors or issues in the statistical evaluation that caused or contributed to the determination of interwell SSIs at the downgradient monitoring wells.

3.4 SUMMARY OF METHODOLOGY AND ANALYSIS REVIEW FINDINGS

In summary, there were no changes to the SSI determinations for the April 2025 detection monitoring event based on the methodology and analysis review. No errors or issues causing or contributing to the reported SSIs were identified.

4.0 ALTERNATIVE SOURCES

This section of the report discusses the potential alternative sources for the SSI constituents at the downgradient wells, identifies the most likely alternative source(s), and presents the lines of evidence indicating that an alternative source is the most likely cause of the observed SSIs.

4.1 POTENTIAL CAUSES OF STATISTICALLY SIGNIFICANT INCREASES

4.1.1 Natural Variation

The statistical analysis was completed using an interwell approach, comparing the April 2025 detection monitoring results to the UPLs calculated based on sampling of the background well (B-26). If concentrations of a constituent that is naturally present in the aquifer vary spatially, then the potential exists that the downgradient concentrations may be higher than upgradient concentrations due to natural variation.

Although natural variation is present in the shallow aquifer, it does not appear likely that natural variation is the primary source causing the boron, field pH, sulfate, and TDS SSIs. These parameters were detected at higher concentrations than would likely be present naturally.

Natural variation may have caused or contributed to the SSI for calcium at B-11B and B-11R. As discussed in **Section 2.1.1**, the alluvial aquifer is underlain by dolomitic bedrock of the Prairie du Chien Group. The dolomite aquifer is also present in the bluffs northeast of the site, and groundwater from the dolomite likely discharges to the alluvial aquifer. Calcium is a typical constituent of groundwater in dolomite aquifers. The calcium concentrations in upgradient well B-26 have exceeded those in at least three of the downgradient wells, suggesting that natural variability may contribute to the calcium concentrations observed in the downgradient monitoring wells.

4.1.2 Man-Made Alternative Sources

Man-made alternative sources that could potentially contribute to the boron, calcium, field pH, sulfate, and TDS SSIs could include the closed CCR landfill, the former coal storage area, or other former plant operations. Based on the groundwater flow directions and on previous investigations at the site, the closed landfill appears to be the most likely man-made cause of the SSIs for the downgradient wells B-7R, B-11R, B-11A, B-11B, B-31A, and B-31R.

4.2 LINES OF EVIDENCE

The lines of evidence indicating that the SSIs for boron, calcium, field pH, sulfate, and TDS in one or more compliance wells relative to the background well are more likely due to the closed landfill and prior fly ash sluicing than to the Slag Pond include:

1. A previous Environmental Contamination Assessment completed for the ash disposal facility indicated that the fly ash sluicing and landfill were the primary source of the groundwater impacts in the area, based on multiple lines of evidence.
2. Sampling performed in preparation for the Slag Pond closure indicated that the slag and the Slag Pond sediment had little potential to cause the SSIs for boron, sulfate, and TDS.
3. Past and current groundwater monitoring performed under the state monitoring program show that groundwater quality has improved since the 1990s in response to termination of fly ash sluicing and closure and capping of the ash landfill. Recent concentration increases at some wells in the state monitoring program appear to be attributable to the closed CCR landfill source and to changes in groundwater flow at the site in response to closure of the Slag Pond.

The data supporting these lines of evidence are discussed below. Most of these lines of evidence and the supporting data were discussed in detail in the ASD for the October 2017 detection monitoring event (SCS, 2018), with the exception of the TDS SSI concentrations. For lines of

evidence included in previous ASDs, the discussion focuses on any updated information collected since the previous ASD, with references to the previous ASD for additional details.

4.2.1 Previous CCR Pond and Landfill Study

A previous investigation titled *Environmental Contamination Assessment: Nelson Dewey Generating Station Ash Disposal Facility*, completed by RMT in 1994, found that groundwater impacts were associated with disposal of fly ash in the now-closed CCR landfill located immediately north of the Slag Pond (**Figure 3**). The purpose of the 1994 Environmental Contamination Assessment (ECA) was to investigate the impacts to groundwater at the NED landfill. The ECA was used to evaluate the feasibility of possible remedial alternatives. The remedial alternative that was ultimately selected was to convert the plant to dry fly ash handling.

The primary lines of evidence from the 1994 report that support the current ASD for boron, calcium, field pH, sulfate, and TDS include:

- Water leaching tests for ash and slag indicated that boron and sulfate concentrations in the slag leachate were orders of magnitude lower than in the fly ash leachate (**Appendix B, Table 5**). Higher pH values were also reported for leach samples of Western coal fly ash in 1990 to 1992 than for the slag samples.
- Surface water samples from the then active fly ash sluice pond and the Slag Pond indicated that boron and sulfate concentrations in the Slag Pond were one or more orders of magnitude lower than in the ash sluice pond. The surface water pH measurement was also higher in the ash sluice pond. The surface water boron and sulfate concentrations in the Slag Pond were higher than leach test results, which was attributed to infiltration of ash sluice pond water through the berm between the ponds into the Slag Pond (**Appendix B, Table 6**).
- Groundwater sampling at monitoring wells B-38 and B-38A (now abandoned), which were installed through and screened below the ash disposal area (now closed landfill), indicated that groundwater affected by ash sluicing was characterized by high pH and elevated concentrations of boron, sulfate, and TDS (**Appendix B, Site Map, and Table 8**).

Although calcium was not included in the historical state groundwater monitoring program or evaluated in the 1994 report, hardness was monitored and provides an indication of relative calcium concentrations. Surface water samples from the then active ash sluice pond and the Slag Pond indicated that hardness in the Slag Pond was lower than in the ash sluice pond (**Appendix B, Table 6**). These results suggest that if the calcium SSI is not solely due to natural variation, then the closed CCR landfill is the most likely man-made source of calcium.

The results of the 1994 ECA were reported to DNR in November 1994. The ECA investigation was then used for a feasibility study to determine appropriate ash disposal operation on site. Following the ECA, the plant converted to a dry ash handling system. Dry ash was placed in the CCR landfill through the 1990s, and the landfill was capped and closed in phases in 1996 through 2001. After that time, fly ash was not disposed of at the facility.

4.2.2 Slag Pond Closure Sampling Results

Results of leaching test analysis performed for slag, ash, soil, and sediment were submitted as part of a Low Hazard Exemption Request to the DNR in March 2017 (SCS, 2017). The Exemption Request was submitted as part of the Closure Plan for the site and requested DNR approval to consolidate

materials from decommissioning activities in the Slag Pond and Slag Handling Area, which would then be capped with a composite final cover system. The sediment and soil samples were collected to characterize the materials that would remain on site under the Closure Plan. Leaching tests were performed using ASTM water leach test methods. The leaching test analytical results for parameters with SSIs that were included in the leaching test program (boron, sulfate, and TDS) are summarized in **Appendix C**.

The sampling results in the Exemption Request indicated that the materials to be consolidated and capped were not likely to cause groundwater standard exceedances for boron, sulfate, or TDS. The leach test results for slag, Slag Pond sediment, and soil in the Slag Handling Area were below the state groundwater standards for boron and sulfate. The parameter TDS does not currently have a state standard but the leach test results for slag, Slag Pond sediment, and soil in the Slag Handling Area were all below the calculated TDS UPL for the site (**Table 1** and **Appendix C**). The boron, sulfate, and TDS results were also below the concentrations in the downgradient CCR wells with SSIs, and well below the historical results for former well B-38, which was located within the CCR landfill area, upgradient from the Slag Pond (**Appendix B, Table 8**).

The Low Hazard Exemption was granted by the DNR based on the sampling results and other information presented.

4.2.3 State Program Groundwater Monitoring Results

Past and current groundwater monitoring performed under the state monitoring program show that groundwater quality has improved substantially since the 1990s in response to termination of fly ash sluicing, and closure and capping of the ash landfill (SCS, 2018). The long-term trends show that concentrations of boron and sulfate in groundwater have decreased or stabilized at most wells since termination of fly ash sluicing and closure of the landfill, in some cases by an order of magnitude or more. Graphs showing historical boron and sulfate trends in state monitoring wells were included in the Biennial Groundwater Monitoring Report for 2022-2023 dated January 31, 2024 (SCS Engineers, 2024). The results suggest that current pH levels and boron, sulfate, and TDS concentrations likely represent residual contamination from historical ash disposal in the CCR landfill area. Increases in boron, sulfate, and TDS concentrations at B-11B beginning in 2018 appear to be attributable to the closed CCR landfill and to changes in groundwater flow at the site related to a decrease in the volume of water discharged to the Slag Pond and subsequent closure of the Slag Pond. Concentrations of boron in samples from B-11B increased to a peak in April 2019 and have been lower since that event. Sulfate concentrations in samples from B-11B peaked in April 2022 and have been lower since that event. A summary of state analytical groundwater results is provided in **Table 4**.

5.0 ALTERNATIVE SOURCE DEMONSTRATION CONCLUSIONS

The lines of evidence discussed above regarding the SSIs reported for boron, calcium, field pH, sulfate, and TDS results in downgradient monitoring wells demonstrate that the SSIs are likely primarily due to sources other than the closed Slag Pond. The SSIs for boron, calcium, field pH, sulfate, and TDS appear to be due to historical ash disposal in the closed CCR landfill, which is not subject to the requirements of 40 CFR 257.50-107. The landfill is regulated by the DNR under the solid waste program (License 02525). Natural variation in groundwater quality in the aquifer may also contribute to the SSIs for calcium.

6.0 SITE GROUNDWATER MONITORING RECOMMENDATIONS

In accordance with section 257.94(e)(2) of the CCR Rule, the NED Slag Pond site may continue with detection monitoring based on this ASD. The ASD report will be included in the 2025 Annual Report due January 31, 2026.

7.0 REFERENCES

RMT, 1994, Environmental Contamination Assessment: Nelson Dewey Generating Station Ash Disposal Facility, November 1994.

SCS Engineers, 2017, Low Hazard Exemption Request, Nelson Dewey Generating Station, Cassville, WI, March 2017.

SCS Engineers, 2018, 2017 Alternative Source Demonstration, October 2017 Monitoring Event, Nelson Dewey Generating Station, April 2018.

SCS Engineers, 2024, Biennial Groundwater Monitoring Report for 2022-2023, Wisconsin Power and Light Company – Nelson Dewey Ash Disposal Facility, Cassville, WI, January 31, 2024.

U.S. Environmental Protection Agency (U.S. EPA), 2015, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule, April 2015.

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Tables

- 1 Groundwater Analytical Results Summary – April 2025
- 2 Historical Analytical Results for Parameters with SSIs
- 3 Water Level Summary
- 4 Analytical Results – State Monitoring Program

**Table 1. Groundwater Analytical Results Summary
Nelson Dewey Slag Pond, Cassville, WI / SCS Engineers Project #25225071.00**

Parameter Name	UPL	Background Well	Compliance Wells					
		B-26	B-7R	B-11R	B-11A	B-11B	B-31R	B-31A
		4/15/2025	4/15/2025	4/14/2025	4/14/2025	4/14/2025	4/14/2025	4/14/2025
Groundwater Elevation, ft amsl		606.80	606.13	606.20	605.79	605.80	606.34	606.00
Appendix III								
Boron, µg/L	70.5	44.8	126	2930	1,370	4780	862	184
Calcium, µg/L	104,000	78,600	54,500	124,000	52,400	130,000	93,000	44,200
Chloride, mg/L	72.7	49.8	7.4 J, D3	23.5	37.5	20.0 J, D3	13.1	52.6
Fluoride, mg/L	0.2	<0.095	<0.48 D3	<0.19 D3	<0.19 D3	<0.95 D3	<0.19 D3	0.10 J
Field pH, Std. Units	7.64	7.30	6.51	6.95	7.85	7.68	6.66	7.85
Sulfate, mg/L	47.1	38.1	35.3	86.8 M0	164	438	71.4	23.3
Total Dissolved Solids, mg/L	536	438	262	622	452	966	454	280

 Blue shaded cell indicates the compliance well result exceeds the UPL (background) and the Limit of Quantitation (LOQ).

Abbreviations:

UPL = Upper Prediction Limit

SSI = Statistically Significant Increase

µg/L = micrograms per liter

mg/L = milligrams per liter

Std. Units = Standard Units

LOD = Limit of Detection

LOQ = Limit of Quantitation

ft amsl = feet above mean sea level

Lab Notes:

J = Estimated concentration at or above the LOD and below the LOQ.

D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Notes:

1. An individual result above the UPL may not constitute an SSI above background. See the accompanying letter text for identification of statistically significant results.

2. Interwell UPLs calculated based on results from background well B-26. UPLs are based on a 1-of-2 retesting approach.

3. Interwell UPLs updated July 2023 based on background well results from December 2015 through April 2023.

Created by: NDK

Date: 12/6/2022

Last revision by: RM

Date: 5/13/2025

Checked by: BLJ

Date: 5/13/2025

I:\25225071.00\Deliverables\2025 April ASD\Tables\[Table 1_2504_NED_CCR GW Screening Summary.xlsx]Current Event - Updated UPL

**Table 2. Historical Analytical Results for Parameters with SSIs
Nelson Dewey Generating Station - Cassville, Wisconsin / SCS Engineers Project #25225071.00**

Well Group	Well	Collection Date	Boron (µg/L)	Calcium (µg/L)	Field pH (Std. Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	
Background	B-26	12/9/2015	29.6	81,300	7.35	37.1	424	
		4/12/2016	33.7	86,200	7.43	38.0	456	
		7/19/2016	28.6	82,400	7.14	36.2	504	
		10/20/2016	33.0	82,700	7.19	35.0	466	
		1/12/2017	35.2	89,400	7.57	35.0	446	
		4/17/2017	50.1	89,000	7.54	32.4	468	
		6/7/2017	45.8	105,000	7.22	31.0	538	
		8/2/2017	54.6	98,100	7.21	28.5	496	
		10/19/2017	47.4	102,000	7.50	25.3	542	
		4/2/2018	48.0	88,100	7.64	19.1	464	
		10/8/2018	53.4	78,700	7.20	25.1	450	
		4/22/2019	41.6	75,300	7.10	26.7	458	
		10/15/2019	<3.00	<76.2	7.24	36.0	404	
		4/14/2020	66.1	88,500	7.27	30.2	464	
		10/13/2020	63.6	76,500	7.34	37.0	448	
		4/21/2021	63.6	78,700	7.27	35.3	470	
		10/8/2021	48.4	84,900	7.18	43.8	440	
		4/25/2022	52.5	75,900	7.19	34.2	470	
		10/18/2022	48.8	80,300	7.15	47.6	472	
		4/5/2023	38.6	77,400	7.05	34.3	448	
10/3/2023	44.8	85,100	7.47	42.5	418			
4/24/2024	44.8	79,600	7.23	29.8	448			
10/8/2024	35.9	84,300	7.19	36 M0	448			
4/15/2025	44.8	78,600	7.30	38.1	438			
Compliance	B-11A	12/9/2015	124	58,800	7.70	3.20 J	338	
		4/13/2016	116	60,100	7.75	3.80 J	362	
		7/19/2016	104	54,000	7.42	2.70 J	336	
		10/19/2016	112	54,600	7.47	3.00 J	340	
		1/12/2017	106	54,500	7.89	2.30 J	322	
		4/17/2017	100	54,800	7.38	<1.00	326	
		6/8/2017	102	57,800	7.78	1.40 J	338	
		8/1/2017	105	54,500	7.67	2.40 J	326	
		10/19/2017	116	55,000	7.96	5.10	322	
		4/2/2018	91.0	53,300	8.04	12.3 M0	336	
		10/9/2018	94.2	48,600	7.43	6.00	332	
		4/22/2019	93.9	60,400	7.62	1.90 J	386	
		10/14/2019	80.7	56,600	7.66	<1.00	348	
		4/13/2020	86.3	57,500	7.75	1.40 J	394	
		10/12/2020	99.3	55,600	7.74	1.00 J	364	
		4/19/2021	88.1	50,600	7.65	2.9	366	
		10/8/2021	85.4	51,400	7.57	7.0	356	
		4/26/2022	88.6	51,600	7.53	8.5	350	
		10/18/2022	95.2	46,000	7.61	22.7	332	
		4/4/2023	119	51,700	7.62	70.8	394	
	10/3/2023	231	60,300	7.66	86.0	352		
	4/24/2024	715	63,900	7.82	155	478		
	10/7/2024	471	57,000	7.67	96.1	424		
	4/14/2025	1370	52,400	7.85	164.0	452		
	B-11B	B-11B	12/9/2015	1,140	64,100	8.06	134	494
			4/13/2016	1,360	65,400	8.14	148	512
			7/19/2016	1,210	59,000	7.77	165	520
			10/20/2016	1,460	59,100	7.91	178	496
			1/12/2017	1,540	63,900	8.18	182	488
			4/17/2017	1,760	67,400	7.83	181	502
			6/8/2017	1,880	68,200	8.07	191	516
			8/1/2017	1,800	61,400	7.77	179	498
			10/19/2017	1,500	52,400	7.77	175	510
			4/2/2018	2,020	59,000	8.42	200	550
			10/9/2018	3,620	66,300	7.74	197	602
			11/12/2018	--	--	8.05	--	594
			4/22/2019	6,830	83,300	7.91	303	742
			10/14/2019	4,630	91,400	7.92	339	728
			4/13/2020	5,380	115,000	7.89	378	872
			10/12/2020	3,350	91,200	7.80	388	906
4/19/2021			4,440	93,400	8.07	379 M0	910	
10/8/2021			2,480	100,000	7.81	466	884	
4/26/2022			2,590	97,100	7.63	513	1000	
10/18/2022			3,010	75,100	7.74	429	920	
4/4/2023	4,740	84,400	7.68	436	980			
10/3/2023	5,040	80,600	7.84	403	918			
4/23/2024	5,630	171,000	7.36	435	1,010			
10/7/2024	3,560	142,000	7.57	405	954			
4/14/2025	4,780	130,000	7.68	438	966			

**Table 2. Historical Analytical Results for Parameters with SSIs
Nelson Dewey Generating Station - Cassville, Wisconsin / SCS Engineers Project #25225071.00**

Well Group	Well	Collection Date	Boron (µg/L)	Calcium (µg/L)	Field pH (Std. Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
Compliance	B-11R	12/9/2015	4,170	126,000	7.07	75.4	616
		4/13/2016	3,410	141,000	6.78	18.4	682
		7/19/2016	3,530	130,000	6.69	115	698
		10/20/2016	4,120	128,000	6.77	118	660
		1/12/2017	3,530	126,000	6.98	108	616
		4/17/2017	3,520	123,000	7.11	108	620
		6/7/2017	3,420	128,000	6.80	98.2	630
		8/1/2017	2,040	139,000	6.70	126	738
		10/19/2017	3,120	117,000	7.22	97.7	586
		4/2/2018	3,180	124,000	7.14	88.1	638
		10/9/2018	576	49,900	6.55	15.1	266
		4/22/2019	1,360	82,400	6.82	34.6	406
		10/14/2019	1,440	66,000	6.83	40.7	310
		4/13/2020	2,140	117,000	6.80	41.9	570
		10/12/2020	2,870	120,000	6.83	22.8	600
		4/19/2021	3,010	115,000	7.11	61.2	578
		10/8/2021	2,940	119,000	6.86	61.8	576
		4/26/2022	2,330	114,000	7.01	58.1	560
	10/18/2022	3,090	116,000	6.76	65.3	572	
	4/4/2023	3,110	105,000	6.81	57.0	554	
	10/3/2023	3,120	90,600	6.80	58.0	456	
	4/24/2024	2,640	96,700	6.89	64.8	536	
	10/7/2024	2,420	152,000	6.74	162	766	
	4/14/2025	2,930	124,000	6.95	86.8 MO	622	
	B-31A	12/9/2015	59.0	48,400	7.65	26.2	274
		4/13/2016	79.2	51,900	7.63	22.6	302
		7/19/2016	67.2	48,900	7.25	24.2	280
		10/20/2016	63.7	45,800	7.54	27.2	292
		1/12/2017	76.4	46,600	7.82	29.8	284
		4/17/2017	69.9	46,900	7.83	31.0	318
		6/8/2017	58.5	49,400	7.74	31.2	296
		8/1/2017	56.3	46,000	7.56	26.6	284
		10/19/2017	63.9	49,600	7.92	26.1	290
		4/2/2018	74.8	49,300	8.00	27.4	282
		10/9/2018	71.8	46,600	7.48	24.8	278
		4/22/2019	86.2	48,200	7.61	21.6	284
		10/14/2019	98.5	52,200	7.69	22.3	272
		4/13/2020	132	50,900	7.71	16.6	298
		10/13/2020	127	47,700	7.78	16.8	300
		4/19/2021	172	52,100	7.90	15.8	330
		10/8/2021	178	53,500	7.44	14.9	294
		4/26/2022	198	55,300	7.82	15.4	316
	10/18/2022	213	45,300	7.63	23.0	310	
	4/4/2023	193	46,100	7.59	15.9	324	
	10/2/2023	191	48,300	7.67	20.0	274	
4/23/2024	187	46,000	7.74	19.0	306		
10/8/2024	197	45,500	7.73	23.4	260		
4/14/2025	184	44,200	7.85	23.3	280		
B-31R	12/9/2015	851	77,400	6.79	28.8	374	
	4/13/2016	838	84,900	6.76	34.1	404	
	7/19/2016	641	76,100	6.44	38.5	406	
	10/20/2016	1,020	84,200	6.53	49.7	452	
	1/12/2017	749	73,900	6.80	34.9	380	
	4/17/2017	929	85,600	6.80	43.0	416	
	6/8/2017	895	90,700	6.67	41.1	426	
	8/1/2017	1,550	93,400	6.56	55.6	432	
	10/19/2017	645	75,700	7.19	19.2	358	
	4/2/2018	540	72,900	6.76	22.0	374	
	10/9/2018	1,430	125,000	6.41	186	668	
	11/12/2018	--	--	6.59	162	596	
	4/22/2019	906	105,000	6.62	121	516	
	10/14/2019	915	110,000	6.72	146	480	
	4/13/2020	730	93,800	6.79	89.4	464	
	10/12/2020	702	95,700	6.89	49.4	462	
	4/19/2021	621	91,400	6.91	45.3	454	
	10/8/2021	353	79,000	6.63	24.9	372	
	4/25/2022	454	81,100	6.77	60.0	428	
10/18/2022	327	78,500	6.83	29.6	386		
4/4/2023	589	88,300	6.62	50.0	440		
10/2/2023	519	114,000	6.82	103	536		
4/23/2024	659	89,300	6.73	113	506		
10/8/2024	845	134,000	6.6	187	666		
4/14/2025	862	93,000	6.66	71.4	454		

**Table 2. Historical Analytical Results for Parameters with SSIs
Nelson Dewey Generating Station - Cassville, Wisconsin / SCS Engineers Project #25225071.00**

Well Group	Well	Collection Date	Boron (µg/L)	Calcium (µg/L)	Field pH (Std. Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	
Compliance	B-7R	12/9/2015	110	31,700	6.74	17.0 J	198	
		4/13/2016	115	42,300	6.80	2.50 J	218	
		7/18/2016	164	44,400	6.29	2.40 J	220	
		10/19/2016	154	56,600	6.55	<5.00	288	
		1/12/2017	159	56,700	7.43	<5.00	240	
		4/17/2017	129	61,400	6.60	<5.00	278	
		6/7/2017	110	51,600	6.65	<5.00	240	
		8/1/2017	129	50,400	6.28	3.70	220	
		10/19/2017	159	56,200	6.88	<5.00 D3	242	
		4/2/2018	121	49,200	6.57	<5.00 D3	220	
		10/9/2018	73.0	38,500	6.23	3.20	186	
		4/22/2019	93.5	59,400	6.63	<5.00 D3	254	
		10/14/2019	139	57,700	6.62	<5.00 D3	208	
		4/13/2020	96.0	58,700	6.60	7.50 J, D3	306	
		10/13/2020	145	41,900	6.35	<2.20	208	
		4/20/2021	104	56,100	6.54	<2.2 D3	248	
		10/8/2021 ⁽¹⁾	--	--	--	--	--	--
		4/26/2022	98.1	59,200	6.43	3.7 J, D3	318	
		10/18/2022 ⁽²⁾	--	--	--	--	--	--
		4/3/2023	120	48,800	6.18	<2.2 D3	224	
10/3/2023	144	41,000 P6	3.60	4.5	184			
4/23/2024	134	52,300	6.33	<2.2 D3	232			
10/7/2024	139	83,500	6.40	157	398			
4/14/2025	126	54,500	6.51	35.3	262			

Abbreviations:

µg/L = micrograms per liter or parts per billion (ppb)

-- = Not applicable

mg/L = milligrams per liter or parts per million (ppm)

Std. Units = Standard Units

Flags:

J = Estimated concentration at or above the LOD and below the LOQ.

D3 = Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M0 = Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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

R1 = Relative Percent Difference (RPD) value was outside control limits

Notes:

(1) B-7R could not be sampled on 10/8/2021 or during an attempted resampling event on 10/28/2021 due to low water levels.

(2) B-7R could not be sampled on 10/18/2022 due to low water levels.

Created by: RM
Last revision by: BLJ
Checked by: AAW

Date: 9/19/2023
Date: 7/11/2025
Date: 7/11/2025

Table 3. Water Level Summary
Nelson Dewey Closed Ash Disposal Facility / SCS Engineers Project #25225071.00

Ground Water Elevation in feet above mean sea level (amsl)																														
Well Number	B-7R	B-8R	B-11R	B-11A	B-11B	B-21R#	B-26	B-26A	B-28	B-30R	B-30AR	B-31R	B-31A	B-32	B-32A	B-35	B-35A**	B-36	B-36A	B-37	B-37A	B-39	B-40	MW-301	MW-302	MW-303	Barge Gauge (SG-12)^	Pond Gauge (SG-13)^		
Top of Casing Elevation (feet amsl)*	622.75	626.85	622.00	621.47	621.27	AB	625.79	625.87	616.25	621.26	621.86	621.79	622.09	613.66	613.84	620.14	620.48	620.90	621.12	AB	AB	625.88	623.55	AB	AB	AB	622.35	See notes		
Screen Length (ft)	10	10	10	5	5	10	10	10	10	5	10	5	10	5	10	5	9	4.5	10	5	10	10	10	10	10	10				
Total Depth (ft from top of casing)	23.05	27.25	24.15	52.00	113.90	22.78	31.67	45.78	16.70	22.20	46.90	22.82	35.52	14.79	52.00	16.60	47.00	20.5	50	19.95	48.20	26.90	27.00	21.11	21.27	20.15				
Top of Well Screen Elevation (ft)	610.30	610.26	608.47	575.12	512.99	610.53	604.73	585.62	610.11	609.61	580.50	609.60	592.17	609.39	567.40	614.18	579.20	609.60	575.50	604.90	571.65	609.58	606.84	607.98	607.94	608.34				
Measurement Date																														
April 16, 2015	607.26	608.50	607.11	607.15	607.05	--	606.40	606.41	--	--	--	607.37	607.09	--	--	606.73	606.78	--	--	606.99	606.88		--	--	--	--	--	--	--	
October 1-2, 2015	605.14	604.66	604.53	604.42	604.38	604.36	604.43	604.50	604.54	604.34	604.32	605.13	604.38	604.76	604.82	604.76	604.75	--	--	604.30	604.39		--	--	--	--	--	--	--	
December 8, 2015	606.69	--	606.71	606.30	606.26	--	606.80	--	--	--	--	607.40	606.39	--	--	--	--	--	--	--	--	607.54	--	--	--	--	--	--	--	
April 12, 2016	609.32	609.36	609.32	608.71	608.68	--	609.81	609.72	--	--	--	609.34	609.01	--	--	609.73	609.65	--	--	608.79	608.79	610.23	--	--	--	--	--	--	--	
July 18-19, 2016	606.54	--	606.14	606.76	606.74	--	606.09	--	--	--	--	606.55	606.73	--	--	--	--	--	--	--	--	606.28	--	--	--	--	--	--	--	
October 19-20, 2016	608.59	608.46	608.35	608.21	608.19	608.37	608.84	608.76	608.63	608.45	608.46	608.51	608.20	608.69	608.73	608.78	608.74	--	--	608.20	608.18	609.09	--	--	--	--	--	--	--	
January 11-12, 2017	608.02		607.96	607.83	607.78		608.56					607.90	607.84									608.92	--	--	--	--	--	--	--	
April 17, 2017	609.08	608.82	608.34	609.05	608.99	--	608.59	608.54	609.94	608.57	608.64	607.20	608.98	608.96	608.98	609.00	609.02	--	--	609.02	609.02	610.23	--	--	--	--	--	--	--	
June 8, 2017	610.74	--	610.42	609.81	610.08	--	611.25	--	--	--	--	609.63	610.50	--	--	--	--	--	--	--	--	611.53	--	--	--	--	--	--	--	
August 1-2, 2017	607.02	--	606.73	605.57	605.50	--	607.39	--	--	--	--	606.84	605.69	--	--	--	--	--	--	--	--	608.71	--	--	--	--	--	--	--	
October 9-10, 2017	606.93	606.51	606.25	607.01	606.94	--	606.22	606.13	606.33	606.44	606.45	606.68	606.93	606.57	606.61	606.65	606.71	--	--	--	--	--	--	--	--	--	--	--	--	--
October 19, 2017	609.60	--	609.42	609.58	609.65	--	608.84	--	--	--	--	609.47	609.43	--	--	--	--	--	--	609.40	609.40	608.55	--	--	--	--	--	--	--	
November 17, 2017	--	--	--	--	--	606.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
December 19, 2017	--	--	--	--	--	604.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
February 7, 2018	605.37	--	605.33	604.96	604.92	--	--	--	616.81	--	--	605.31	605.01	--	--	--	--	--	--	--	--	606.19	--	605.08	605.05	605.00	--	--	--	
March 16, 2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	604.64	604.6	604.56	--	--	--	
April 203, 2018 **	604.82	606.61	606.27	606.63	606.55	606.52	606.49	606.37	606.39	606.46	606.43	604.44	606.46	606.58	606.66	606.68	606.70	--	--	606.77	606.83	606.19	--	--	--	--	--	--	--	
May 23, 2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	610.68	610.78	610.61	--	--	--	
October 8-10, 2018	610.76	610.68	610.67	610.28	610.24	610.02	610.34	610.28	610.83	610.09	610.05	610.39	610.27	611.05	610.94	610.72	610.54	--	--	--	--	611.44	--	--	--	--	--	--	--	--
November 11, 2018	--	--	--	--	609.14	--	--	--	--	--	--	609.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	608.40	--	--	
April 22-23, 2019	615.28	615.66	615.28	615.29	615.28	614.98	615.49	615.31	615.40	615.36	615.35	615.01	615.33	--	--	615.87	615.98	--	--	--	--	615.40	--	--	--	--	615.17	<615.06	--	
October 14-16, 2019	613.43	613.11	613.06	613.29	613.18	612.47	613.10	613.10	612.71	612.83	612.78	612.50	613.20	613.10	613.00	613.10	613.15	--	--	--	--	613.35	--	--	--	--	612.33	<615.06	--	
April 13-14, 2020	614.12	613.76	614.39	613.88	613.86	613.22	613.76	613.73	613.68	613.60	613.56	613.80	613.79	--	--	614.04	614.00	--	--	--	--	613.71	--	--	--	--	612.89	613.10	--	
October 12-13, 2020	605.09	604.88	604.57	604.54	604.44	604.28	604.92	604.83	604.86	604.72	604.72	604.66	604.54	605.07	605.06	605.00	605.08	--	--	--	--	605.06	--	--	--	--	603.89	DRY	--	
April 19-21, 2021	608.83	608.66	608.57	608.72	608.67	607.93	608.55	608.49	608.27	608.38	608.35	608.66	608.63	608.68	608.74	608.86	608.85	608.40	608.39	608.74	608.75	608.48	--	--	--	--	608.15	<609.00	--	
October 6-8, 2021	604.05	604.04	603.85	603.79	603.74	603.56	604.21	604.13	604.11	604.00	603.97	603.98	603.84	604.32	604.38	604.35	604.34	603.93	603.92	NM	NM	604.23	--	--	--	--	602.90	<609.00	--	
April 25-26, 2022	609.84	610.25	609.75	610.00	609.98	609.70	610.12	610.08	609.99	610.11	610.09	610.27	609.95	610.26	610.40	610.44	610.32	609.94	609.90	AB	AB	610.22	--	--	--	--	NM	609.25	--	
October 18-19, 2022	603.81	603.82	603.59	603.63	603.57	603.39	603.99	603.81	603.84	603.78	603.77	603.69	603.61	604.07	604.09	604.12	604.05	603.64	603.65	AB	AB	603.91	--	--	--	--	601.29	<609.00	--	
April 3-5, 2023	607.51	607.58	607.83	607.92	607.90	--	607.36	607.34	607.19	607.38	607.41	607.88	607.85	607.40	607.40	607.67	607.71	607.34	607.34	AB	AB	606.92	--	--	--	--	606.24	<609.00	--	
October 2-3, 2023	604.39	604.06	603.93	603.97	603.91	--	604.20	604.15	604.12	604.07	604.05	603.98	603.95	604.23	604.29	604.34	599.49	603.81	603.86	AB	AB	604.04	--	--	--	--	603.29	<609.00	--	
April 23-24, 2024	606.66	606.80	606.72	606.86	606.66	AB	606.51	606.41	DRY	606.44	606.45	606.61	606.63	606.56	606.62	606.71	606.73	606.31	606.36	AB	AB	606.25	606.22	--	--	--	605.34	--	--	
October 7-8, 2024	604.02	603.79	603.54	603.52	603.46	AB	603.93	603.85	603.91	603.75	603.72	603.72	603.59	604.13	604.16	DRY	604.07	603.66	603.66	AB	AB	604.15	603.43	--	--	--	601.05	DRY	--	
April 14-15, 2025	606.13	606.39	606.20	605.79	605.80	AB	606.80	606.81	606.97	606.72	606.70	606.34	606.00	605.66	606.85	606.87	606.82	606.78	606.78	AB	AB	606.79	606.64	--	--	--	603.74	DRY	--	
Bottom of Well Elevation (ft)	600.30	600.26	598.47	570.12	507.99	600.53	594.73	580.62	600.11	599.61	575.50	599.60	587.17	599.39	562.40	604.18	574.20	600.6	571	594.90	566.65	599.58	596.84	597.98	597.94	598.34				

Notes:
 -- = not measured
 * All site monitoring wells and staff gauges were resurveyed by Mohn Surveying on April 23-25, 2025. Top of casing elevations recorded during this survey are used to calculate groundwater elevations for the April 2025 monitoring event and later events. The bases (0' marks) of the three SG-13 staff gauges were surveyed at 609.11, 612.18, and 615.19 feet amsl.
 ** The PVC casing at B-35A was cut down on June 28, 2018 to allow the protective cover to close. Groundwater elevations prior to 6/28/18 are calculated using the old top of casing (TOC) elevation of 621.20 ft amsl. Groundwater elevations after 6/28/18 are calculated using the new TOC elevation (621.09 ft amsl).
 ^ One pond staff gauge was installed on April 22, 2019. The base of the gauge (0 reading) at the tiem of installatoin 615.056 ft amsl. Two additional gauges were installed on March 24, 2020. These gauge bases were at 609' and 612' amsl. These elevations apply to water elevation measurements through October 2024.
 ^^ SG-12 reestablished in 2022 following barge slip construction work. Previous elevation (applies to measurements before October 2022) was 616.60. New elevation (top of metal pipe) used to calculate elevations from October 2022 to October 2042 is 622.34'
 # B-21R was extended in 2018 following well rehabilitation. The well was resurveyed on April 22, 2019. The old top of casing elevation was 621.03 ft. The TOC elevation after extension was 623.31 ft. This well was found knocked over during the April 2023 sampling event and was subsequently abandoned.
 AB = well abandoned
 amsl = above mean seal level

Created by: MDB Date: 4/1/2013
 Last revision by: RM Date: 5/19/2025
 Checked by: EMS Date: 5/28/2025

**Table 4. Analytical Results - State Monitoring Program
Nelson Dewey Generating Station
Cassville, Wisconsin / SCS Engineers Project #25225071.00**

WELL ID	SAMPLE MONTH	BORON, DISSOLVED (UG/L)	SULFATE, DISSOLVED (MG/L)	PH, FIELD (STANDARD UNITS)
B-7R	2016-Apr	110	7.40	6.80
	2016-Oct	147	<20.0	6.55
	2017-Apr	127	<5.00	6.60
	2017-Oct	159	<5.00	6.61
	2018-Apr	115	<5.00 D3	6.57
	2018-Oct	89.8	3.40	6.23
	2019-Apr	95.7	<5.00 D3	6.63
	2019-Oct	140	<5.00 D3	6.62
	2020-Apr	90.8	5.20 J, D3	6.60
	2020-Oct	145	<2.20 D3	6.35
	2021-Apr	121	<2.20 D3	6.54
	2021-Oct	--	--	--
	2022-Apr	93.1	5.0 J, D3	6.43
	2022-Oct	--	--	--
	2023-Apr	120	2.3 J, D3	6.18
	2023-Oct	151	4.3	6.30
	2024-Apr	133	<2.2 D3	6.33
2024-Oct	152	157	6.40	
2025-Apr	120	38.8	6.51	
B-8R	2016-Apr	2,250	30.0	6.64
	2016-Oct	2,130	47.0	6.38
	2017-Apr	1,970	30.5	6.83
	2017-Oct	2,490	32.5	6.87
	2018-Apr	1,700	28.7	7.02
	2018-Oct	1,500	30.6	6.18
	2019-Apr	1,560	39.8	6.65
	2019-Oct	1,110	23.6	6.85
	2020-Apr	1,340	20.9	6.61
	2020-Oct	1,600	63.9	6.60
	2021-Apr	1,310	25.0	6.54
	2021-Oct	1,730	42.3	6.48
	2022-Apr	1,320	23.8	6.52
	2022-Oct	1,690	41.4	6.45
	2023-Apr	1,290	20.0	6.43
	2023-Oct	1,360	28.7	6.88
	2024-Apr	1,280	17.9	6.71
2024-Oct	1,370	47.1	6.34	
2025-Apr	1,340	21.4	6.53	
B-11A	2016-Apr	110	3.80 J	7.75
	2016-Oct	111	2.80 J	7.47
	2017-Apr	106	<1.00	7.38
	2017-Oct	97.7	8.30	7.91
	2018-Apr	89.4	12.70	8.04
	2018-Oct	142	5.30	7.43
	2019-Apr	94.0	1.90 J	7.62
	2019-Oct	82.3	<1.00	7.66
	2020-Apr	83.3	1.50 J	7.75
	2020-Oct	94.3	1.0 J	7.74
	2021-Apr	92.9	3.5	7.65
	2021-Oct	97.6	7.3	7.49
	2022-Apr	87.0	9.1	7.53
	2022-Oct	98.4	24.2	7.61
	2023-Apr	119	72.0	7.62
	2023-Oct	240	88.5	7.66
	2024-Apr	697	153	7.82
2024-Oct	484	94.5	7.67	
2025-Apr	1310	164.0	7.85	

**Table 4. Analytical Results - State Monitoring Program
Nelson Dewey Generating Station
Cassville, Wisconsin / SCS Engineers Project #25225071.00**

WELL ID	SAMPLE MONTH	BORON, DISSOLVED (UG/L)	SULFATE, DISSOLVED (MG/L)	PH, FIELD (STANDARD UNITS)
B-11B	2016-Apr	1,240	153	8.14
	2016-Oct	1,410	181	7.91
	2017-Apr	1,720	186	7.83
	2017-Oct	1,900	169	7.80
	2018-Apr	2,020	195	8.42
	2018-Oct	3,910	195	7.74
	2019-Apr	6,670	289	7.91
	2019-Oct	4,860	335	7.92
	2020-Apr	5,080	362	7.89
	2020-Oct	3,190	422	7.80
	2021-Apr	4,590	389	8.07
	2021-Oct	2,480	468	7.72
	2022-Apr	2,690	494	7.63
	2022-Oct	3,190	446	7.74
	2023-Apr	4,320	459	7.68
	2023-Oct	4,940	409	7.84
	2024-Apr	5,860	449	7.36
2024-Oct	3,880	411	7.57	
2025-Apr	4,680	439	7.68	
B-11R	2016-Apr	3,290	93.9	6.98
	2016-Oct	4,070	115	6.77
	2017-Apr	3,710	111	7.11
	2017-Oct	3,400	94.0	6.75
	2018-Apr	2,790	78.6	7.14
	2018-Oct	635	15.6	6.55
	2019-Apr	1,310	34.5	6.82
	2019-Oct	1,500	39.2	6.83
	2020-Apr	2,250	39.8	6.80
	2020-Oct	2,690	23.0	6.83
	2021-Apr	2,890	59.9	7.11
	2021-Oct	3,050	61.6	6.86
	2022-Apr	2,330	58.1	7.01
	2022-Oct	3,250	59.9	6.76
	2023-Apr	3,010	62.7	6.81
	2023-Oct	3,020	58.4	6.80
	2024-Apr	2,960	66.2	6.89
2024-Oct	2,640	145.0	6.74	
2025-Apr	2,820	86.8	6.95	
B-26	2016-Apr	37.0	40.1	7.43
	2016-Oct	48.7	34.4	7.19
	2017-Apr	37.3	32.3	7.54
	2017-Oct	44.5	25.0	7.35
	2018-Apr	46.8	19.2	7.64
	2018-Oct	55.2	24.9	7.20
	2019-Apr	41.8	26.4	7.10
	2019-Oct	50.8	37.0	7.24
	2020-Apr	49.2	29.1	7.27
	2020-Oct	61.4	37.1	7.34
	2021-Apr	67.1	35.5	7.27
	2021-Oct	56.0	43.0	7.18
	2022-Apr	50.3	33.5	7.19
	2022-Oct	51.5	46.1	7.15
	2023-Apr	48.3	34.4	7.05
	2023-Oct	40.8	43.7	7.47
	2024-Apr	45.2	29.9	7.23
2024-Oct	41.0	40.5	7.19	
2025-Apr	43.9	37.5	7.3	

**Table 4. Analytical Results - State Monitoring Program
Nelson Dewey Generating Station
Cassville, Wisconsin / SCS Engineers Project #25225071.00**

WELL ID	SAMPLE MONTH	BORON, DISSOLVED (UG/L)	SULFATE, DISSOLVED (MG/L)	PH, FIELD (STANDARD UNITS)
B-26A	2016-Apr	33.1	40.1	7.06
	2016-Oct	30.5	39.9	7.26
	2017-Apr	52.6	42.3	7.96
	2017-Oct	28.4	38.4	7.44
	2018-Apr	27.6	37.0	7.47
	2018-Oct	18.4	33.3	7.38
	2019-Apr	27.6	27.0	7.35
	2019-Oct	47.0	35.6	7.31
	2020-Apr	37.7	39.2 M0	7.38
	2020-Oct	33.5	44.7	7.51
	2021-Apr	42.7	45.5	7.26
	2021-Oct	36.4	49.7	7.45
	2022-Apr	29.8	53.2	7.39
	2022-Oct	26.3	47.1	7.48
	2023-Apr	31.0	47.0	7.15
	2023-Oct	36.9	50.9	7.54
2024-Apr	29.7	42.8	7.60	
2024-Oct	26.6	49.7	7.27	
2025-Apr	28.2	42.9	7.38	
B-31A	2016-Apr	69.4	22.8	7.63
	2016-Oct	81.0	27.9	7.54
	2017-Apr	80.3	30.8	7.83
	2017-Oct	61.5	26.2	7.60
	2018-Apr	69.3	28.1	8.00
	2018-Oct	103	26.2	7.48
	2019-Apr	86.0	21.6	7.61
	2019-Oct	112	22.5	7.69
	2020-Apr	121	17.7	7.71
	2020-Oct	146	16.8	7.78
	2021-Apr	168	17.1	7.90
	2021-Oct	188	15.0	7.58
	2022-Apr	179	15.3	7.82
	2022-Oct	202	22.8	7.63
	2023-Apr	196	16.1	7.59
	2023-Oct	195	21.3	7.67
2024-Apr	182	19.1	7.74	
2024-Oct	212	23.4	7.73	
2025-Apr	184	22.5	7.85	
B-31R	2016-Apr	759	34.3	6.76
	2016-Oct	956	48.5	6.53
	2017-Apr	910	42.9	6.80
	2017-Oct	618	23.2	6.78
	2018-Apr	520	23.3	6.76
	2018-Oct	1,530	179	6.41
	2019-Apr	892	114	6.62
	2019-Oct	1,000	145	6.72
	2020-Apr	765	97.6 M0	6.79
	2020-Oct	696	50.8	6.89
	2021-Apr	597	44.9	6.91
	2021-Oct	356	25.1	6.83
	2022-Apr	425	57.4	6.77
	2022-Oct	341	30.2	6.83
	2023-Apr	553	50.5	6.62
	2023-Oct	532	105	6.82
2024-Apr	691	118	6.73	
2024-Oct	865	197	6.6	
2025-Apr	798	72.2	6.66	

**Table 4. Analytical Results - State Monitoring Program
Nelson Dewey Generating Station
Cassville, Wisconsin / SCS Engineers Project #25225071.00**

WELL ID	SAMPLE MONTH	BORON, DISSOLVED (UG/L)	SULFATE, DISSOLVED (MG/L)	PH, FIELD (STANDARD UNITS)
B-35	2016-Apr	38.7	8.10	6.89
	2016-Oct	46.4	6.50	6.86
	2017-Apr	54.4	7.70	6.68
	2017-Oct	40.8	3.80	7.65
	2018-Apr	28.9	4.80 M0	7.01
	2018-Oct	40.0	3.60	6.58
	2019-Apr	33.6	4.90	7.26
	2019-Oct	41.0	5.60	7.07
	2020-Apr	27.0	4.20	6.87
	2020-Oct	28.1	5.60	6.85
	2021-Apr	23.8	5.90	6.89
	2021-Oct	--	--	--
	2022-Apr	22.7	7.7	6.95
	2022-Oct	--	--	--
	2023-Apr	20.6	4.5	6.74
	2023-Oct	--	--	--
	2024-Apr	26.8	11.8	6.92
2024-Oct	DRY	DRY	DRY	
2025-Apr	26.5	7.1	6.7	
B-35A	2016-Apr	21.7	26.2	6.96
	2016-Oct	23.4	27.4	7.17
	2017-Apr	29.9	25.4	7.27
	2017-Oct	51.4	4.00	7.44
	2018-Apr	28.9	23.1	7.45
	2018-Oct	59.8	6.00 J, D3	6.95
	2019-Apr	30.3	16.7	7.30
	2019-Oct	33.7	18.9	7.30
	2020-Apr	32.1	20.2	7.29
	2020-Oct	70.7	17.8	7.39
	2021-Apr	46.8	18.9	7.26
	2021-Oct	52.7	18.7	7.27
	2022-Apr	46.5	16.2	7.17
	2022-Oct	55.6	5.6	7.23
	2023-Apr	47.2	5.4	7.04
2023-Oct	96.5	14.0	7.54	
2024-Apr	93	19.7	7.60	
2024-Oct	42.1	6.9	7.29	
2025-Apr	39.6	9.3	7.19	
B-36	2021-Oct	24.7	2.80	7.34
	2022-Apr	27.2	3.2	7.23
	2022-Oct	28.3	3.1	6.71
	2023-Apr	25.1	3.1	6.88
	2023-Oct	26.8	3.4	6.66
	2024-Apr	25.1	3.5	6.87
	2024-Oct	37.8	3.9	6.75
	2025-Apr	28.5	3.7	6.8
B-36A	2021-Oct	20.7	17.6	7.43
	2022-Apr	29.5	13.7	7.26
	2022-Oct	33.1	16.7	7.18
	2023-Apr	35.7	8.1	7.28
	2023-Oct	27.9	22.8	6.80
	2024-Apr	24.4	25.6	7.32
	2024-Oct	26.5	3.3	7.37
2025-Apr	20.4	24.2	7.13	

Table 4. Analytical Results - State Monitoring Program
Nelson Dewey Generating Station
Cassville, Wisconsin / SCS Engineers Project #25225071.00

Laboratory Abbreviations:

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

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Notes:

(1) B-7R and B-35 were dry during October 2021 and 2022 sampling events.

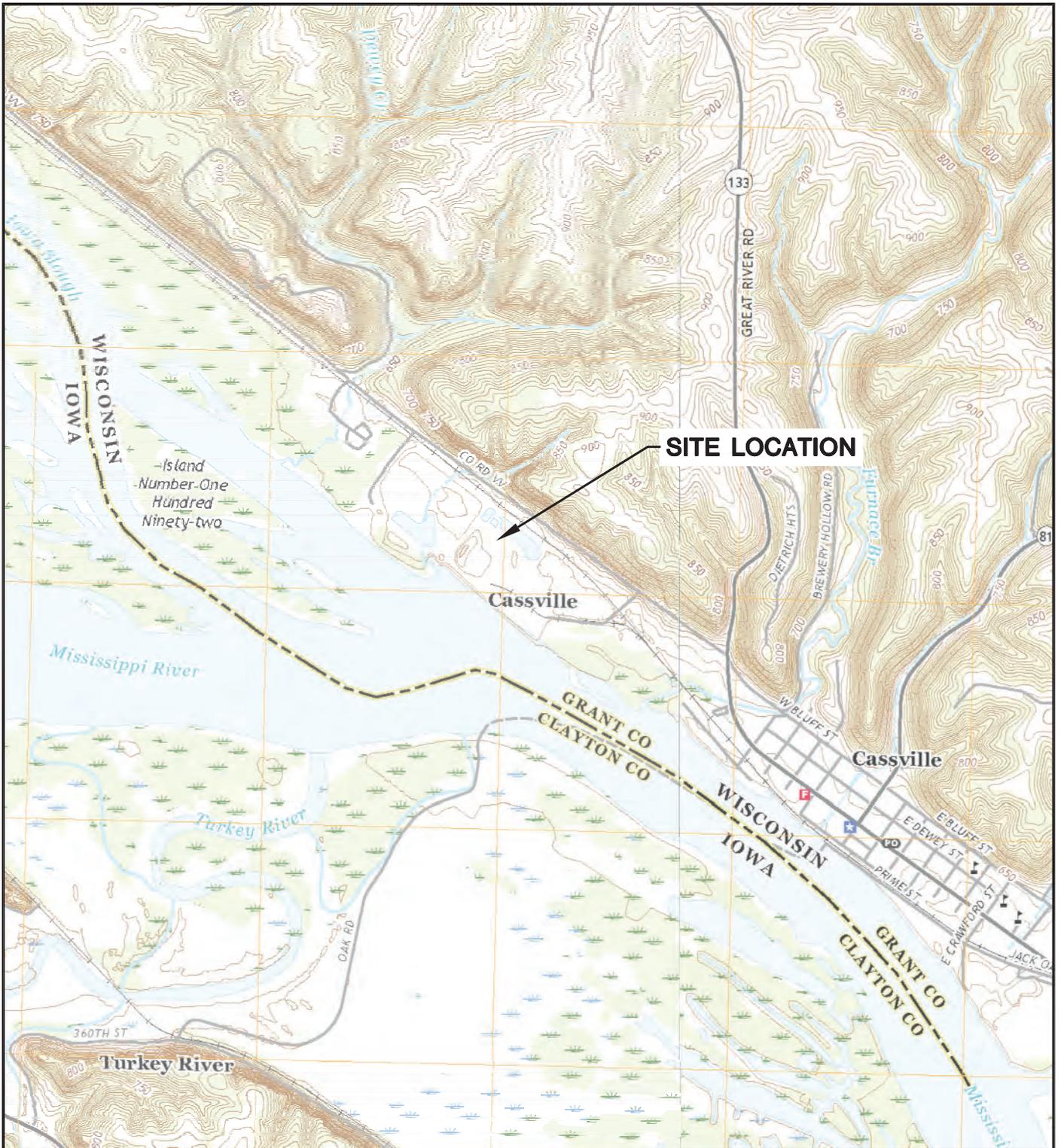
(2) B-37 and B-37A were abandoned 12/6/2022. B-36 and B-36A were installed prior to the October 2021 sampling event.

Created by: RM
Last revision by: BLJ
Checked by: AAW

Date: 9/19/2023
Date: 7/11/2025
Date: 7/11/2025

Figures

- 1 Site Location Map
- 2 Aerial View
- 3 Site Plan and Monitoring Well Locations
- 4 Water Table Flow Map – April 2025

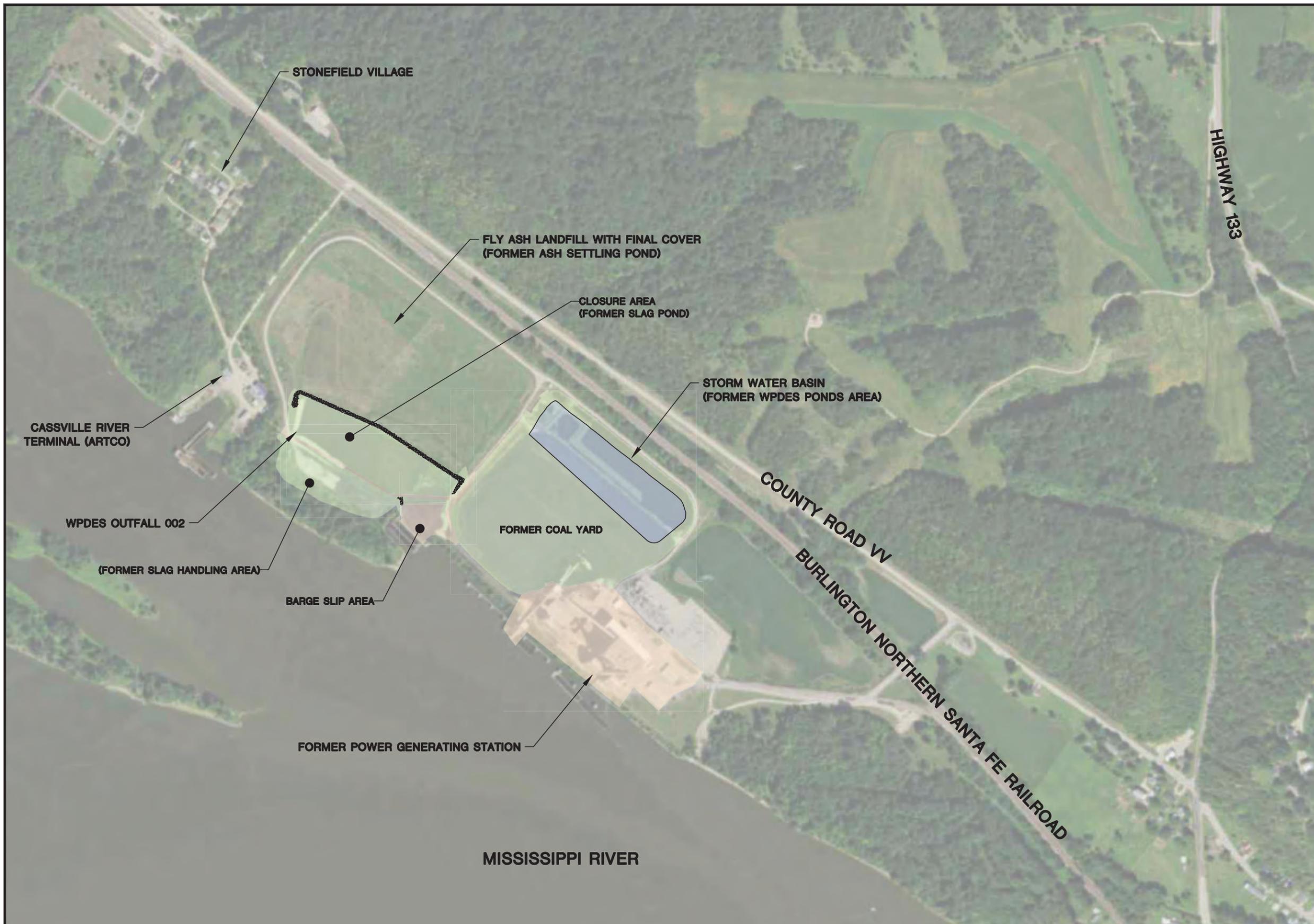


CASSVILLE AND TURKEY RIVER QUADRANGLES
 WISCONSIN-IOWA
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 2018
 SCALE: 1" = 2,000'



CLIENT	ALLIANT ENERGY 4902 N. BILTMORE LANE, #1000 MADISON, WI 53718		SITE	ALLIANT ENERGY NELSON DEWEY GENERATING STATION CASSVILLE, WISCONSIN		ENGINEER	SITE LOCATION MAP	
	PROJECT NO.	25220071.00		DRAWN BY:	BSS		SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE
	DRAWN:	11/27/2019		CHECKED BY:	MDB			1
REVISED:	01/14/2020	APPROVED BY:	TK 04/10/2020					

I:\25220071.00\Drawings\ASD\Site Location Map.dwg, 4/12/2020 7:11:31 PM



NOTES:

1. AERIAL PHOTOGRAPH FROM THE NATIONAL AGRICULTURE IMAGERY PROGRAM AND PUBLISHED BY THE USDA FSA AERIAL PHOTOGRAPHY FIELD OFFICE. DATE OF IMAGE IS AUGUST 24, 2015.



SCALE: 1" = 500'

PROJECT NO.	25220071.00	DRAWN BY:	BJM	 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	CLIENT WISCONSIN POWER AND LIGHT CO. NELSON DEWEY GENERATING STATION 11999 COUNTY HIGHWAY VV CASSVILLE WI, 53806	SITE WISCONSIN POWER AND LIGHT NELSON DEWEY GENERATING STATION CASSVILLE WISCONSIN	AERIAL VIEW	FIGURE
DRAWN:	12/18/13	CHECKED BY:	KAK					2
REVISED:	01/22/20	APPROVED BY:	TK 04/10/2020					

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DOCUMENT PATH: I:\CLIENT\ALLIANT\PROJECT_SITES\NELSON DEWEY\GIS\NELSON DEWEY\NELSON DEWEY\GWA\APRX

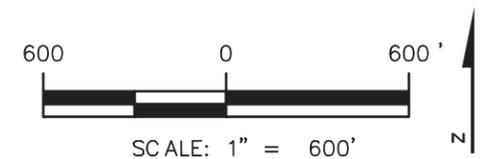


LEGEND

- ABANDONED MONITORING WELL
- ABANDONED PIEZOMETER
- ABANDONED WATER SUPPLY WELL
- CCR BACKGROUND MONITORING WELL
- CCR MONITORING WELL
- CCR PIEZOMETER
- MONITORING WELL
- PIEZOMETER
- STAFF GAUGE
- WATER SUPPLY WELL
- NED SLAG POND 2022 FINAL COVER LIMITS
- NED ESTIMATED APPROXIMATE CLOSED CCR LANDFILL LIMITS
- RAILROAD
- MAJOR TOPOGRAPHIC CONTOUR (10FT INTERVAL)
- MINOR TOPOGRAPHIC CONTOUR (2FT INTERVAL)

NOTES

1. IMAGERY SOURCE: MAXAR. DATE: 07/25/2023.
2. COORDINATE SYSTEM: NAD 1983 (2011) STATEPLANE WISCONSIN SOUTH FIPS 4803 (US FEET).
3. RAILROAD DATA FROM BUREAU OF TRANSPORTATION STATISTICS (BTS); FEDERAL RAILROAD ADMINISTRATION (FRA).
4. CONTOUR DATA BASED ON DRAWINGS PREPARED BY JSD PROFESSIONAL SERVICES, INC. (JSD). CONTOUR DATA UPDATED BY JSD ON MARCH 7 AND 8, 2016. CONTOURS WITHIN THE COAL YARD BASED ON JULY 9, 2016 SCS ENGINEERS GROUND SURVEY. CONTOURS WITHIN THE SLAG POND AND WPDES POND BASED ON AUGUST 2-4, 2016 J.F. BRENNAN BATHYMETRIC SURVEY AND GROUND SURVEY. CONTOURS BELOW WATER SURFACE REPRESENT TOP OF SEDIMENT.
5. MONITORING WELL AND OTHER SAMPLE LOCATIONS ARE APPROXIMATE.
6. EXISTING LIMITS OF WASTE ARE APPROXIMATE.
7. MONITORING WELLS MW-301, MW-302 AND MW-303 WERE INSTALLED BY BADGER STATE DRILLING ON DECEMBER 18 AND 19, 2017. THESE WELLS WERE ABANDONED IN OCTOBER 2018 AND WERE SURVEYED BY SCS ENGINEERS ON JANUARY 10, 2018. MONITORING WELL B-39 WAS INSTALLED TO INTERSECT THE WATER TABLE, BY BADGER STATE DRILLING ON OCTOBER 20, 2015. MONITORING WELLS B-8R AND B-39 WERE SURVEYED BY SCS ENGINEERS ON DECEMBER 9, 2015. MONITORING WELLS B-37 AND B-37A WERE ABANDONED ON DECEMBER 6, 2021. THE FORMER ARTCO SUPPLY WELL WAS ABANDONED AND A NEW REPLACEMENT SUPPLY WELL ARTCO ON AUGUST 20, 2021. MONITORING WELL B-40 WAS INSTALLED ON APRIL 8, 2024, BY ON-SITE ENVIRONMENTAL, INC. OF SUN PRAIRIE, WI, AND WAS SURVEYED BY MOHN SURVEYING OF LANSING, IOWA ON JUNE 13, 2024. MONITORING WELL B-21R WAS ABANDONED ON MARCH 8, 2024, BY ON-SITE ENVIRONMENTAL, INC.



PROJECT NO.	25225071.00	DRAWN BY:	AA
DRAWN:	08/21/2025	CHECKED BY:	NLB 08/29/2025
REVISED:	10/21/2025	APPROVED BY:	TK 09/09/2025

SCS ENGINEERS
 2830 DAIRY DRIVE MADISON, WI 53718-6751
 PHONE: (608) 224-2830

CLIENT
 INTERSTATE POWER AND LIGHT CO.
 11999 CO HWY VV
 CASSVILLE, WI 53806

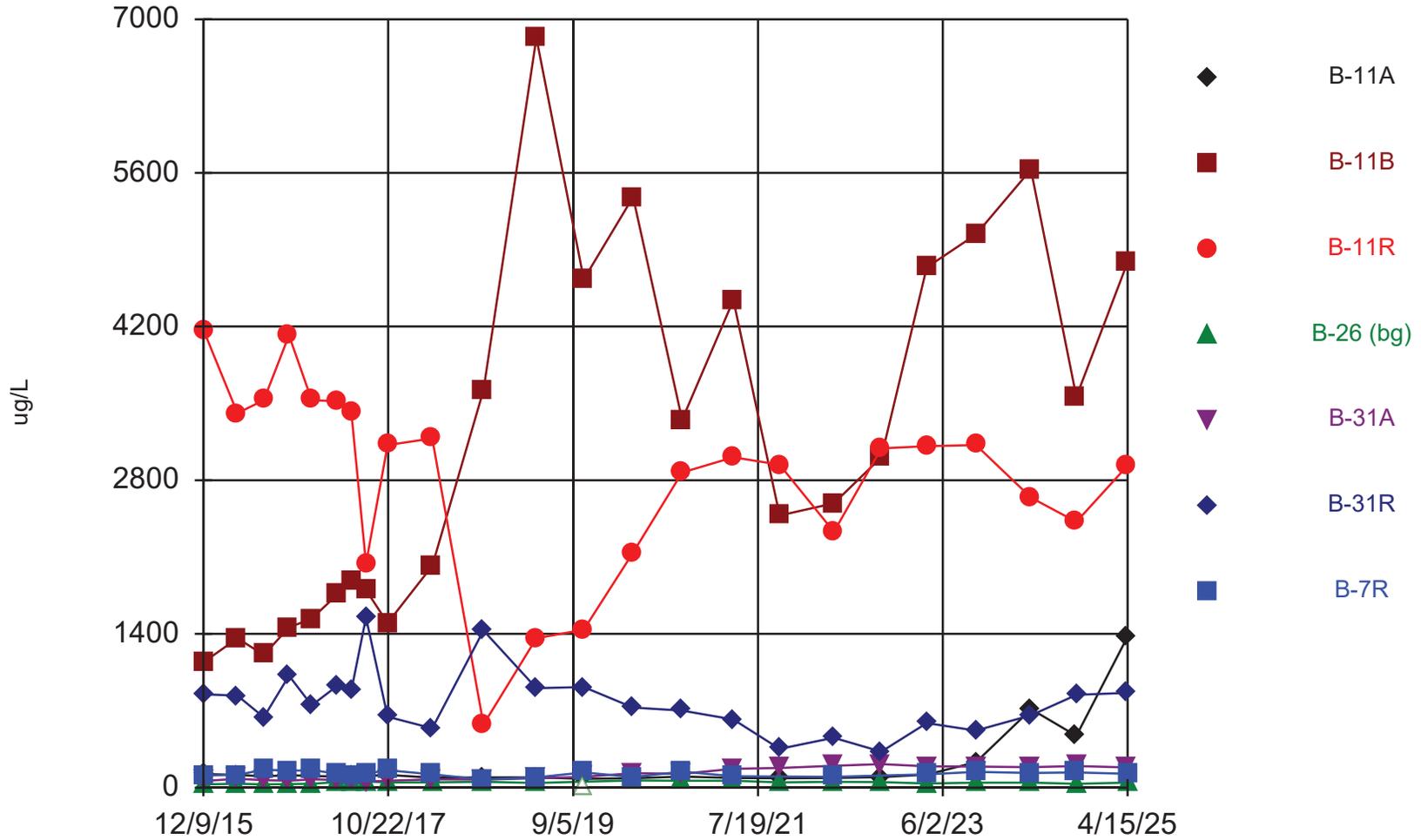
SITE
 ALLIANT ENERGY
 NELSON DEWEY GENERATING STATION
 CASSVILLE, WISCONSIN

SITE PLAN

FIGURE
 3

Appendix A
CCR Well Trend Plots

Boron



Time Series Analysis Run 7/11/2025 3:11 PM

Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

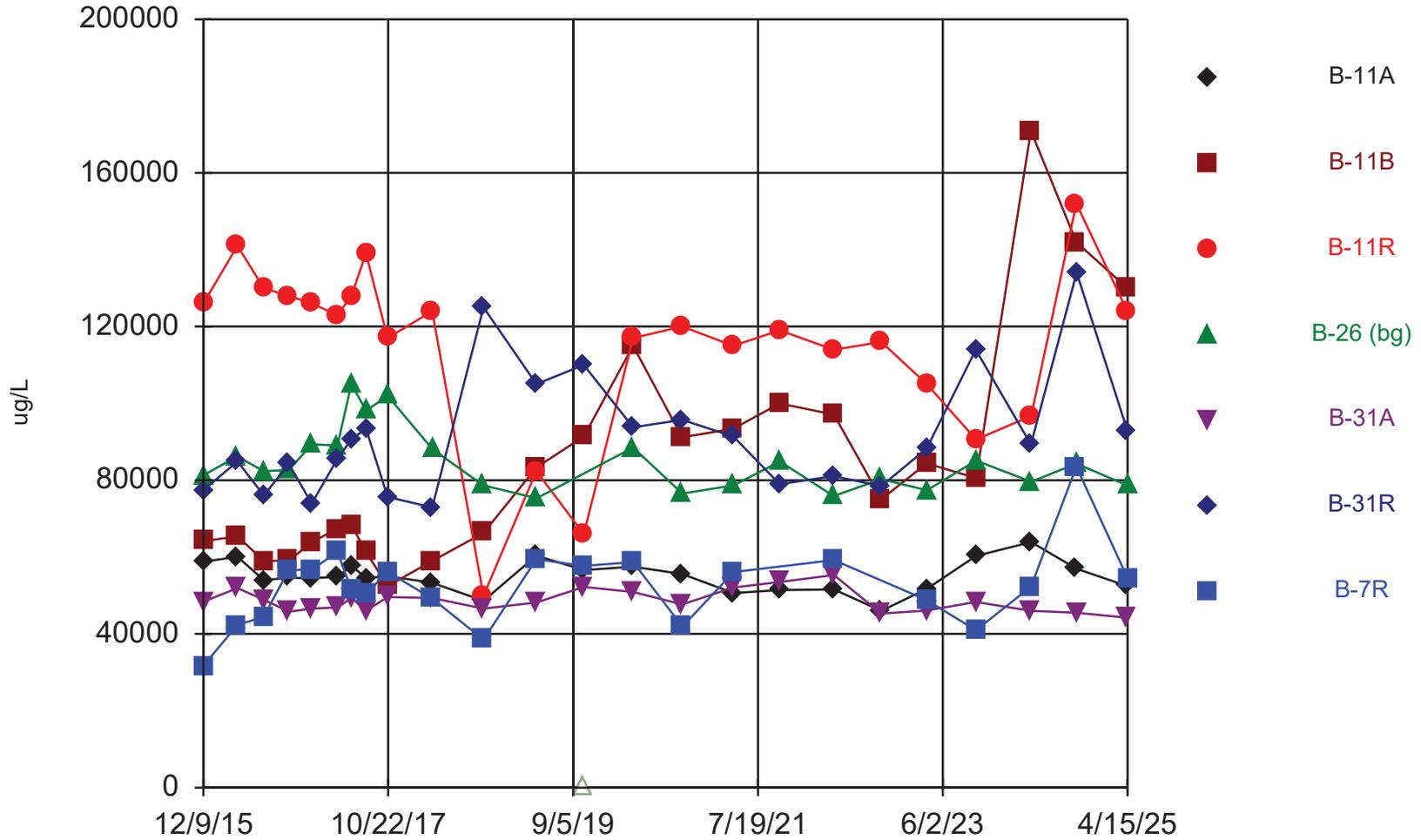
Time Series

Constituent: Boron (ug/L) Analysis Run 7/11/2025 3:14 PM

Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	124	1140	4170	29.6	59	851	110
4/12/2016				33.7			
4/13/2016	116	1360	3410		79.2	838	115
7/18/2016							164
7/19/2016	104	1210	3530	28.6	67.2	641	
10/19/2016	112						154
10/20/2016		1460	4120	33	63.7	1020	
1/12/2017	106	1540	3530	35.2	76.4	749	159
4/17/2017	100	1760	3520	50.1	69.9	929	129
6/7/2017			3420	45.8			110
6/8/2017	102	1880			58.5	895	
8/1/2017	105	1800	2040		56.3	1550	129
8/2/2017				54.6			
10/19/2017	116	1500	3120	47.4	63.9	645	159
4/2/2018	91	2020	3180		74.8	540	121
4/3/2018				48			
10/8/2018				53.4			
10/9/2018	94.2	3620	576		71.8	1430	73
4/22/2019	93.9	6830	1360		86.2	906	93.5
4/23/2019				41.6			
10/14/2019	80.7	4630	1440		98.5	915	139
10/15/2019				<3 (UX)			
4/13/2020	86.3	5380	2140		132	730	96
4/14/2020				66.1			
10/12/2020	99.3	3350	2870		127	702	
10/13/2020				63.6			145
4/19/2021	88.1	4440	3010		172	621	
4/20/2021							104
4/21/2021				63.6			
10/7/2021	85.4	2480	2940		178	353	
10/8/2021				48.4			
4/25/2022				52.5		454	
4/26/2022	88.6	2590	2330		198		98.1
10/18/2022	95.2	3010	3090	48.8	213	327	
4/3/2023							120
4/4/2023	119	4740	3110		193	589	
4/5/2023				38.6			
10/2/2023					191	519	
10/3/2023	231	5040	3120	44.8			144
4/23/2024		5630			187	659	134
4/24/2024	715		2640	44.8			
10/7/2024	471	3560	2420				139
10/8/2024				35.9	197	845	
4/14/2025	1370	4780	2930		184	862	
4/15/2025				44.8			126

Calcium



Time Series Analysis Run 7/11/2025 3:11 PM

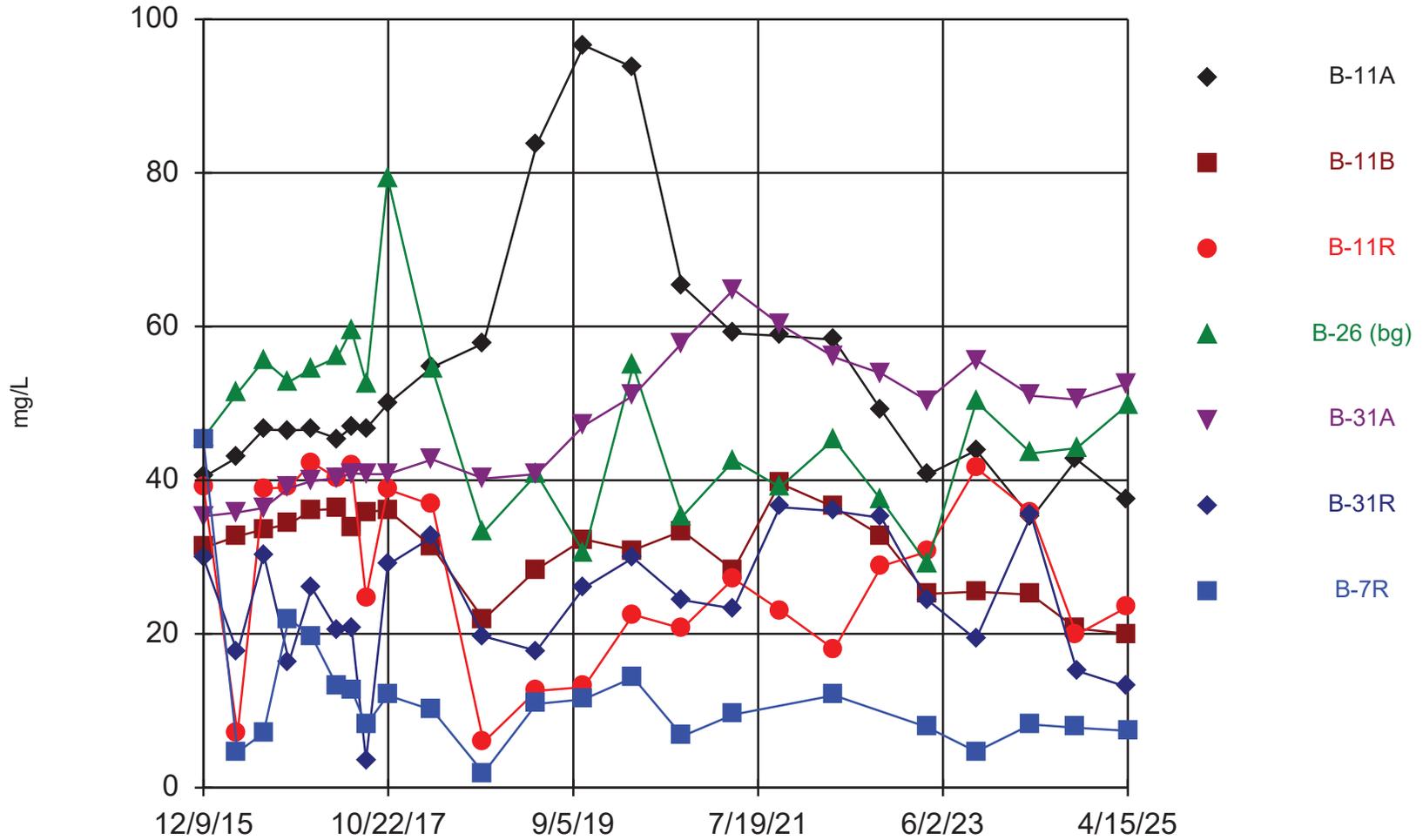
Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

Time Series

Constituent: Calcium (ug/L) Analysis Run 7/11/2025 3:14 PM
 Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	58800	64100	126000	81300	48400	77400	31700
4/12/2016				86200			
4/13/2016	60100	65400	141000		51900	84900	42300
7/18/2016							44400
7/19/2016	54000	59000	130000	82400	48900	76100	
10/19/2016	54600						56600
10/20/2016		59100	128000	82700	45800	84200	
1/12/2017	54500	63900	126000	89400	46600	73900	56700
4/17/2017	54800	67400	123000	89000	46900	85600	61400
6/7/2017			128000	105000			51600
6/8/2017	57800	68200			49400	90700	
8/1/2017	54500	61400	139000		46000	93400	50400
8/2/2017				98100			
10/19/2017	55000	52400	117000	102000	49600	75700	56200
4/2/2018	53300	59000	124000		49300	72900	49200
4/3/2018				88100			
10/8/2018				78700			
10/9/2018	48600	66300	49900		46600	125000	38500
4/22/2019	60400	83300	82400		48200	105000	59400
4/23/2019				75300			
10/14/2019	56600	91400	66000		52200	110000	57700
10/15/2019				<76.2 (UX)			
4/13/2020	57500	115000	117000		50900	93800	58700
4/14/2020				88500			
10/12/2020	55600	91200	120000		47700	95700	
10/13/2020				76500			41900
4/19/2021	50600	93400	115000		52100	91400	
4/20/2021							56100
4/21/2021				78700			
10/7/2021	51400	100000	119000		53500	79000	
10/8/2021				84900			
4/25/2022				75900		81100	
4/26/2022	51600	97100	114000		55300		59200
10/18/2022	46000	75100	116000	80300	45300	78500	
4/3/2023							48800
4/4/2023	51700	84400	105000		46100	88300	
4/5/2023				77400			
10/2/2023					48300	114000	
10/3/2023	60300	80600	90600	85100			41000
4/23/2024		171000			46000	89300	52300
4/24/2024	63900		96700	79600			
10/7/2024	57000	142000	152000				83500
10/8/2024				84300	45500	134000	
4/14/2025	52400	130000	124000		44200	93000	
4/15/2025				78600			54500

Chloride



Time Series Analysis Run 7/11/2025 3:11 PM

Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

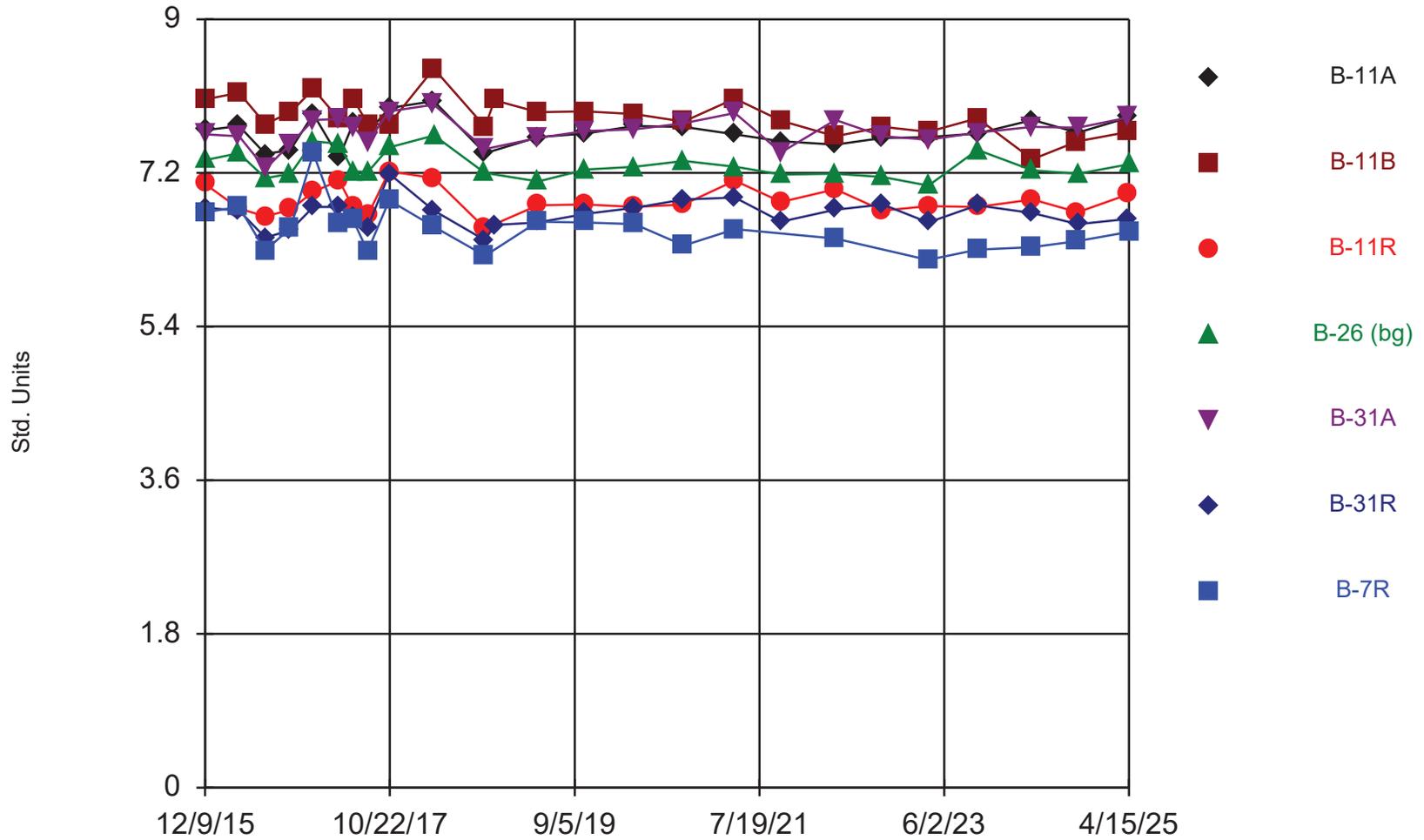
Time Series

Constituent: Chloride (mg/L) Analysis Run 7/11/2025 3:14 PM

Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	40.4	31.2	39.2	45.5	35.3	29.9	45.2
4/12/2016				51.3			
4/13/2016	43	32.7	7		35.8	17.6	4.6
7/18/2016							7.1
7/19/2016	46.6	33.6	38.9	55.6	36.4	30.3	
10/19/2016	46.5						22
10/20/2016		34.3	39.1	52.8	39	16.4	
1/12/2017	46.6	36.1	42.3	54.5	39.9	26	19.7
4/17/2017	45.4	36.3	40.2	56	40.3	20.4	13.1
6/7/2017			42	59.6			12.8
6/8/2017	46.9	33.9			40.9	20.7	
8/1/2017	46.7	35.9	24.7		40.8	3.6	8.1
8/2/2017				52.6			
10/19/2017	49.9	36.1	38.8	79.3	40.8	29	12
4/2/2018	54.7	31.3	36.8		42.7	32.6	10.1
4/3/2018				54.4			
10/8/2018				33.2			
10/9/2018	57.8	21.9	5.9		40.2	19.7	1.9 (J)
4/22/2019	83.6	28.4	12.6		40.8	17.8	10.9
4/23/2019				40.8			
10/14/2019	96.6	32.3	13.1		47.1	26	11.5
10/15/2019				30.5			
4/13/2020	93.7	30.9	22.5		51	29.9	14.3
4/14/2020				54.9			
10/12/2020	65.3	33.4	20.7		57.9	24.4	
10/13/2020				35.3			6.7 (J)
4/19/2021	59.1	28.3	27.2		64.8	23.3	
4/20/2021							9.5 (J)
4/21/2021				42.6			
10/7/2021	58.8	39.6	23.1		60.3	36.5	
10/8/2021				39.1			
4/25/2022				45.3		36	
4/26/2022	58.3	36.5	18		56		12
10/18/2022	49.1	32.8	28.8	37.4	53.9	35.1	
4/3/2023							7.9 (J)
4/4/2023	40.7	25.2	30.7		50.4	24.5	
4/5/2023				29.1			
10/2/2023					55.7	19.3	
10/3/2023	43.9	25.5	41.6	50.2			4.7
4/23/2024		25.1			51	35.4	8.2 (J)
4/24/2024	35.1		35.8	43.5			
10/7/2024	42.7	20.7	19.9				7.8 (J)
10/8/2024				44.2	50.5	15.2	
4/14/2025	37.5	20 (J)	23.5		52.6	13.1	
4/15/2025				49.8			7.4 (J)

Field pH



Time Series Analysis Run 7/11/2025 3:11 PM

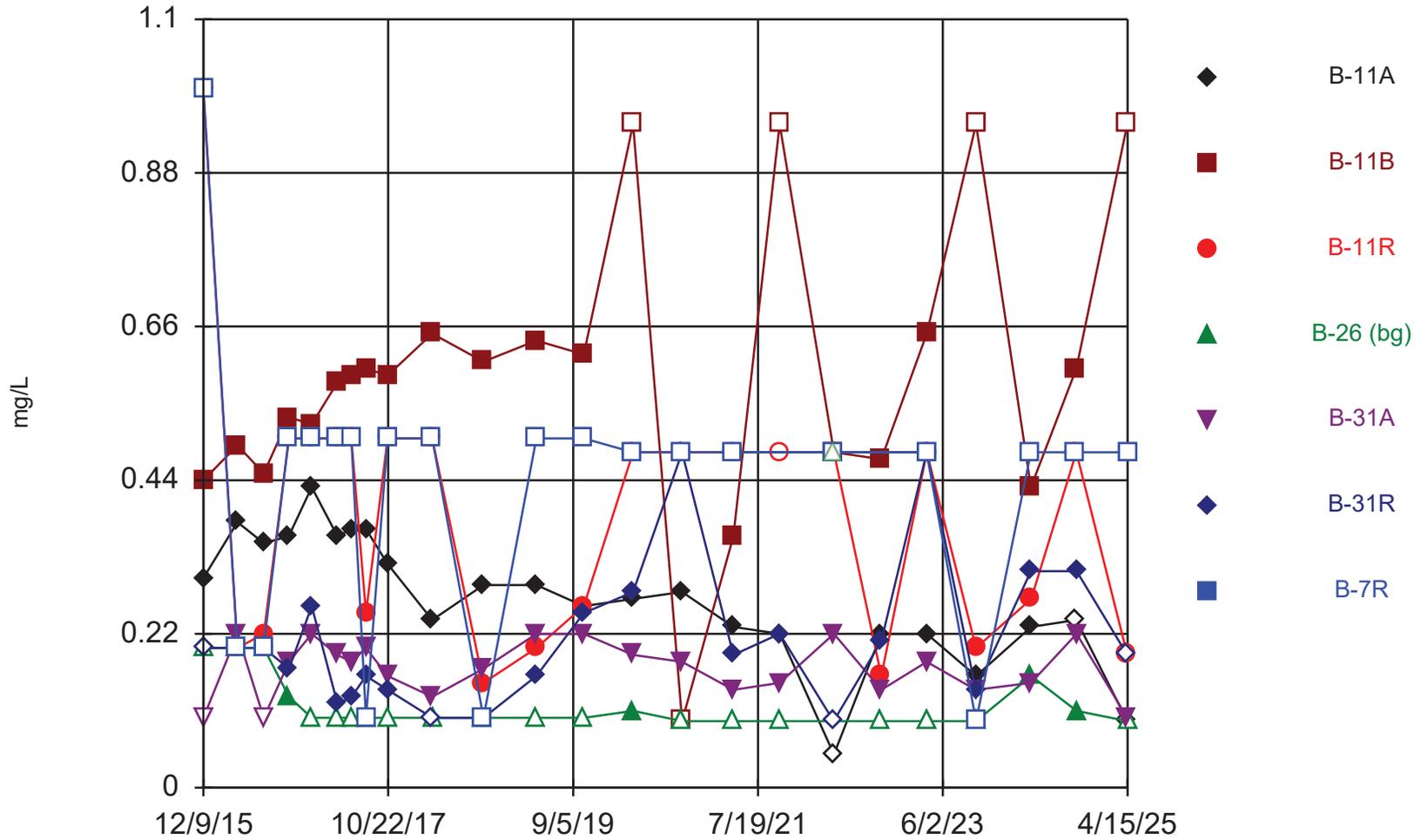
Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

Time Series

Constituent: Field pH (Std. Units) Analysis Run 7/11/2025 3:14 PM
 Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	7.7	8.06	7.07	7.35	7.65	6.79	6.74
4/12/2016				7.43			
4/13/2016	7.75	8.14	6.78		7.63	6.76	6.8
7/18/2016							6.29
7/19/2016	7.42	7.77	6.69	7.14	7.25	6.44	
10/19/2016	7.47						6.55
10/20/2016		7.91	6.77	7.19	7.54	6.53	
1/12/2017	7.89	8.18	6.98	7.57	7.82	6.8	7.43
4/17/2017	7.38	7.83	7.11	7.54	7.83	6.8	6.6
6/7/2017			6.8	7.22			6.65
6/8/2017	7.78	8.07			7.74	6.67	
8/1/2017	7.67	7.77	6.7		7.56	6.56	6.28
8/2/2017				7.21			
10/19/2017	7.96	7.77	7.22	7.5	7.92	7.19	6.88
4/2/2018	8.04	8.42	7.14		8	6.76	6.57
4/3/2018				7.64			
10/8/2018				7.2			
10/9/2018	7.43	7.74	6.55		7.48	6.41	6.23
11/12/2018		8.05				6.59	
4/22/2019	7.62	7.91	6.82		7.61	6.62	6.63
4/23/2019				7.1			
10/14/2019	7.66	7.92	6.83		7.69	6.72	6.62
10/15/2019				7.24			
4/13/2020	7.75	7.89	6.8		7.71	6.79	6.6
4/14/2020				7.27			
10/12/2020	7.74	7.8	6.83		7.78	6.89	
10/13/2020				7.34			6.35
4/19/2021	7.65	8.07	7.11		7.9	6.91	
4/20/2021							6.54
4/21/2021				7.27			
10/7/2021	7.57	7.81	6.86		7.44	6.63	
10/8/2021				7.18			
4/25/2022				7.19		6.77	
4/26/2022	7.53	7.63	7.01		7.82		6.43
10/18/2022	7.61	7.74	6.76	7.15	7.63	6.83	
4/3/2023							6.18
4/4/2023	7.62	7.68	6.81		7.59	6.62	
4/5/2023				7.05			
10/2/2023					7.67	6.82	
10/3/2023	7.66	7.84	6.8	7.47			6.3
4/23/2024		7.36			7.74	6.73	6.33
4/24/2024	7.82		6.89	7.23			
10/7/2024	7.67	7.57	6.74				6.4
10/8/2024				7.19	7.73	6.6	
4/14/2025	7.85	7.68	6.95		7.85	6.66	
4/15/2025				7.3			6.51

Fluoride



Time Series Analysis Run 7/11/2025 3:11 PM

Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

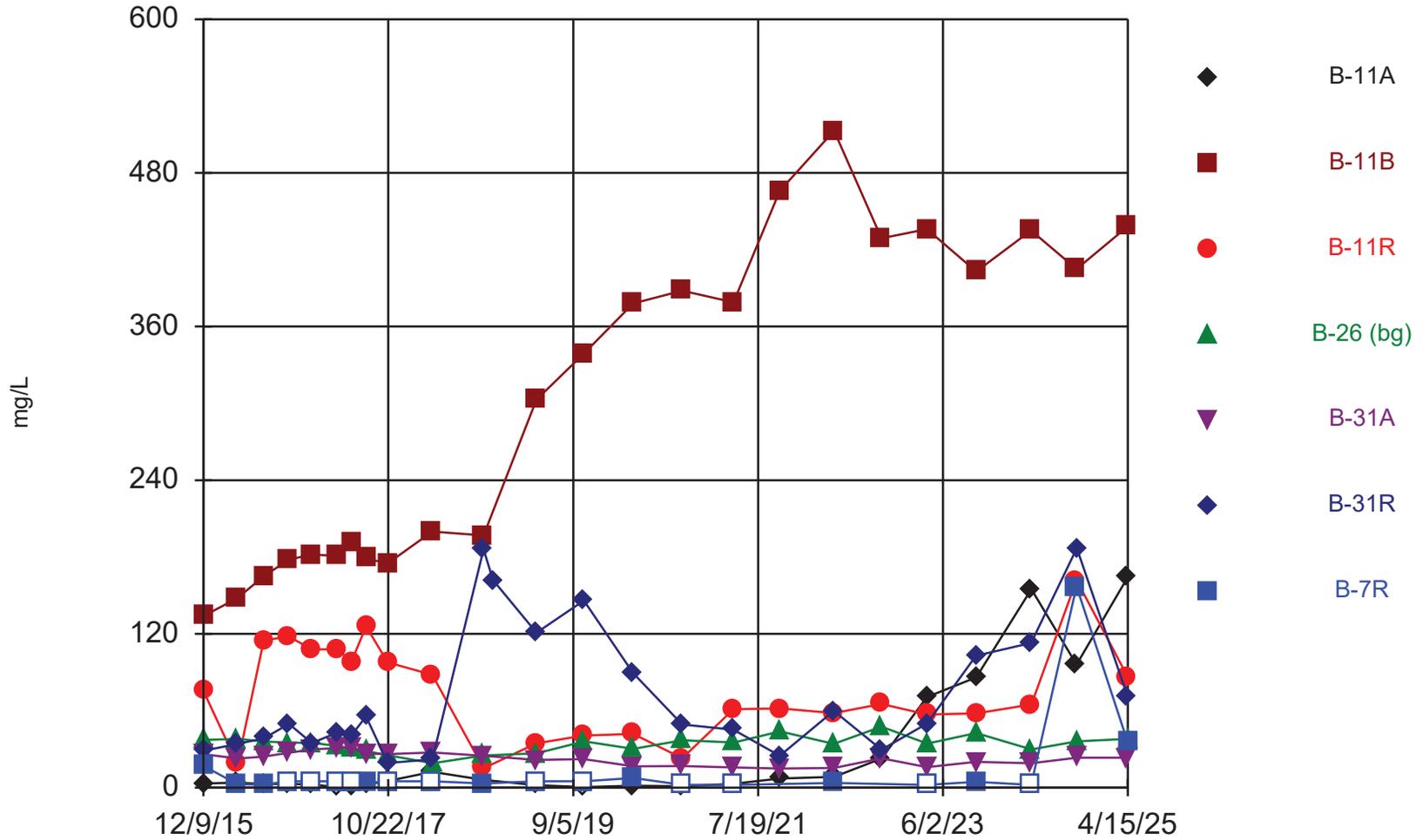
Time Series

Constituent: Fluoride (mg/L) Analysis Run 7/11/2025 3:14 PM

Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	0.3 (J)	0.44	<1 (U)	<0.2 (U)	<0.2 (U)	<0.2 (U)	<1 (U)
4/12/2016				<0.2 (U)			
4/13/2016	0.38 (J)	0.49	<0.2 (U)		0.22 (J)	<0.2 (U)	<0.2 (U)
7/18/2016							<0.2 (U)
7/19/2016	0.35 (J)	0.45	0.22 (J)	<0.2 (U)	<0.2 (U)	<0.2 (U)	
10/19/2016	0.36						<0.5 (U)
10/20/2016		0.53	<0.5 (U)	0.13 (J)	0.18 (J)	0.17 (J)	
1/12/2017	0.43	0.52	<0.5 (U)	<0.1 (U)	0.22 (J)	0.26 (J)	<0.5 (U)
4/17/2017	0.36	0.58	<0.5 (U)	<0.1 (U)	0.19 (J)	0.12 (J)	<0.5 (U)
6/7/2017			<0.5 (U)	<0.1 (U)			<0.5 (U)
6/8/2017	0.37	0.59			0.18 (J)	0.13 (J)	
8/1/2017	0.37	0.6	0.25 (J)		0.2 (J)	0.16 (J)	<0.1 (U)
8/2/2017				<0.1 (U)			
10/19/2017	0.32	0.59	<0.5 (U)	<0.1 (U)	0.16 (J)	0.14 (J)	<0.5 (U)
4/2/2018	0.24 (J)	0.65	<0.5 (U)		0.13 (J)	<0.1 (U)	<0.5 (U)
4/3/2018				<0.1 (U)			
10/8/2018				<0.1 (U)			
10/9/2018	0.29 (J)	0.61	0.15 (J)		0.17 (J)	<0.1 (U)	<0.1 (U)
4/22/2019	0.29 (J)	0.64	0.2 (J)		0.22 (J)	0.16 (J)	<0.5 (U)
4/23/2019				<0.1 (U)			
10/14/2019	0.26 (J)	0.62	0.26 (J)		0.22 (J)	0.25 (J)	<0.5 (U)
10/15/2019				<0.1 (U)			
4/13/2020	0.27 (J)	<0.95 (U)	<0.48 (U)		0.19 (J)	0.28 (J)	<0.48 (U)
4/14/2020				0.11 (J)			
10/12/2020	0.28 (J)	<0.095 (U)	<0.48 (U)		0.18 (J)	<0.48 (U)	
10/13/2020				<0.095 (U)			<0.48 (U)
4/19/2021	0.23 (J)	0.36	<0.48		0.14 (J)	0.19 (J)	
4/20/2021							<0.48
4/21/2021				<0.095 (U)			
10/7/2021	0.22 (J)	<0.95 (U)	<0.48 (U)		0.15 (J)	0.22 (J)	
10/8/2021				<0.095 (U)			
4/25/2022				<0.48 (UX)		<0.095 (U)	
4/26/2022	<0.095 (U)	<0.48 (U)	<0.48 (U)		0.22 (J)		<0.48 (U)
10/18/2022	0.22 (J)	0.47	0.16 (J)	<0.095 (U)	0.14 (J)	0.21 (J)	
4/3/2023							<0.48 (U)
4/4/2023	0.22 (J)	0.65 (J)	<0.48 (U)		0.18 (J)	<0.48 (U)	
4/5/2023				<0.095 (U)			
10/2/2023					0.14 (J)	0.14 (J)	
10/3/2023	0.16 (J)	<0.95 (U)	0.2 (J)	<0.095 (U)			<0.095 (U)
4/23/2024		0.43			0.15 (J)	0.31 (J)	<0.48
4/24/2024	0.23 (J)		0.27 (J)	0.16 (J)			
10/7/2024	<0.48	0.6 (J)	<0.48				<0.48
10/8/2024				0.11 (J)	0.22 (J)	0.31 (J)	
4/14/2025	<0.19	<0.95	<0.19		0.1 (J)	<0.19	
4/15/2025				<0.095			<0.48

Sulfate



Time Series Analysis Run 7/11/2025 3:11 PM

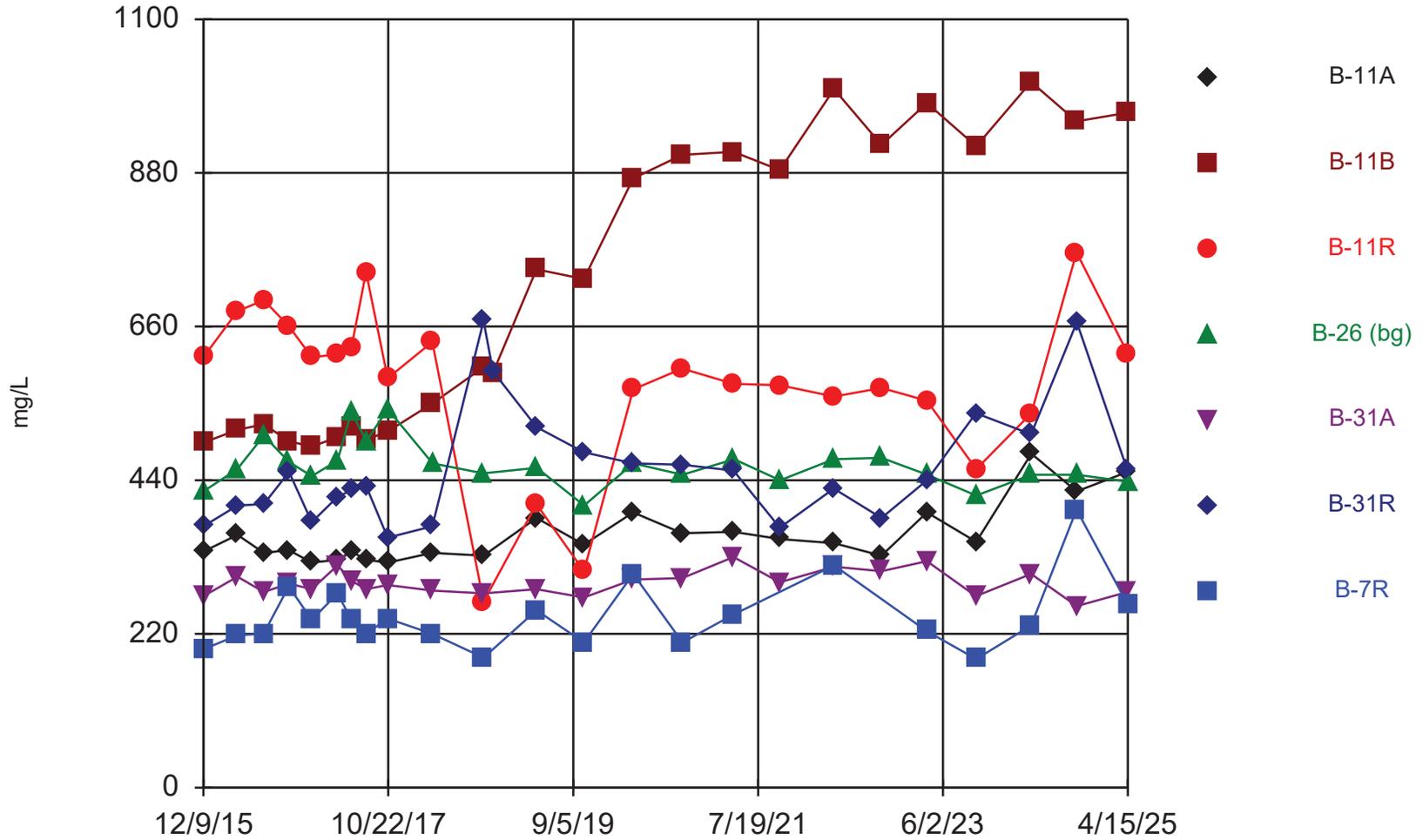
Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

Time Series

Constituent: Sulfate (mg/L) Analysis Run 7/11/2025 3:14 PM
 Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	3.2 (J)	134	75.4	37.1	26.2	28.8	17 (J)
4/12/2016				38			
4/13/2016	3.8 (J)	148	18.4		22.6	34.1	2.5 (J)
7/18/2016							2.4 (J)
7/19/2016	2.7 (J)	165	115	36.2	24.2	38.5	
10/19/2016	3 (J)						<5 (U)
10/20/2016		178	118	35	27.2	49.7	
1/12/2017	2.3 (J)	182	108	35	29.8	34.9	<5 (U)
4/17/2017	<1 (U)	181	108	32.4	31	43	<5 (U)
6/7/2017			98.2	31			<5 (U)
6/8/2017	1.4 (J)	191			31.2	41.1	
8/1/2017	2.4 (J)	179	126		26.6	55.6	3.7
8/2/2017				28.5			
10/19/2017	5.1	175	97.7	25.3	26.1	19.2	<5 (U)
4/2/2018	12.3	200	88.1		27.4	22	<5 (U)
4/3/2018				19.1			
10/8/2018				25.1			
10/9/2018	6	197	15.1		24.8	186	3.2
11/12/2018						162	
4/22/2019	1.9 (J)	303	34.6		21.6	121	<5 (U)
4/23/2019				26.7			
10/14/2019	<1 (U)	339	40.7		22.3	146	<5 (U)
10/15/2019				36			
4/13/2020	1.4 (J)	378	41.9		16.6	89.4	7.5 (J)
4/14/2020				30.2			
10/12/2020	1 (J)	388	22.8		16.8	49.4	
10/13/2020				37			<2.2 (U)
4/19/2021	2.9	379	61.2		15.8	45.3	
4/20/2021							<2.2
4/21/2021				35.3			
10/7/2021	7	466	61.8		14.9	24.9	
10/8/2021				43.8			
4/25/2022				34.2		60	
4/26/2022	8.5	513	58.1		15.4		3.7 (J)
10/18/2022	22.7	429	65.3	47.6	23	29.6	
4/3/2023							<2.2 (U)
4/4/2023	70.8	436	57		15.9	50	
4/5/2023				34.3			
10/2/2023					20	103	
10/3/2023	86	403	58	42.5			4.5
4/23/2024		435			19	113	<2.2
4/24/2024	155		64.8	29.8			
10/7/2024	96.1	405	162				157
10/8/2024				36	23.4	187	
4/14/2025	164	438	86.8		23.3	71.4	
4/15/2025				38.1			35.3

Total Dissolved Solids



Time Series Analysis Run 7/11/2025 3:11 PM

Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

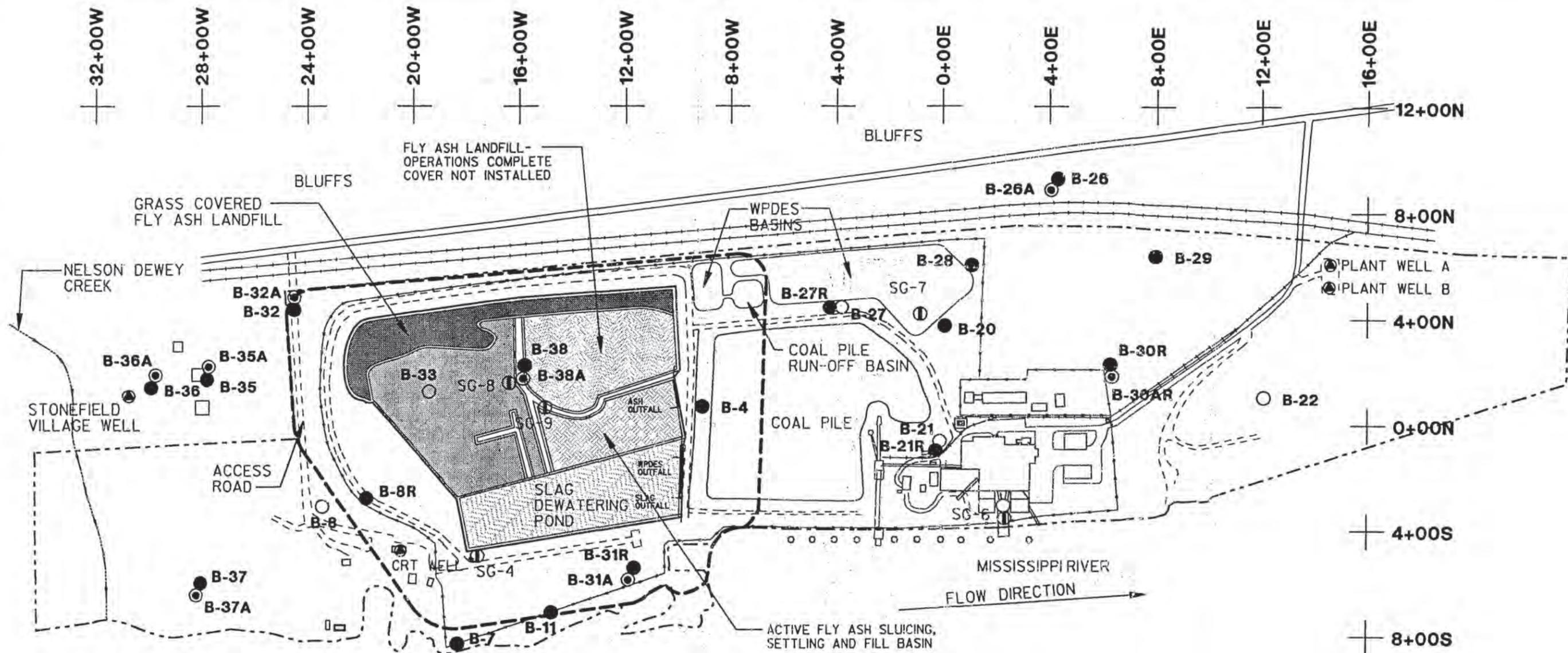
Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 7/11/2025 3:14 PM
 Nelson Dewey Generating Station Client: SCS Engineers Data: NelsonDewey

	B-11A	B-11B	B-11R	B-26 (bg)	B-31A	B-31R	B-7R
12/9/2015	338	494	616	424	274	374	198
4/12/2016				456			
4/13/2016	362	512	682		302	404	218
7/18/2016							220
7/19/2016	336	520	698	504	280	406	
10/19/2016	340						288
10/20/2016		496	660	466	292	452	
1/12/2017	322	488	616	446	284	380	240
4/17/2017	326	502	620	468	318	416	278
6/7/2017			630	538			240
6/8/2017	338	516			296	426	
8/1/2017	326	498	738		284	432	220
8/2/2017				496			
10/19/2017	322	510	586	542	290	358	242
4/2/2018	336	550	638		282	374	220
4/3/2018				464			
10/8/2018				450			
10/9/2018	332	602	266		278	668	186
11/12/2018		594				596	
4/22/2019	386	742	406		284	516	254
4/23/2019				458			
10/14/2019	348	728	310		272	480	208
10/15/2019				404			
4/13/2020	394	872	570		298	464	306
4/14/2020				464			
10/12/2020	364	906	600		300	462	
10/13/2020				448			208
4/19/2021	366	910	578		330	454	
4/20/2021							248
4/21/2021				470			
10/7/2021	356	884	576		294	372	
10/8/2021				440			
4/25/2022				470		428	
4/26/2022	350	1000	560		316		318
10/18/2022	332	920	572	472	310	386	
4/3/2023							224
4/4/2023	394	980	554		324	440	
4/5/2023				448			
10/2/2023					274	536	
10/3/2023	352	918	456	418			184
4/23/2024		1010			306	506	232
4/24/2024	478		536	448			
10/7/2024	424	954	766				398
10/8/2024				448	260	666	
4/14/2025	452	966	622		280	454	
4/15/2025				438			262

Appendix B

1994 RMT Environmental Contamination Assessment Information

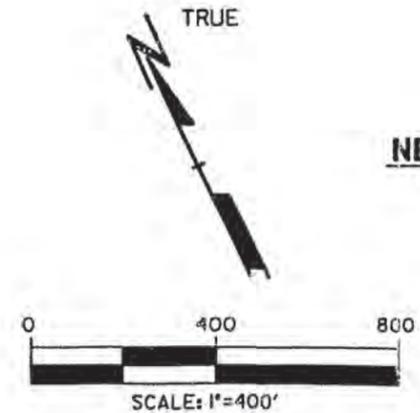


LEGEND

● B-28	WATER TABLE OBSERVATION WELL
⊙ B-28A	PIEZOMETER
○ B-33	ABANDONED WELL
⊙ CRT WELL	WATER SUPPLY WELL
Ⓢ SG-4	STAFF GAUGE
---	APPROXIMATE LIMITS OF LICENSED LANDFILL
---	RAILROAD TRACK
---	ROAD
---	PROPERTY LINE
---	DESIGN MANAGEMENT ZONE
+	LOCAL GRID
□	BUILDINGS
○	PILINGS

- NOTES**
1. BASE MAP WELLHEAD LOCATIONS SURVEYED BY SCHMITT ENGINEERING IN OCTOBER 1993.
 2. OTHER SITE INFORMATION PROVIDED BY WP&L.

**WISCONSIN POWER & LIGHT
NELSON DEWEY GENERATING STATION
EXISTING CONDITIONS
OCTOBER 1993**



	Drawn By	CCH
	Approved By	ELM
	Date	OCTOBER 1994
	Proj. #	2767.03
	File #	276703OLDGN

TABLE 5

SUMMARY OF LEACHING TEST RESULTS

Year	Fly Ash		Slag
	1983	1990 to 1992	1987 to 1992
Coal Type	Eastern (and Western)	Western (and Eastern)	Western (and Eastern) ¹
Water:Solid Ratio	2:1	4:1	4:1
Extraction Time	24 hours	48 hours	48 hours
Number of Samples	1	3	6
Arsenic (mg/L)	< 0.001	0.05 to 2.02	< 0.002 to 0.081
Selenium (mg/L)	NA	0.42 to 160	< 0.002 to 0.045
Boron (mg/L)	420	4.63 to 37.34	< 0.010 to 1.05
Iron (mg/L)	NA	NA	< 0.02 to 0.98
Sulfate (mg/L)	13,070	2,000 to 16,700	2.0 to < 5.0
pH (SU)	6.6	10.3 to 12.5	5.6 to 9.9

NOTES:

1. 1983 fly ash leaching data from RMT (1984); remaining leaching data provided by WP&L.
2. NA = Not Analyzed.

PROJECT NUMBER: 1831.28
 BEGINNING DATE: 01-JUN-93
 ENDING DATE: 07-SEP-93

TABLE 6
 SLAG AND ASH BASIN CHEMISTRY

PARAMETER	UNITS	FLY ASH BASIN	SLAG BASIN
		07-SEP-93 3302-011	07-SEP-93 3302-010
COLOR, FIELD		CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	5190	400
ODOR, FIELD		NONE	NONE
PH, FIELD	SU	8.1	7.4
TEMPERATURE	DEG C	17	18
TURBIDITY, FIELD		SLIGHT	SLIGHT
ALKALINITY AS CaCO ₃	MG/L	230	160
HARDNESS AS CaCO ₃	MG/L	930	200
SOLIDS, TOTAL DISSOLVED	MG/L	410	300
SULFATE	MG/L	3300	50
ARSENIC, TOTAL	UG/L	60	8.0
BARIUM, TOTAL	UG/L	270	150
BORON, TOTAL	UG/L	2300	210
CADMIUM, TOTAL	UG/L	5.4	< 0.30
CHROMIUM, TOTAL	UG/L	11	< 10
IRON, TOTAL	UG/L	1600	2000
LEAD, TOTAL	UG/L	< 3.0	< 3.0
MERCURY, TOTAL	UG/L	< 0.20	< 0.20
SELENIUM, TOTAL	UG/L	36	2.1
SILVER, TOTAL	UG/L	< 1.0	< 1.0

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TABLE 8
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PARAMETER	UNITS	B-04	B-04	B-07 ND	B-07 ND	B-08	B-08R
		01-JUN-93 1670-015	07-SEP-93 3293-010	01-JUN-93 1670-020	07-SEP-93 3302-004	01-JUN-93 1670-001	07-SEP-93 3293-009
COLOR, FIELD		CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	1160	1240	460	550	670	1160
DEPTH TO WATER	FEET	9.90	12.75	12.83	16.12	5.68	20.13
ODOR, FIELD		NONE	NONE	NONE	NONE	NONE	NONE
PH, FIELD	SU	7.3	7.5	7.0	6.9	7.1	6.8
TEMPERATURE	DEG C	15	10	14	12	15	7
TURBIDITY, FIELD		NONE	SLIGHT	NONE	SLIGHT	NONE	MODERATE
WATER ELEVATION	FEET	610.68	607.83	610.97	607.68	610.51	
ALKALINITY AS CaCO3	MG/L	72	92	160	190	220	440
CHLORIDE	MG/L	18	23	17	15	9.4	2.8
COD	MG/L						
FLUORIDE	MG/L	0.58	5.5	0.26	0.32	< 0.10	0.12
HARDNESS AS CaCO3	MG/L	220	120	210	250	370	620
NITROGEN, NITRATE + NITRITE	MG/L	0.15	0.33	< 0.050	< 0.050	< 0.050	4.2
SOLIDS, TOTAL DISSOLVED	MG/L	900	940	300	360	460	770
SULFATE	MG/L	500	560	74	100	180	180
ARSENIC, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
BARIUM, DISSOLVED	UG/L	68	< 50	61	73	63	50
BORON, DISSOLVED	UG/L	1900	4200	230	< 200	2200	9400
CADMIUM, DISSOLVED	UG/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	0.38
CHROMIUM, DISSOLVED	UG/L	< 10	< 10	< 10	< 10	< 10	< 10
COPPER, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	< 20
IRON, DISSOLVED	UG/L	720	890	2800	4100	< 100	< 100
LEAD, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L	1200	720	970	1500	17	3400
MERCURY, DISSOLVED	UG/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L	6.9	3.2	< 1.0	< 1.0	< 1.0	34
SILVER, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L	1000	100	22	< 20	220	< 20

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PARAMETER	UNITS	B-11	B-11	B-20	B-26	B-26	B-26A
		07-SEP-93 X0001	29-OCT-93 3485-001	07-SEP-93 X0002	01-JUN-93 1670-022	07-SEP-93 3302-005	01-JUN-93 1670-023
COLOR, FIELD					CLEAR	CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	1500		310	610	670	660
DEPTH TO WATER	FEET	15.91		10.81	16.22	18.85	16.20
ODOR, FIELD					NONE	NONE	NONE
PH, FIELD	SU				7.1	7.2	7.0
TEMPERATURE	DEG C	13	13	14	14	11	15
TURBIDITY, FIELD					NONE	SLIGHT	NONE
WATER ELEVATION	FEET				610.18	607.55	610.19
ALKALINITY AS CaCO3	MG/L		470		320	300	340
CHLORIDE	MG/L				21	43	33
COD	MG/L						
FLUORIDE	MG/L				< 0.10	0.15	< 0.10
HARDNESS AS CaCO3	MG/L		810		390	410	400
NITROGEN, NITRATE + NITRITE	MG/L				2.6	4.9	2.0
SOLIDS, TOTAL DISSOLVED	MG/L		520		440	450	450
SULFATE	MG/L		360		34	34	33
ARSENIC, DISSOLVED	UG/L		8.4		< 3.0	< 3.0	< 3.0
BARIUM, DISSOLVED	UG/L		100		62	68	96
BORON, DISSOLVED	UG/L		5100		< 200	< 200	< 200
CADMIUM, DISSOLVED	UG/L		< 0.30		< 0.30	< 0.30	< 0.30
CHROMIUM, DISSOLVED	UG/L		< 10		< 10	< 10	< 10
COPPER, DISSOLVED	UG/L				< 20	< 20	< 20
IRON, DISSOLVED	UG/L		55000		< 100	< 100	< 100
LEAD, DISSOLVED	UG/L		< 3.0		< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L				< 5.0	< 5.0	< 5.0
MERCURY, DISSOLVED	UG/L		< 0.20		< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L		< 1.0	LNP	< 1.0	< 1.0	< 1.0
SILVER, DISSOLVED	UG/L		< 10		< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L				< 20	< 20	< 20

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PARAMETER	UNITS	B-26A 07-SEP-93 3302-006	B-27R 07-SEP-93 X0003	B-28 01-JUN-93 1670-014	B-28 07-SEP-93 3302-003	B-29 07-SEP-93 X0004	B-30AR 01-JUN-93 1670-013
COLOR, FIELD		CLEAR		CLEAR	CLEAR		CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	440	370	190	230	360	220
DEPTH TO WATER	FEET	18.84	14.67	6.40	9.08	9.57	12.33
ODOR, FIELD		NONE		NONE	NONE		NONE
PH, FIELD	SU	7.2		6.1	6.0		7.2
TEMPERATURE	DEG C	11	14	17	15	15	17
TURBIDITY, FIELD		NONE		SLIGHT	MODERATE		NONE
WATER ELEVATION	FEET	607.55		610.46	607.74	607.26	610.11
ALKALINITY AS CaCO3	MG/L	340		26	54		200
CHLORIDE	MG/L	25		4.6	11		13
COD	MG/L						7.3
FLUORIDE	MG/L	0.15		< 0.10	< 0.10		0.10
HARDNESS AS CaCO3	MG/L	410		82	110		220
NITROGEN, NITRATE + NITRITE	MG/L	1.8		2.7	0.60		< 0.050
SOLIDS, TOTAL DISSOLVED	MG/L	440		140	160		280
SULFATE	MG/L	38		45	42		27
ARSENIC, DISSOLVED	UG/L	< 3.0		< 3.0	< 3.0		< 3.0
BARIUM, DISSOLVED	UG/L	86		< 50	52		< 50
BORON, DISSOLVED	UG/L	< 200		< 200	< 200		< 200
CADMIUM, DISSOLVED	UG/L	< 0.30		< 0.30	< 0.30		< 0.30
CHROMIUM, DISSOLVED	UG/L	< 10		< 10	< 10		< 10
COPPER, DISSOLVED	UG/L	< 20		< 20	< 20		< 20
IRON, DISSOLVED	UG/L	< 100		210	< 100		< 100
LEAD, DISSOLVED	UG/L	< 3.0		< 3.0	< 3.0		< 3.0
MANGANESE, DISSOLVED	UG/L	< 5.0		8.6	< 5.0		< 5.0
MERCURY, DISSOLVED	UG/L	< 0.20		< 0.20	< 0.20		< 0.20
SELENIUM, DISSOLVED	UG/L	< 1.0	LN	< 1.0	< 1.0	L	< 1.0
SILVER, DISSOLVED	UG/L	< 1.0		< 1.0	< 1.0		< 1.0
ZINC, DISSOLVED	UG/L	< 20		< 20	< 20		< 20

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PARAMETER	UNITS	B-30AR	B-30R	B-30R	B-31A	B-31A	B-31R
		07-SEP-93 3302-002	01-JUN-93 1670-012	07-SEP-93 3302-001	01-JUN-93 1670-019	07-SEP-93 3293-011	01-JUN-93 1670-018
COLOR, FIELD		CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	410	420	360	700	800	640
DEPTH TO WATER	FEET	15.37	12.25	15.17	12.21	15.93	11.56
ODOR, FIELD		NONE	NONE	NONE	NONE	NONE	NONE
PH, FIELD	SU	7.3	7.0	6.8	6.9	7.3	6.8
TEMPERATURE	DEG C	12	16	14	17	14	17
TURBIDITY, FIELD		NONE	MODERATE	MODERATE	NONE	SLIGHT	SLIGHT
WATER ELEVATION	FEET	607.07	610.10	607.18	610.46	606.74	610.85
ALKALINITY AS CaCO3	MG/L	190	160	140	170	160	240
CHLORIDE	MG/L	14	13	6.6	16	17	11
COD	MG/L		9.7				
FLUORIDE	MG/L	0.16	< 0.10	< 0.10	0.39	0.43	< 0.10
HARDNESS AS CaCO3	MG/L	230	210	210	120	160	330
NITROGEN, NITRATE + NITRITE	MG/L	< 0.050	8.5	8.8	< 0.050	< 0.050	< 0.050
SOLIDS, TOTAL DISSOLVED	MG/L	280	280	230	510	570	510
SULFATE	MG/L	25	25	26	250	250	150
ARSENIC, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
BARIUM, DISSOLVED	UG/L	< 50	< 50	< 50	54	66	110
BORON, DISSOLVED	UG/L	< 200	< 200	< 200	2900	2100	2900
CADMIUM, DISSOLVED	UG/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	2.7
CHROMIUM, DISSOLVED	UG/L	< 10	< 10	< 10	< 10	< 10	< 10
COPPER, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	110
IRON, DISSOLVED	UG/L	< 100	< 100	< 100	210	300	450
LEAD, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L	< 5.0	< 5.0	< 5.0	4600	6000	440
MERCURY, DISSOLVED	UG/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L	< 1.0	1.3	3.2	< 1.0	< 1.0	1.2
SILVER, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	27

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TABLE 8
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PARAMETER	UNITS	B-31R	B-32	B-32	B-32A	B-32A	B-35
		07-SEP-93 3293-012	01-JUN-93 1670-002	07-SEP-93 3293-016	01-JUN-93 1670-003	07-SEP-93 3293-017	01-JUN-93 1670-004
COLOR, FIELD		CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	L YLW/BM
CONDUCTANCE, SPECIFIC	UMHOS/CM	480	300	330	610	1320	1070
DEPTH TO WATER	FEET	14.44	3.37	6.22	3.59	6.46	10.10
ODOR, FIELD		NONE	NONE	NONE	NONE	NONE	NONE
PH, FIELD	SU	7.0	6.3	5.6	7.0	6.8	6.3
TEMPERATURE	DEG C	15	13	14	13	14	12
TURBIDITY, FIELD		MODERATE	SLIGHT	MODERATE	NONE	SLIGHT	SLIGHT
WATER ELEVATION	FEET	607.97	610.80	607.95	610.81	607.94	610.66
ALKALINITY AS CaCO3	MG/L	190	140	140	330	320	190
CHLORIDE	MG/L	11	6.7	6.9	7.0	7.6	110
COD	MG/L						
FLUORIDE	MG/L	0.18	< 0.10	0.12	0.12	0.19	< 0.10
HARDNESS AS CaCO3	MG/L	240	160	180	350	390	260
NITROGEN, NITRATE + NITRITE	MG/L	< 0.050	0.68	1.2	1.1	1.3	36
SOLIDS, TOTAL DISSOLVED	MG/L	340	200	240	380	420	800
SULFATE	MG/L	71	11	16	29	30	35
ARSENIC, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	7.4
BARIUM, DISSOLVED	UG/L	81	100	120	98	91	100
BORON, DISSOLVED	UG/L	1100	< 200	< 200	< 200	< 200	210
CADMIUM, DISSOLVED	UG/L	1.1	< 0.30	0.38	< 0.30	0.35	< 0.30
CHROMIUM, DISSOLVED	UG/L	< 10	< 10	< 10	< 10	< 10	< 10
COPPER, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	21
IRON, DISSOLVED	UG/L	210	< 100	< 100	< 100	< 100	< 100
LEAD, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L	360	< 5.0	280	6.9	33	< 5.0
MERCURY, DISSOLVED	UG/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
SILVER, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	< 20

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PARAMETER	UNITS	B-35	B-35A	B-35A	B-36	B-36	B-36A
		07-SEP-93 3293-002	01-JUN-93 1670-005	07-SEP-93 3293-003	01-JUN-93 1670-007	07-SEP-93 3293-004	01-JUN-93 1670-006
COLOR, FIELD		YELLOW	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	1050	620	680	430	500	620
DEPTH TO WATER	FEET	13.13	10.55	13.57	10.86	13.97	11.11
ODOR, FIELD		NONE	NONE	NONE	NONE	NONE	NONE
PH, FIELD	SU	6.8	7.0	7.1	6.3	7.0	7.1
TEMPERATURE	DEG C	14	13	12	12	13	13
TURBIDITY, FIELD		SLIGHT	NONE	NONE	SLIGHT	MODERATE	NONE
WATER ELEVATION	FEET	607.63	610.63	607.61	610.60	607.49	610.35
ALKALINITY AS CaCO3	MG/L	210	330	320	230	210	330
CHLORIDE	MG/L	80	26	24	4.4	25	12
COO	MG/L						
FLUORIDE	MG/L	0.19	< 0.10	0.13	< 0.10	0.14	< 0.10
HARDNESS AS CaCO3	MG/L	290	380	400	240	280	350
NITROGEN, NITRATE + NITRITE	MG/L	39	1.7	2.0	< 0.050	1.4	0.83
SOLIDS, TOTAL DISSOLVED	MG/L	770	480	460	280	350	400
SULFATE	MG/L	43	33	37	15	18	36
ARSENIC, DISSOLVED	UG/L	3.6	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
BARIUM, DISSOLVED	UG/L	120	< 50	54	110	120	68
BORON, DISSOLVED	UG/L	220	< 200	< 200	< 200	< 200	< 200
CADMIUM, DISSOLVED	UG/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
CHROMIUM, DISSOLVED	UG/L	< 10	< 10	< 10	< 10	< 10	< 10
COPPER, DISSOLVED	UG/L	24	< 20	< 20	< 20	< 20	< 20
IRON, DISSOLVED	UG/L	< 100	< 100	< 100	< 100	< 100	< 100
LEAD, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L	< 5.0	< 5.0	< 5.0	< 5.0	55	< 5.0
MERCURY, DISSOLVED	UG/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	1.0	2.6	< 1.0
SILVER, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	< 20

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TABLE 8
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PARAMETER	UNITS	B-36A	B-37	B-37A	B-38	B-38	B-38A
		07-SEP-93 3293-005	07-SEP-93 3302-007	07-SEP-93 3302-008	01-JUN-93 1670-016	07-SEP-93 3293-006	01-JUN-93 1670-017
COLOR, FIELD		CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	620	510	770	3630	2830	2760
DEPTH TO WATER	FEET	14.18	8.13	8.14	18.53	20.19	24.87
ODOR, FIELD		NONE	NONE	NONE	NONE	NONE	NONE
PH, FIELD	SU	7.1	7.3	7.3	8.3	9.9	7.7
TEMPERATURE	DEG C	11	13	11	20	20	15
TURBIDITY, FIELD		NONE	SLIGHT	NONE	NONE	SLIGHT	NONE
WATER ELEVATION	FEET	607.51	606.69	606.69	617.29	615.63	610.96
ALKALINITY AS CaCO3	MG/L	330	200	190	100	420	80
CHLORIDE	MG/L	13	6.8	11	26	24	23
COD	MG/L						
FLUORIDE	MG/L	0.14	< 0.10	< 0.10	1.8	2.6	1.1
HARDNESS AS CaCO3	MG/L	390	290	410	620	21	500
NITROGEN, NITRATE + NITRITE	MG/L	0.85	1.2	< 0.050	1.7	0.29	1.6
SOLIDS, TOTAL DISSOLVED	MG/L	420	380	590	3000	2200	2300
SULFATE	MG/L	36	100	240	2600	1200	2000
ARSENIC, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	180	90	38
BARIUM, DISSOLVED	UG/L	68	< 50	< 50	110	< 50	58
BORON, DISSOLVED	UG/L	< 200	3100	7400	2500	2600	2200
CADMIUM, DISSOLVED	UG/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
CHROMIUM, DISSOLVED	UG/L	< 10	< 10	< 10	68	< 10	52
COPPER, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	< 20
IRON, DISSOLVED	UG/L	< 100	< 100	< 100	< 100	< 100	< 100
LEAD, DISSOLVED	UG/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MANGANESE, DISSOLVED	UG/L	< 5.0	< 5.0	55	< 5.0	< 5.0	< 5.0
MERCURY, DISSOLVED	UG/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SELENIUM, DISSOLVED	UG/L	< 1.0	L	< 1.0	L	57	320
SILVER, DISSOLVED	UG/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ZINC, DISSOLVED	UG/L	< 20	< 20	< 20	< 20	< 20	< 20

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TABLE 8
 GROUNDWATER CHEMISTRY

PARAMETER	UNITS	B-38A 07-SEP-93 3293-007
COLOR, FIELD		CLEAR
CONDUCTANCE, SPECIFIC	UMHOS/CM	3280
DEPTH TO WATER	FEET	27.59
ODOR, FIELD		NONE
PH, FIELD	SU	9.0
TEMPERATURE	DEG C	16
TURBIDITY, FIELD		NONE
WATER ELEVATION	FEET	608.24
ALKALINITY AS CaCO ₃	MG/L	90
CHLORIDE	MG/L	21
COD	MG/L	
FLUORIDE	MG/L	3.4
HARDNESS AS CaCO ₃	MG/L	390
NITROGEN, NITRATE + NITRITE	MG/L	0.59
SOLIDS, TOTAL DISSOLVED	MG/L	2600
SULFATE	MG/L	1800
ARSENIC, DISSOLVED	UG/L	51
BARIUM, DISSOLVED	UG/L	54
BORON, DISSOLVED	UG/L	3300
CADMIUM, DISSOLVED	UG/L	< 0.30
CHROMIUM, DISSOLVED	UG/L	11
COPPER, DISSOLVED	UG/L	< 20
IRON, DISSOLVED	UG/L	< 100
LEAD, DISSOLVED	UG/L	< 3.0
MANGANESE, DISSOLVED	UG/L	< 5.0
MERCURY, DISSOLVED	UG/L	< 0.20
SELENIUM, DISSOLVED	UG/L	57
SILVER, DISSOLVED	UG/L	< 1.0
ZINC, DISSOLVED	UG/L	< 20

Appendix C

2016 Low-Hazard Waste Exemption Leaching Test Results – Slag and Ash

Sediment and Soil Analytical Results - Water Leach Test Results
WPL Nelson Dewey

Sample	Date	Depth (feet)	Material Type	Lab Notes	Boron (ug/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	TDS (mg/L)
WPDES POND									
SED-1	8/3/2016	0-1.3	Fly Ash	--	240	4.3	<1.0	4.4	54
SED-2	8/3/2016	0-1.0	Fly Ash	--	200	4.3	<1.0	11.5	60
QC-3 (SED-2)	8/3/2016	0-1	Fly Ash	--	240	3.5 J	<1.0	6.1	52
SED-3	7/20/2016	0-4.5	Slag	--	130	2.7 J	<1.0	5	28
	7/20/2016	4.5-5.5	SP	--	<50	2.5 J	<0.20	<2.0	14 J
SED-4	7/19/2016	0-4.8	ML	--	510	10.5 J	<10.0	11.9 J	86
	7/19/2016	4.8-5.5		--	74 J	NA	NA	NA	NA
GP-19	8/4/2016	8-12	SM	--	62 J	2.4 J	<1.0	2 J	16 J
SLAG POND									
SED-5	7/20/2016	0-1.6	ML-OL	--	54 J	3.2 J	<1.0	33.3	90
SED-6	7/20/2016	0-1.0	ML	--	60 J	3.7 J	0.36 J	59.1	130
SED-7	8/4/2016	0-3.0	Fly Ash	--	88 J	4	<1.0	10.5	76
SED-8	8/4/2016	1.0-1.5	Fly Ash	--	82 J	3.7 J	<1.0	12.1	74
COAL YARD									
TP-CY-1	7/19/2016	0-0.5	Coal	--	140	<20.0	<2.0	<20.0	32
	7/19/2016	3.0-3.5	SM	--	100 J	2.8 J	<1.0	<2.0	20
TP-CY-3	7/20/2016	1.9-2.1	GM	--	<50	3.9 J	<0.20	2.8 J	50
	7/20/2016	4.8-5.5	SM	--	NA	NA	NA	NA	NA
TP-CY-4	7/19/2016	0-2.8	Coal	--	190	<20.0	<2.0	<20.0	38
	7/19/2016	2.8-3.2	GP & SM	--	<50	<10.0	<1.0	<10.0	34
	7/19/2016	3.6-4.8	Slag	--	<50	<20.0	<2.0	<20.0	10 J
	7/19/2016	4.8-5.0		--	NA	NA	NA	NA	NA
TP-CY-6	7/19/2016	0-0.5	Coal	--	190	<20.0	<2.0	<20.0	54
	7/19/2016	0.7-1.0	SP	--	<50	2.5 J	<0.20	2.3 J	30
TP-CY-10	7/19/2016	0-0.5	Coal	--	120	2.4 J	<1.0	11.6	48
	7/19/2016	1.0-2.0	SM	--	<50	2.2 J	<1.0	2.3 J	28
TP-CY-12	7/20/2016	0-0.3	Coal	--	160	<20.0	<2.0	<20.0	44
	7/20/2016	0.3-2.0	SP	--	<50	2.2 J	<0.20	2.2 J	24
	7/20/2016	2.0-2.7	SP	--	<50	2.3 J	<0.20	27.5	50
QC-1 (TP-CY-12)	7/20/2016	0.3-2.0	SP	--	<50	2.6 J	<0.20	2.5 J	24
SLAG HANDLING AREA									
GP-5	8/3/2016	12.5-15	Fly Ash	--	100	<2.0	<1.0	3.0 J	22
	8/3/2016	18-24	ML & SM	--	99 J	3.3 J	<1.0	<2.0	24
GP-7	8/3/2016	7.5-18	Slag	--	<50	2.2 J	<1.0	<2.0	<8.7
QC-2 (GP-7)	8/3/2016	7.5-18	Slag	--	<50	2.2 J	<1.0	<2.0	10 J
GP-14	8/4/2016	12.5-15	Fly Ash	--	120	<2.0	<1.0	13.4	96
SLAG SAMPLES¹									
Slag 01 ²	6/3/2013	--	Slag	--	NA	NA	NA	NA	NA
Slag 01	12/23/2013	--	Slag	--	12.5 AB	0.277 B	NA	0.218	NA
NED Slag Composite 2014	7/1/2014	--	Slag	--	11.7 AB* ^A	< 0.142	NA	0.457 B	98 H
Slag Sample	4/14/2015	--	Slag	--	< 1020 A	0.751	NA	0.427	NA

Sediment and Soil Analytical Results - Water Leach Test Results
WPL Nelson Dewey

Sample	Date	Depth (feet)	Material Type	Lab Notes	Boron (ug/L)	Chloride (mg/L)	Fluoride (mg/L)	Sulfate (mg/L)	TDS (mg/L)
FLY ASH SAMPLES¹									
NED Flyash Composite ²	2/14/2014	--	Fly Ash	--	NA	NA	NA	6,530 B	NA
Week of 062815 ²	7/3/2015	--	Fly Ash	--	NA	NA	NA	6,260	NA
Week of 010916	1/4/2016	--	Fly Ash	--	NA	NA	NA	NA	NA
NR 140 Preventative Action Limits (PALs)					200	125	0.8	125	NE
NR 140 Enforcement Standards (ESs)					1000	250	4	250	NE
40 CFR Part 141.62 Maximum Contaminant Levels (MCL)					NE	NE	4	NE	NE
NR 538 Table 1A Standards					190	125	0.8	125	NE
NR 538 Table 2A Standards					1900	1,250	8	1,250	NE

Abbreviations:

mg/L = micrograms per liter
 ML = Silt
 ML-OL = Silty Organic Clay

NE = No Standard Established
 ML-CL = Silty Clay
 SP = Poorly Graded Sand

NA = Not Analyzed
 SM = Silty Sand
 ML-OL = Silty Organic Clay

GM = Silty Gravel
 GP = Poorly Graded Gravel
 TDS = Total Dissolved Solids

Notes:

- Slag and Fly Ash samples were collected by the plant as part of permit requirements.
 - Sample was analyzed using the SPLP Leach Method rather than the ASTM Water Leach Method for tested parameters except for Sulfate.
- NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.
- NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.

Laboratory Notes/Qualifiers:

- J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
 A = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
 B = Compound was found in the blank and sample.
 F1 = MS and/or MSD Recovery is outside acceptance limits.
 H = Sample was prepped or analyzed beyond the specified holding time.
 ^ = ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
 * = LCS or LCSD is outside acceptance limits.

Created by: RJG Date: 3/14/2016
 Last revision by: RJG Date: 10/24/2016
 Checked by: BSS Date: 10/24/2016

Original table prepared for Slag Pond Closure Low Hazard Waste Exemption Request (SCS Project #25216054.00).
 Reformatted for the Alternative Source Demonstration to include only the parameters with SSIs that were included in the leach testing by NDK, 9/14/2020; SCC 10/1/2021.

I:\25221071.00\Deliverables\2021 April ASD NED\Appendix C 2016 leachate results slag and ash\Table 4. Sediment_Soil_Water Leach Results-Updated.xlsx\Leach Test - SSI Parameters

Sediment and Soil Analytical Results - Water Leach Test Results
WPL Nelson Dewey

Sample	Date	Depth (feet)	Material Type	Lab Notes	Boron (ug/L)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)
WPDES POND								
SED-1	8/3/2016	0-1.3	Fly Ash	--	240	4.3	4.4	54
SED-2	8/3/2016	0-1.0	Fly Ash	--	200	4.3	11.5	60
QC-3 (SED-2)	8/3/2016	0-1	Fly Ash	--	240	3.5 J	6.1	52
SED-3	7/20/2016	0-4.5	Slag	--	130	2.7 J	5	28
	7/20/2016	4.5-5.5	SP	--	<50	2.5 J	<2.0	14 J
SED-4	7/19/2016	0-4.8	ML	--	510	10.5 J	11.9 J	86
	7/19/2016	4.8-5.5		--	74 J	NA	NA	NA
GP-19	8/4/2016	8-12	SM	--	62 J	2.4 J	2 J	16 J
SLAG POND								
SED-5	7/20/2016	0-1.6	ML-OL	--	54 J	3.2 J	33.3	90
SED-6	7/20/2016	0-1.0	ML	--	60 J	3.7 J	59.1	130
SED-7	8/4/2016	0-3.0	Fly Ash	--	88 J	4	10.5	76
SED-8	8/4/2016	1.0-1.5	Fly Ash	--	82 J	3.7 J	12.1	74
COAL YARD								
TP-CY-1	7/19/2016	0-0.5	Coal	--	140	<20.0	<20.0	32
	7/19/2016	3.0-3.5	SM	--	100 J	2.8 J	<2.0	20
TP-CY-3	7/20/2016	1.9-2.1	GM	--	<50	3.9 J	2.8 J	50
	7/20/2016	4.8-5.5	SM	--	NA	NA	NA	NA
TP-CY-4	7/19/2016	0-2.8	Coal	--	190	<20.0	<20.0	38
	7/19/2016	2.8-3.2	GP & SM	--	<50	<10.0	<10.0	34
	7/19/2016	3.6-4.8	Slag	--	<50	<20.0	<20.0	10 J
	7/19/2016	4.8-5.0		--	NA	NA	NA	NA
TP-CY-6	7/19/2016	0-0.5	Coal	--	190	<20.0	<20.0	54
	7/19/2016	0.7-1.0	SP	--	<50	2.5 J	2.3 J	30
TP-CY-10	7/19/2016	0-0.5	Coal	--	120	2.4 J	11.6	48
	7/19/2016	1.0-2.0	SM	--	<50	2.2 J	2.3 J	28
TP-CY-12	7/20/2016	0-0.3	Coal	--	160	<20.0	<20.0	44
	7/20/2016	0.3-2.0	SP	--	<50	2.2 J	2.2 J	24
	7/20/2016	2.0-2.7	SP	--	<50	2.3 J	27.5	50
QC-1 (TP-CY-12)	7/20/2016	0.3-2.0	SP	--	<50	2.6 J	2.5 J	24
SLAG HANDLING AREA								
GP-5	8/3/2016	12.5-15	Fly Ash	--	100	<2.0	3.0 J	22
	8/3/2016	18-24	ML & SM	--	99 J	3.3 J	<2.0	24
GP-7	8/3/2016	7.5-18	Slag	--	<50	2.2 J	<2.0	<8.7
QC-2 (GP-7)	8/3/2016	7.5-18	Slag	--	<50	2.2 J	<2.0	10 J
GP-14	8/4/2016	12.5-15	Fly Ash	--	120	<2.0	13.4	96
SLAG SAMPLES¹								
Slag O1 ²	6/3/2013	--	Slag	--	NA	NA	NA	NA
Slag O1	12/23/2013	--	Slag	--	12.5 AB	0.277 B	0.218	NA
NED Slag Composite 2014	7/1/2014	--	Slag	--	11.7 AB*^	< 0.142	0.457 B	98 H
Slag Sample	4/14/2015	--	Slag	--	< 1020 A	0.751	0.427	NA

Table 4a. Sediment and Soil Analytical Results - Water Leach Test Metals
WPL Nelson Dewey / SCS Engineers Project #25216054.00
(Results are in µg/L, except where noted otherwise)

Sample	Date	Depth (feet)	Material Type	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium (Total)	Cobalt	Copper	Iron	Lead	Lithium	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Zinc		
WPDES POND																											
SED-1	8/3/2016	0-1.3	Fly Ash	<250	<25	<25	650	<25	240	<2.5	6,100	<25	<25	<25	<250	<3.8	7.9	<25	<0.13	130	<25	<25	<25	<25	<25		
SED-2	8/3/2016	0-1.0	Fly Ash	<250	<25	<25	550	<25	200	<2.5	5,900	<25	<25	<25	<250	<3.8	12	<25	0.18 J	120	25 J	<25	<25	<25	<25		
QC-3 (SED-2)	8/3/2016	0-1	Fly Ash	<250	<25	<25	520	<25	240	<2.5	5,900 J	<25	<25	<25	<250	<3.8	7.7	<25	<0.13	56	<25	<25	<25	<25	<25		
SED-3	7/20/2016	0-4.5	Slag	<250	<25	<25	<250	<25	130	<2.5	2,200	<25	<25	<25	<250	<3.8	3.4	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/20/2016	4.5-5.5	SP	<250	<25	<25	<250	<25	<50	<2.5	<500	<25	<25	<25	<250	<3.8	0.81 J	<25	<0.13	<25	<25	<25	<25	<25	<25		
SED-4	7/19/2016	0-4.8	ML	<250	<25	130	280 J	<25	510	<2.5	4,100	<25	<25	<25	<250	<3.8	1.2	<25	<0.13	410	<25	<25	<25	<25	<25		
	7/19/2016	4.8-5.5	SP	NA	NA	NA	<25	<250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	44 J	NA	NA	NA	NA	NA		
GP-19	8/4/2016	8-12	SM	<250	<25	<25	<250	<25	62 J	<2.5	<500	<25	<25	<25	<250	<3.8	<0.11	<25	<0.13	<25	<25	<25	<25	<25	<25		
SLAG POND																											
SED-5	7/20/2016	0-1.6	ML-OL	<250	<25	<25	390 J	<25	54 J	<2.5	18,200	<25	<25	<25	<250	<3.8	3.4	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/20/2016	3.7-5.3	SM	NA	NA	NA	<250	NA	93 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SED-6	7/20/2016	0-1.0	ML	<250	<25	<25	310 J	<25	60 J	<2.5	17,500	<25	<25	<25	<250	<3.8	1.5	<25	<0.13	<25	<25	<25	<25	<25	<25		
SED-7	8/4/2016	0-3.0	Fly Ash	<250	<25	<25	440 J	<25	88 J	<2.5	11,300	<25	<25	<25	<250	<3.8	2.1	<25	<0.13	75	<25	<25	<25	<25	<25		
SED-8	8/4/2016	1.0-1.5	Fly Ash	<250	<25	<25	410 J	<25	82 J	<2.5	11,400	<25	<25	<25	<250	<3.8	2.2	70	<0.13	27 J	<25	<25	<25	<25	<25		
COAL YARD																											
TP-CY-1	7/19/2016	0-0.5	Coal	<250	<25	<25	<250	<25	140	<2.5	<500	<25	<25	<25	<250	<3.8	1.9	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	3.0-3.5	SM	<250	<25	<25	<250	<25	100 J	<2.5	<500	<25	<25	<25	<250	<3.8	0.21 J	<25	<0.13	<25	<25	<25	<25	<25	<25		
TP-CY-3	7/20/2016	1.9-2.1	GM	<250	<25	<25	<250	<25	<50	<2.5	7,600	<25	<25	<25	<250	<3.8	2.5	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/20/2016	4.8-5.5		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
TP-CY-4	7/19/2016	0-2.8	Coal	<250	<25	<25	<250	<25	190	<2.5	<500	<25	<25	<25	<250	<3.8	1.1	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	2.8-3.2	GP & SM	<250	<25	<25	<250	<25	<50	<2.5	4,500	<25	<25	<25	<250	<3.8	1.9	4.25	0.24 J	<25	<25	<25	<25	<25	<25		
	7/19/2016	3.6-4.8	Slag	<250	<25	<25	<250	<25	<50	<2.5	<500	<25	<25	<25	<250	<3.8	1.3	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	4.8-5.0		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
TP-CY-6	7/19/2016	0-0.5	Coal	<250	<25	<25	<250	<25	190	<2.5	<500	<25	<25	<25	<250	<3.8	4.3	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	0.7-1.0	SP	<250	<25	<25	<250	<25	<50	<2.5	2,600	<25	<25	<25	<250	<3.8	2.3	<25	<0.13	<25	<25	<25	<25	<25	<25		
TP-CY-10	7/19/2016	0-0.5	Coal	<250	<25	<25	<250	<25	120	<2.5	<25	<25	<25	<25	<250	<3.8	3.5	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	1.0-2.0	SM	<250	<25	<25	<250	<25	<50	<2.5	2,000	<25	<25	<25	<250	<3.8	1.4	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/19/2016	6.5-7.0		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
TP-CY-12	7/20/2016	0-0.3	Coal	<250	<25	<25	<250	<25	160	<2.5	<500	<25	<25	<25	<250	<3.8	3.8	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/20/2016	0.3-2.0	SP	<250	<25	<25	<250	<25	<50	<2.5	2,600	<25	<25	<25	<250	<3.8	1.7	<25	<0.13	<25	<25	<25	<25	<25	<25		
QC-1 (TP-CY-12)	7/20/2016	0.3-2.0	SP	<250	<25	<25	<250	<25	<50	<2.5	700 J	<25	<25	<25	<250	<3.8	1.7	<25	<0.13	<25	<25	<25	<25	<25	<25		
	7/20/2016	2.0-2.7	SP	<250	<25	<25	<250	<25	<50	<2.5	11,000	<25	<25	<25	<250	<3.8	1.6	<25	<0.13	<25	<25	<25	<25	<25	<25		
SLAG HANDLING AREA																											
GP-5	8/3/2016	12.5-1.5	Fly Ash	<250	<25	<25	<250	<25	100	<2.5	3,000	<25	<25	<25	<250	<3.8	5.5	<25	<0.13	<25	<25	<25	<25	<25	<25		
	8/3/2016	18-24	ML & SM	<250	<25	<25	<250	<25	99 J	<2.5	2,300	<25	<25	<25	<250	<3.8	0.42 J	<25	<0.13	56	<25	<25	<25	<25	<25		
GP-7	8/3/2016	7.5-18	Slag	<250	<25	<25	<250	<25	<50	<2.5	720 J	<25	<25	<25	<250	<3.8	0.85 J	<25	<0.13	<25	<25	<25	<25	<25	<25		
QC-2 (GP-7)	8/3/2016	7.5-18	Slag	<250	<25	<25	<250	<25	<50	<2.5	710 J	<25	<25	<25	<250	<3.8	0.84 J	<25	<0.13	<25	<25	<25	<25	<25	<25		
GP-14	8/4/2016	12.5-1.5	Fly Ash	<250	<25	<25	320 J	<25	120	<2.5	25,200	<25	<25	<25	<250	<3.8	3.0	<25	<0.13	52	<25	<25	<25	<25	<25		
	8/4/2016	17.5-20	SM	<250	<25	<25	<250	<25	120	<2.5	2,500	<25	<25	<25	<250	<3.8	NA	<25	NA	69	<25	<25	<25	<25	36 J		
SLAG SAMPLES¹																											
Slag 01 ²	6/3/2013	--	Slag	NA	< 2.93	< 0.925	< 100	< 10	NA	< 10	NA	< 20	NA	< 100	NA	< 100	NA	NA	< 0.250	NA	NA	< 150	NA	< 2.62	NA		
Slag 01	12/23/2013	--	Slag	312	0.92 A B	0.95 A B	43 B	0.166 A	12.5 A B	0.602 A	1,240	1.0 A B	NA	1.48 A B	238 B	0.621 A	NA	2.99 A	< 0.020	< 0.81	1.5 A B	0.425 A	0.05 A B	< 0.40	3.8 A B		
NED Slag Composite 2014	7/1/2014	--	Slag	809	< 0.11	0.34 A B	65.6	0.29 A B	11.7 AB ^{AA}	< 0.026	879 A	0.764 A	NA	1.78 A B	394	0.177 A	NA	4.49 A	< 0.071	< 0.81	0.4 A	< 0.340	0.01 A B	< 0.40	5.7 A B		
Slag Sample	4/14/2015	--	Slag	788 B	0.69 A B	0.99 A B	49.3 B	0.221 A	< 1020 A	0.067 A	1,140 A	1.65 A B	NA	1.87 A	493 B	< 1.01	NA	3.96 A	< 1.84	1.05 A B	< 0.23	0.903 A	0.02 A B	0.19 A	7.3 A		
FLY ASH SAMPLES¹																											
NED Flyash Composite ²	2/14/2014	--	Fly Ash	NA	5.99 A	52.6	497	< 30	NA	< 722	NA	265	NA	< 300	NA	< 1.02	NA	NA	< 0.710	NA	NA	< 450	NA	< 2.38	NA		
Week of 062815 ²	7/3/2015	--	Fly Ash	NA	27.5 A	278	626 B	< 9.36	NA	< 12	NA	282	NA	< 11	NA	< 59.4	NA	NA	< 0.926	NA	NA	< 98.7	NA	< 2.98 F1	NA		
Week of 010916	1/4/2016	--	Fly Ash	NA	< 3.37 F1	61.3 F1	482 B	< 9.36	NA	< 12	NA	250	NA	< 11	NA	< 59.4	NA	NA	< 0.926	NA	NA	434 A	NA	< 1.79 F1	NA		
NR 140 Preventative Action Limits (PALs)				40	1.2	1	400	0.4	200	0.5	NE	10	8	130	150	1.5	NE	60	0.2	8	20	10	10	0.4	2,500		
NR 140 Enforcement Standards (ES)				200	6	10	2,000	4	1,000	5	NE	100	40	1,300	300	15	NE	300</									

Table 4a. Sediment and Soil Analytical Results - Water Leach Test Metals
WPL Nelson Dewey / SCS Engineers Project #25216054.00

Abbreviations:

µg/L = micrograms per liter or parts per billion (ppb)
 ML = Silt
 NA = Not Analyzed
 ML-CL = Silty Clay
 NE = No Standard Established
 SM = Silty Sand
 GM = Silty Gravel
 SP = Poorly Graded Sand
 GP = Poorly Graded Gravel

Notes:

1. Slag and Fly Ash samples were collected by the plant as part of permit requirements.
 2. Sample was analyzed using the SPLP Leach Method rather than the ASTM Water Leach Method for tested parameters except for Sulfate.
- NR 140 ES - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.
 NR 140 PALS - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.

Bold+underlined values meet or exceed NR 140 enforcement standards.

Italic+underlined values meet or exceed NR 140 preventative action limits.

Shaded values exceed NR 538 Table 1A Standards.

Red text exceeds NR 538 Table 2A Standards.

Laboratory Notes/Qualifiers:

- J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
- A = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
- B = Compound was found in the blank and sample.
- FI = HFS and/or HSD Recovery is outside acceptance limits.
- ^ = ICV, CCV, ICB, CCS, ISA, ISS, CRI, CRA, DLCK or MRL standard; Instrument related QC is outside acceptance limits.
- * = LCS or LCSD is outside acceptance limits.

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Table 4b. Sediment and Soil Analytical Results - Water Leach Test Additional Parameters
WPL Nelson Dewey / SCS Engineers Project #25216054.00
 (Results are in mg/L, except where noted otherwise)

Sample	Date	Depth (feet)	Material Type	Lab Notes	Chloride	Fluoride	Nitrite+ Nitrate	Total Kjeldahl Nitrogen	Sulfate	TDS
WPDES POND										
SED-1	8/3/2016	0-1.3	Fly Ash	--	4.3	<1.0	<0.095	0.69 J	4.4	54
SED-2	8/3/2016	0-1.0	Fly Ash	--	4.3	<1.0	<0.095	0.75	11.5	60
QC-3 (SED-2)	8/3/2016	0-1	Fly Ash	--	3.5 J	<1.0	<0.095	0.59 J	6.1	52
SED-3	7/20/2016	0-4.5	Slag	--	2.7 J	<1.0	<0.095	0.22 J	5	28
	7/20/2016	4.5-5.5	SP	--	2.5 J	<0.20	<0.095	0.22 J	<2.0	14 J
SED-4	7/19/2016	0-4.8	ML	--	10.5 J	<10.0	<0.095	1.4	11.9 J	86
GP-19	8/4/2016	8-12	SM	--	2.4 J	<1.0	<0.095	0.23 J	2 J	16 J
SLAG POND										
SED-5	7/20/2016	0-1.6	ML-OL	--	3.2 J	<1.0	<0.095	<0.22	33.3	90
SED-6	7/20/2016	0-1.0	ML	--	3.7 J	0.36 J	1.0	<0.22	59.1	130
SED-7	8/4/2016	0-3.0	Fly Ash	--	4	<1.0	<0.095	1.1	10.5	76
SED-8	8/4/2016	1.0-1.5	Fly Ash	--	3.7 J	<1.0	<0.095	1.1	12.1	74
COAL YARD										
TP-CY-1	7/19/2016	0-0.5	Coal	--	<20.0	<2.0	<0.095	0.26 J	<20.0	32
	7/19/2016	3.0-3.5	SM	--	2.8 J	<1.0	<0.095	0.28 J	<2.0	20
TP-CY-3	7/20/2016	1.9-2.1	GM	--	3.9 J	<0.20	<0.095	<0.22	2.8 J	50
TP-CY-4	7/19/2016	0-2.8	Coal	--	<20.0	<2.0	<0.095	0.81	<20.0	38
	7/19/2016	2.8-3.2	GP & SM	--	<10.0	<1.0	<0.095	<0.22	<10.0	34
	7/19/2016	3.6-4.8	Slag	--	<20.0	<2.0	<0.095	<0.22	<20.0	10 J
TP-CY-6	7/19/2016	0-0.5	Coal	--	<20.0	<2.0	<0.095	0.23 J	<20.0	54
	7/19/2016	0.7-1.0	SP	--	2.5 J	<0.20	<0.095	<0.22	2.3 J	30
TP-CY-10	7/19/2016	0-0.5	Coal	--	2.4 J	<1.0	<0.095	<0.22	11.6	48
	7/19/2016	1.0-2.0	SM	--	2.2 J	<1.0	<0.095	<0.22	2.3 J	28
TP-CY-12	7/20/2016	0-0.3	Coal	--	<20.0	<2.0	<0.095	0.26 J	<20.0	44
	7/20/2016	0.3-2.0	SP	--	2.2 J	<0.20	<0.095	<0.22	2.2 J	24
	7/20/2016	2.0-2.7	SP	--	2.3 J	<0.20	<0.095	<0.22	27.5	50
QC-1 (TP-CY-12)	7/20/2016	0.3-2.0	SP	--	2.6 J	<0.20	<0.095	<0.22	2.5 J	24
SLAG HANDLING AREA										
GP-5	8/3/2016	12.5-15	Fly Ash	--	<2.0	<1.0	0.11 J	<0.22	3.0 J	22
	8/3/2016	18-24	ML & SM	--	3.3 J	<1.0	<0.095	0.48 J	<2.0	24
GP-7	8/3/2016	7.5-18	Slag	--	2.2 J	<1.0	<0.095	0.22 J	<2.0	<8.7
QC-2 (GP-7)	8/3/2016	7.5-18	Slag	--	2.2 J	<1.0	<0.095	0.24 J	<2.0	10 J
GP-14	8/4/2016	12.5-15	Fly Ash	--	<2.0	<1.0	0.1 J	<0.22	13.4	96
SLAG SAMPLES¹										
Slag 01 ²	6/3/2013	--	Slag	--	NA	NA	NA	NA	NA	NA
Slag 01	12/23/2013	--	Slag	--	0.277 B	NA	0.923	NA	0.218	NA
NED Slag Composite 2014	7/1/2014	--	Slag	--	< 0.142	NA	< 0.045	NA	0.457 B	98 H
Slag Sample	4/14/2015	--	Slag	--	0.751	NA	< 0.045	NA	0.427	NA
FLY ASH SAMPLES¹										
NED Flyash Composite ²	2/14/2014	--	Fly Ash	--	NA	NA	NA	NA	6,530 B	NA
Week of 062815 ²	7/3/2015	--	Fly Ash	--	NA	NA	NA	NA	6,260	NA
Week of 010916	1/4/2016	--	Fly Ash	--	NA	NA	NA	NA	NA	NA
NR 140 Preventative Action Limits (PALs)					125	0.8	2	NE	125	NE
NR 140 Enforcement Standards (ESs)					250	4	10	NE	250	NE
40 CFR Part 141.62 Maximum Contaminant Levels (MCL)					NE	4	10	NE	NE	NE
NR 538 Table 1A Standards					125	0.8	2	NE	125	NE
NR 538 Table 2A Standards					1,250	8	20	NE	1,250	NE

**Table 4b. Sediment and Soil Analytical Results - Water Leach Test Additional Parameters
WPL Nelson Dewey / SCS Engineers Project #25216054.00**

Abbreviations:

mg/L = micrograms per liter	NE = No Standard Established	NA = Not Analyzed	TDS = Total Dissolved Solids	GM = Silty Gravel
ML = Silt	ML-CL = Silty Clay	SM = Silty Sand	SP = Poorly Graded Sand	GP = Poorly Graded Gravel

Notes:

- Slag and Fly Ash samples were collected by the plant as part of permit requirements.
 - Sample was analyzed using the SPLP Leach Method rather than the ASTM Water Leach Method for tested parameters except for Sulfate.
- NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.
- NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.

Bold+underlined values meet or exceed NR 140 enforcement standards.

Italic+underlined values meet or exceed NR 140 preventive action limits.

Shaded values exceed NR 538 Table 1A Standards.

Red text exceeds NR 538 Table 2A Standards.

Laboratory Notes/Qualifiers:

- J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
- A = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
- B = Compound was found in the blank and sample.
- F1 = MS and/or MSD Recovery is outside acceptance limits.
- H = Sample was prepped or analyzed beyond the specified holding time.
- ^ = ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
- * = LCS or LCSD is outside acceptance limits.

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Table 4c. Sediment and Soil Analytical Results - Water Leach Test Radiochemistry
WPL Nelson Dewey / SCS Engineers Project #25216054.00
 (Results are in pCi/L)

Sample	Date	Depth (feet)	Lab Notes	Radium-226	Radium-228	Total Radium
WPDES POND						
SED-4	7/19/2016	0-4.8	--	0.0858 ± 0.481 (0.922)	0.355 ± 0.483 (1.00)	0.441 ± 0.964 (1.92)
SLAG POND						
SED-6	7/20/2016	0-1.0	--	0.206 ± 0.905 (1.45)	2.97 ± 1.30 (2.14)	3.18 ± 2.21 (3.59)
COAL YARD						
TP-CY-10	7/19/2016	0-0.5	--	1.23 ± 0.996 (0.556)	0.915 ± 0.497 (0.891)	2.145 ± 1.493 (1.45)
SLAG HANDLING AREA						
GP-5	8/3/2016	12.5-15	--	0.0829 ± 0.586 (0.996)	0.447 ± 0.474 (0.981)	0.53 ± 1.06 (1.98)
GP-7	8/3/2016	7.5-18	--	-0.085 ± 0.683 (1.19)	0.446 ± 0.418 (0.843)	0.446 ± 1.1 (2.03)
NR 140 Preventive Action Limits (PALs)				NE	NE	NE
NR 140 Enforcement Standards (ESs)				NE	NE	NE
CFR 40 141.66 Maximum Contaminant Levels (MCL)				NE	NE	5
NR 538 Table 1A Standards				NE	NE	NE
NR 538 Table 2A Standards				NE	NE	NE

Abbreviations:

pCi/L = picocuries per liter NA = Not Analyzed NE = No Standard Established GM = Silty Gravel ML = Silt
 ML-CL = Silty Clay SM = Silty Sand SP = Poorly Graded Sand

Notes:

NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.

NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015 and WAC, Chapter NR 140.12 Table 2 - Public Welfare Groundwater Quality Standards from July 2015.

Bold+underlined values meet or exceed NR 140 enforcement standards.

Italic+underlined values meet or exceed NR 140 preventive action limits.

Shaded values exceed NR 538 Table 1A Standards.

Red text exceeds NR 538 Table 2A Standards.

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