

2024 Annual Groundwater Monitoring and Corrective Action Report

Prairie Creek Generating Station
Cedar Rapids, Iowa

Prepared for:

Alliant Energy



SCS ENGINEERS

25224074.00 | January 31, 2025

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OVERVIEW OF CURRENT STATUS

Prairie Creek Generating Station (PCS) 2024 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) unit. The groundwater monitoring system at PCS monitors the closure area for 10 former 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;	Assessment
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;	Assessment
Statistically Significant Increases (SSIs)	(iii) If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III to this part pursuant to §257.94(e):	

Category	Rule Requirement	Site Status
	(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>SSIs initially determined on January 15, 2018, based on October 2017 monitoring results. In 2024, SSIs for semiannual events for compliance wells at the waste boundary included the following; see Table 5 for complete results.</p> <p><u>November 2023</u> Boron: MW-303, MW-304, MW-305, MW-306, MW-307, MW-308 Field pH: MW-307, MW-308 Sulfate: MW-304, MW-305, MW-308 Total Dissolved Solids: MW-305</p> <p><u>April 2024</u> Boron: MW-303, MW-304, MW-305, MW-306, MW-307, MW-308 Field pH: MW-307, MW-308 Sulfate: MW-303, MW-304, MW-305, MW-306, MW-308, Total Dissolved Solids: MW-305</p>
	(B) Provide the date when the assessment monitoring program was initiated for the CCR unit.	July 16, 2018
Statistically Significant Levels (SSL) Above Groundwater Protection Standard	(iv) If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in Appendix IV to this part pursuant to §257.95(g) include all of the following:	
	(A) Identify those constituents listed in Appendix IV to this part and the names of the monitoring wells associated with such an increase;	<p>Arsenic: Initially determined to be at SSL above GPS on January 14, 2019, at MW-303, MW-304, and MW-305. In 2024, concentrations determined to be at SSL above the GPS at compliance wells as follows:</p> <p><u>November 2023</u> MW-303, MW-304, MW-308</p>

Category	Rule Requirement	Site Status
		<p><u>April 2024</u> MW-303, MW-304, MW-308</p> <p>Molybdenum: Initially determined to be at SSL above GPS on January 14, 2019, at MW-306. In 2024, concentrations determined to be at SSL above the GPS at compliance wells as follows:</p> <p><u>November 2023</u> MW-306</p> <p><u>April 2024</u> MW-306</p>
	(B) Provide the date when the assessment of corrective measures was initiated for the CCR unit;	April 15, 2019
	(C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and	Selection of remedy in progress. A public meeting date has not been set.
	(D) Provide the date when the assessment of corrective measures was completed for the CCR unit.	<p>September 12, 2019 – Original ACM</p> <p>August 9, 2021 – Addendum No. 1 to ACM</p>
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	Selection of remedy is in progress
Corrective Action	(vi) Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.	Not applicable – Selection of remedy is in progress

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1.0 INTRODUCTION

This 2024 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 2024 Annual Groundwater Monitoring and Corrective Action Report for the CCR Units. The Prairie Creek Generating Station (PCS) site location is shown in **Figure 1**.

This report covers the period of groundwater monitoring from January 1, 2024, through December 31, 2024.

The groundwater monitoring system at PCS monitors the closure area for 10 former CCR units. All CCR units at PCS were closed in 2018. CCR was consolidated and capped in accordance with §257.102(d), and closure certification was completed in December 2018.

The monitoring system is designed to detect monitored constituents at the waste boundary of the facility as required by 40 CFR 257.91(d). The groundwater monitoring system currently consists of two upgradient background wells, six downgradient compliance monitoring wells at the waste boundary, two supplemental background wells, and five downgradient delineation wells installed to characterize site conditions and evaluate the nature and extent of groundwater impacts (**Figure 2** and **Table 1**). An additional upgradient monitoring well was installed to monitor water level only.

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 requirement sections:

- Geologic and hydrogeologic setting
- CCR Rule monitoring system

2.1 GEOLOGIC AND HYDROGEOLOGIC SETTING

2.1.1 Regional Information

The geologic formation beneath PCS that meets the definition of the “uppermost aquifer,” as defined by section 257.53 of the CCR Rule, is the surficial alluvial aquifer. A summary of regional hydrogeologic units in east-central Iowa is provided in **Appendix A**. The alluvial aquifer comprises Cedar River valley sand, gravel, silt, and clay deposits. This deposit is present along the Cedar River valley and is used for municipal supply by the City of Cedar Rapids approximately 4.5 miles upstream of PCS. A map of the regional surficial aquifers in east-central Iowa is included in **Appendix A**.

The alluvial aquifer is underlain by Devonian and Silurian limestone and dolomite bedrock. A bedrock geology map and cross sections of the area are provided in **Appendix A**. The Devonian and Silurian bedrock are also aquifer units and are likely hydraulically connected to the alluvial aquifer above. The Silurian limestone is several hundred feet thick at the site and is underlain by an Ordovician confining unit.

2.1.2 Site Information

Monitoring wells MW-301 through MW-310 were installed to intersect the surficial alluvium aquifer at the site. The unconsolidated materials at these well locations are generally sand and silt with minor clay and gravel. The total boring depths were between 15.5 and 30.5 feet and bedrock was not encountered in any monitoring well boring. Boring logs and well construction forms for MW-301 through MW-310 are included in **Appendix B**.

Assessment piezometers MW-301A, MW-306A, MW-309A, and MW-310A were installed in June and July 2020. Unconsolidated materials were also observed in the deeper piezometer borings, and bedrock was not encountered. The boring for upgradient piezometer MW-301A encountered a thick lean clay layer and the well is screened within the clay. The other three piezometers are screened in sandy materials. The total boring depths were between 45 and 60 feet. Boring logs and well construction forms for the four deeper piezometers are included in **Appendix B**.

Sidegradient supplemental background monitoring well MW-312 and groundwater elevation-only well MW-311 were installed in May 2022. The unconsolidated materials at these well locations are generally sand and silt. Wells are screened predominantly in sand. Total boring depths are 16 to 20 feet. Boring logs and well construction forms for MW-311 and MW-312 are included in **Appendix B**.

The sampling event summary and groundwater elevation data for the CCR monitoring wells are included in **Tables 2** and **3**. Water table elevations and groundwater flow patterns for the April and October 2024 monitoring events are shown on **Figures 3** and **4**, respectively. Both water table maps show groundwater flow moving north toward Prairie Creek, which is a tributary of the Cedar River.

Estimated horizontal gradients and flow velocities are provided in **Table 4A**. Vertical hydraulic gradients for the well nests are provided in **Table 4B**. For both the April and October 2024 events, the vertical gradients indicate upward flow at the MW-306/MW-306A, MW-309/MW-309A, and MW-310/MW-310A nests and downward flow at the MW-301/MW-301A nest.

2.2 CCR RULE MONITORING SYSTEM

The current groundwater monitoring system established in accordance with the CCR Rule consists of two upgradient (background) monitoring wells, six downgradient compliance monitoring wells, two supplemental background monitoring wells, and five additional downgradient monitoring wells and piezometers to assist with the assessment monitoring and selection of remedy process. The background wells are MW-301 and MW-302, and the six downgradient wells at the waste boundary include MW-303, MW-304, MW-305, MW-306, MW-307, and MW-308. An additional monitoring well, MW-311, was installed to provide information on water level elevations only and is not part of the compliance monitoring network. The supplemental background wells include MW-301A and MW-312. Monitoring well MW-301A is a piezometer installed in a nest with MW-301 and is screened in a lean clay. Monitoring well MW-312 was installed as a sidegradient, supplemental background well to provide groundwater quality information in the Prairie Creek valley.

The shallow downgradient delineation monitoring wells include MW-309 and MW-310. The deeper downgradient piezometers include MW-306A, MW-309A, and MW-310A. The upgradient piezometer, MW-301A, was also installed to assist with the selection of remedy process.

The CCR Rule wells are installed in the alluvial aquifer, which is the uppermost aquifer unit. Shallow monitoring well depths range from approximately 15 to 32 feet, measured from the top of the well

casing. The piezometer depths range from approximately 47 to 62 feet, measured from top of well casing. Upgradient piezometer MW-301A is installed in a clay till unit below the alluvial aquifer. This well is not used in the statistical evaluation of background conditions because it is not installed in the same hydrostratigraphic unit as the downgradient wells.

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 with an aerial image showing the closure area, former CCR units, and all background (or upgradient) and downgradient monitoring wells with identification numbers for the groundwater monitoring program is provided as **Figure 2**.

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;

There were no changes to the groundwater monitoring system in 2024.

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 2024. Semiannual groundwater monitoring events were completed in April and October 2024. 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 or assessment monitoring program is included in **Table 2**.

The validation and evaluation of the November 2023 monitoring event data was completed and transmitted to Interstate Power and Light (IPL) on March 14, 2024. The validation and evaluation of the April 2024 assessment monitoring event data was completed and transmitted to IPL on August 19, 2024. The validation and evaluation of the October 2024 monitoring event data was in progress at the end of 2024 and will be transmitted to IPL in 2025; therefore, the October 2024 monitoring results will be included in the 2025 annual report. The October 2024 groundwater elevation data are included in this report.

In the November 2023 and April 2024, semiannual events, groundwater samples collected from the background wells and the compliance wells installed at the waste boundary event were analyzed for Appendix III and Appendix IV constituents. Samples collected from the delineation wells were analyzed for select Appendix IV parameters. Iron was included in the monitoring program in 2024 as a supplemental groundwater quality parameter to support the selection of remedy process.

Analytical results for the November 2023 and April 2024 sampling events are shown in **Table 5**. Field parameter results for the November 2023 and April 2024 sampling events are provided in **Table 6**. The results of the analytical laboratory analyses are provided in the November 2023 and April 2024 laboratory reports in **Appendix C**. Historical results for each monitoring well through April 2024 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 2024.

The PCS monitoring program transitioned to assessment monitoring beginning in April 2018 and assessment monitoring continued through 2024. An Assessment of Corrective Measures (ACM) was initiated for the PCS CCR units in April 2019 and completed in September 2019. An addendum to the ACM was submitted August 9, 2021. The ACM was initiated in response to the detection of arsenic and molybdenum at statistically significant levels (SSLs) exceeding the GPS. Assessment monitoring continued during the ACM and will continue during the selection of remedy.

The validation and evaluation of the November 2023 monitoring event data was completed and transmitted to IPL on March 14, 2024. The validation and evaluation of the April 2024 monitoring event data was completed and transmitted to IPL on August 19, 2024. The validation and evaluation of the October 2024 monitoring event data was in progress at the end of 2024 and will be transmitted to IPL in 2025; therefore, the October 2024 monitoring results will be included in the 2025 annual report. The October 2024 groundwater elevation data is included in this report.

In accordance with the Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at Resource Conservation and Recovery Act (RCRA) Facilities (U.S. EPA, 2009), the comparison of assessment monitoring results to the GPS was based on the lower confidence limit (LCL) for the arithmetic mean. The LCL evaluation was completed for each Appendix IV parameter that has been detected at a concentration exceeding the GPS in at least one sample result since assessment monitoring was initiated, which include arsenic, molybdenum, and lithium. The LCLs were calculated

with Sanitas™ using the most recent 8 monitoring events at each well. The LCL evaluations completed for the evaluation of the November 2023 and April 2024 monitoring events are provided in **Appendix E**.

Based on the LCL evaluations completed following the November 2023 and April 2024 events, SSLs above the GPS were identified for the following parameters and wells:

- Arsenic:
 - Compliance wells MW-303, MW-304, and MW-308
 - Delineation wells MW-309 and MW-310
- Lithium: None
- Molybdenum:
 - Compliance well MW-306

The SSLs for arsenic at MW-303, MW-304, MW-308, MW-309, and MW-310 and for molybdenum at MW-306 are consistent with previous SSL determinations. Lithium was detected above the GPS in the November 2023 and April 2024 samples from MW-308, but the LCL for the mean lithium concentration at MW-308 remains below the GPS according to the statistical analyses provided in **Appendix E**.

The comparison of Appendix III and Appendix IV parameter results to background concentrations was completed in accordance with 40 CFR 257.93(f)(3) using a prediction interval or tolerance 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) or upper tolerance limit (UTL). The UPLs and UTLs are shown in **Table 5**. As part of the evaluation of the October 2022 monitoring results, the background data set was updated and interwell UPLs and UTLs were calculated using background well data collected through October 2022. An updated statistical evaluation of background and a technical memorandum were included in the 2023 annual report.

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 2024 Annual Groundwater Monitoring and Corrective Action Report.

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 is currently in the selection of remedy process, with assessment monitoring continuing.

Summary of Key Actions Completed.

- Completed a 2023 Annual Groundwater Monitoring and Corrective Action Report (January 31, 2024).
- Completed statistical evaluation for the November 2023 monitoring event and prepared groundwater monitoring results letter (March 14, 2024).
- Submitted documentation of cap repair to Iowa Department of Natural Resources (March 19, 2024) summarizing repairs made after 2023 impoundment closure area borings to support ACM.
- Prepared and submitted permit applications for aquifer pumping test well installation to Linn County and the City of Cedar Rapids.
- Evaluated ash sample leach test results with geochemical modeling to support ACM.
- Attempted to drill one 6-inch pumping well and two 2-inch observation wells for aquifer pumping tests; however, drilling was suspended when municipal solid waste (trash) was encountered while drilling (June 2024).
- Completed two semiannual groundwater sampling and analysis events (April and October 2024).
- Completed statistical evaluation for the April 2024 monitoring event and prepared groundwater monitoring results letter (August 19, 2024).
- Prepared semiannual progress reports for the Selection of Remedy process (March and September 2024).
- Initiated work on a technical memorandum for evaluation of leach testing and borings collected from CCR materials.
- Continued work on the selection of remedy in accordance with § 257.97.

Description of Any Problems Encountered.

- Encountered municipal solid waste (trash) related to historical non-IPL municipal landfill activities while drilling for the new 6-inch extraction well and two, 2-inch-diameter observation piezometers near existing monitoring well MW-306 to support ACM.

Discussion of Actions to Resolve the Problems.

- IPL is evaluating feasibility of completing a pumping test in the area of well MW-306 given the presence of municipal solid waste in the vicinity of the well. The ACM will be amended to incorporate any changes to the feasibility of active extraction as a corrective measure prior to finalizing the selection of remedy.

Projection of Key Activities for the Upcoming Year (2025).

- Complete two semiannual assessment monitoring events (April and October 2025).
- Complete statistical evaluation and determination of any SSLs exceeding the GPS and prepare groundwater monitoring results letters for the October 2024 and April 2025 monitoring events (April and October 2025).
- Pending the evaluation of the feasibility of extraction wells in the vicinity of monitoring well MW-306, install a 6-inch-diameter extraction well and two, 2-inch-diameter observation piezometers near the well, or an alternate location. Perform an extraction well stepped pumping test to evaluate and design a groundwater extraction plan. Groundwater samples will be collected at intervals throughout the pumping test to evaluate the pumping effects on molybdenum concentrations.
- Prepare ACM Addendum No. 2, which will include a summary of the work done to assess potential corrective measures since the previous Addendum was prepared in August 2021, including ash borings, ash leach testing, creek and hand-auger soil borings, creek piezometer data, and evaluation of extraction wells as a corrective action, including extraction well stepped pumping test results.
- Continue work on the selection of remedy in accordance with § 257.97.

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. The PCS closure area is no longer in the detection monitoring program.

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.

Not applicable. The PCS closure area is no longer in the detection monitoring program.

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 been initiated at the site but no alternative assessment monitoring frequency is proposed at this time.

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).

The 2024 assessment monitoring results, background UPLs or UTLs, and GPSs established for PCS are provided in **Table 5**. The laboratory reports are provided in **Appendix C**. Historical monitoring results are summarized in **Appendix D**.

Supplemental groundwater quality parameters were included in the monitoring program in 2024 to support the selection of remedy process. The results for the supplemental parameters are included in **Table 5** and in the laboratory reports in **Appendix C**.

3.5.6 § 257.95(d)(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. No alternative source demonstration for assessment monitoring was completed in 2024.

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. The ACM was initiated on April 15, 2019. The July 10, 2019 certification, demonstrating the need for a 90-day deadline extension was provided in the 2019 Annual Groundwater Monitoring and Corrective Action Report. The ACM was completed on September 19, 2019.

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 REFERENCE

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

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- 2 CCR Rule Groundwater Samples Summary
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**Table 1. Groundwater Monitoring Well Network
Prairie Creek Generating Station
SCS Engineers Project #25224074.00**

Monitoring Well	Location in Monitoring Network	Role in Monitoring Network
MW-301	Upgradient	Background
MW-301A	Upgradient, deeper	Supplemental Background
MW-302	Upgradient	Background
MW-303	Downgradient	Compliance
MW-304	Downgradient	Compliance
MW-305	Downgradient	Compliance
MW-306	Downgradient	Compliance
MW-306A	Downgradient, deeper	Delineation
MW-307	Downgradient	Compliance
MW-308	Downgradient	Compliance
MW-309	Downgradient	Delineation
MW-309A	Downgradient, deeper	Delineation
MW-310	Downgradient	Delineation
MW-310A	Downgradient, deeper	Delineation
MW-311	Upgradient	Water level only
MW-312	Sidegradient	Supplemental Background

Last revision by: NLB
Checked by: LH

Date: 11/18/2024
Date: 11/26/2024

**Table 2. CCR Rule Groundwater Samples Summary
Prairie Creek Generating Station
SCS Engineers Project #25224074.00**

Sample Dates	Background Well		Compliance Wells						Delineation Wells					Supplemental Background Wells	
	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307	MW-308	MW-306A	MW-309	MW-309A	MW-310	MW-310A	MW-301A	MW-312
April 15-18, 2024	A	A	A	A	A	A	A	A	A-NE	A-NE	A-NE	A-NE	A-NE	A	A
October 1-3, 2024	A	A	A	A	A	A	A	A	A-NE	A-NE	A-NE	A-NE	A-NE	A	A
Total Samples	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Abbreviations:

A = Assessment Monitoring Program

A-NE = Assessment monitoring for nature and extent, wells sampled for arsenic, lithium, molybdenum, and iron.

Notes:

1. MW-311 was installed in May 2022 and is used as a water level only well.

Last revision by: NLB Date: 11/18/2024
 Checked by: LH Date: 11/26/2024

Table 3. Water Level Summary
IPL - Prairie Creek / SCS Engineers Project #25224074.00

Ground Water Elevation in feet above mean sea level (amsl)																
Well Number	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-301A	MW-306A	MW-309A	MW-310A	MW-311	MW-312
Top of Casing Elevation (feet amsl)	732.55	722.68	709.46	709.66	709.61	712.54	721.16	719.67	711.80	711.93	732.07	711.50	710.54	710.68	724.36	711.60
Screen Length (ft)	10.0	10.0	10.0	10.0	10.0	5.0	10.0	10.0	10.0	10.0	5.0	5.0	5.0	5.0	10.0	10.0
Total Depth (ft from top of casing)	25.10	17.39	17.01	17.09	17.00	31.91	23.27	23.21	15.00	15.00	56.15	61.85	47.31	47.47	18.81	18.65
Top of Well Screen Elevation (ft)	717.45	715.29	702.45	702.57	702.61	685.63	707.89	706.46	703.11	703.09	680.92	654.65	668.23	668.21	715.55	703.95
Measurement Date																
December 20, 2016	716.05	715.80	703.36	703.42	703.46	703.32	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
January 23, 2017	716.05	716.18	704.64	704.56	704.59	704.49	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
February 23, 2017	715.87	715.96	704.46	704.65	704.67	704.59	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
March 28, 2017	715.80	715.86	703.81	703.99	704.09	703.99	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
April 27, 2017	716.70	716.48	705.07	705.08	705.04	704.98	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
May 25, 2017	717.08	716.68	705.37	705.37	705.29	705.34	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
June 28, 2017	716.10	715.63	703.96	704.16	704.11	703.94	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
August 17, 2017	715.35	714.88	702.83	702.96	702.91	702.74	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
October 17, 2017	714.36	714.33	702.95	703.17	703.21	703.16	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
May 8, 2018	713.95	713.94	705.36	705.54	705.61	705.51	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
August 6, 2018	714.30	714.24	702.64	702.62	702.56	702.68	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
October 9, 2018	715.74	717.13	707.86	707.81	707.73	707.88	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
March 11, 2019	NM	NM	NM	704.24	704.05	NM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
April 22-23, 2019	716.44	716.10	703.83	703.93	703.93	704.23	709.86	706.19	NI	NI	NI	NI	NI	NI	NI	NI
October 28-29, 2019	715.86	715.68	704.10	704.15	704.17	704.40	708.57	706.31	703.84	703.71	NI	NI	NI	NI	NI	NI
January 9, 2020	NM	NM	NM	NM	NM	NM	NM	NM	703.10	702.81	NI	NI	NI	NI	NI	NI
April 27, 2020	715.80	715.58	703.10	702.84	703.02	703.35	NM	NM	702.84	702.53	NI	NI	NI	NI	NI	NI
May 27, 2020	NM	NM	NM	NM	NM	NM	708.14	705.64	NM	NM	NI	NI	NI	NI	NI	NI
September 14, 2020	715.30	715.57	703.70	703.74	703.74	703.84	708.75	706.13	703.28	702.83	694.12	704.03	703.63	703.43	703.43	NI
October 19-21, 2020	714.77	714.16	702.16	702.13	702.02	702.26	706.56	703.87	701.97	701.78	704.32	702.43	702.17	702.00	NI	NI
April 26-27, 2021	715.84	715.36	702.75	702.80	702.66	702.75	706.38	705.05	702.68	702.11	716.76	703.63	702.92	702.69	NI	NI
July 14, 2021	NM	NM	NM	NM	NM	NM	NM	703.38	NM	NM	NM	NM	NM	NM	NI	NI
October 20-22, 2021	713.44	713.09	701.84	701.80	701.75	702.02	706.29	703.21	701.70	701.48	707.07	702.31	701.60	701.76	NI	NI
February 22, 2022	NM	NM	NM	NM	NM	NM	NM	702.84	NM	NM	NM	NM	NM	NM	NI	NI
April 25-27, 2022	714.50	715.27	703.85	703.82	703.76	704.02	708.27	705.45	703.56	703.33	707.77	704.16	702.93	703.68	NI	NI
May 25, 2022	714.57	714.12	702.96	702.95	702.88	703.23	707.55	704.83	702.86	702.60	703.71	703.47	703.08	702.92	709.86	703.52
July 15, 2022	714.26	713.81	703.17	703.27	703.23	703.53	709.27	705.26	703.04	702.82	707.97	703.72	703.30	703.19	710.01	703.80
October 10-12, 2022	722.08	712.56	701.93	701.86	701.73	701.97	705.32	702.60	702.08	701.73	706.76	702.18	702.12	701.92	707.83	702.85
April 19-20, 2023	714.10	713.90	702.37	702.43	702.36	702.74	707.21	703.97	702.30	702.04	708.02	703.03	702.61	702.44	NM	701.96
November 6-7, 2023	712.29	711.86	701.55	701.54	701.38	701.68	704.67	702.18	701.59	701.34	681.93	701.92	701.70	701.51	707.38	702.24
April 15-18, 2024	712.62	712.69	702.14	702.08	701.96	702.25	706.22	703.51	702.06	701.73	706.69	702.48	702.27	702.05	709.09	702.65
October 1-3, 2024	713.08	712.40	701.81	701.76	701.63	701.99	705.64	703.06	701.76	701.50	706.89	702.22	702.00	701.74	708.61	702.48
Bottom of Well Elevation (ft)	707.45	705.29	692.45	692.57	692.61	680.63	697.89	696.46	693.11	693.09	675.92	649.65	663.23	663.21	705.55	692.95

Created by: <u>MDB</u>	Date: <u>5/1/2017</u>
Last rev. by: <u>RM</u>	Date: <u>10/16/2024</u>
Checked by: <u>BAS</u>	Date: <u>10/17/2024</u>

**Table 4A. Horizontal Gradients and Flow Velocities
Prairie Creek Generating Station
SCS Engineers Project #25224074.00**

Flow Path A - Northwest					
Sampling Dates	h1 (ft)	h2 (ft)	Δl (ft)	Δh/Δl (ft/ft)	V (ft/d)
April 15-18, 2024	710.00	701.73	842	0.010	1.5
October 1-3, 2024	708.61	701.63	515	0.014	2.0

Wells	K Value (cm/sec)	K Value (ft/d)	Assumed Porosity, n
MW-301	N/A	N/A	0.40
MW-301A	N/A	N/A	
MW-302	N/A	N/A	
MW-303	1.2E-02	34	
MW-304	1.3E-02	36	
MW-305	1.6E-01	439	
MW-306	5.0E-02	141	
MW-306A	1.2E-02	35	
MW-307	1.8E-02	50	
MW-308	5.3E-03	15	
MW-309	5.0E-02	142	
MW-309A	1.1E-01	303	
MW-310	1.7E-02	47	
MW-310A	5.1E-02	145	
MW-311	1.3E-03	4	
MW-312	2.0E-02	55	
Geometric Mean	2.1E-02	59	

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

Notes:

1. Geometric mean hydraulic conductivity calculation does not include K values for upgradient wells MW-301, MW-301A, or MW-302 because they are not considered to be representative of conditions downgradient from the closure area.

2. See Figures 3 and 4 for velocity calculation flow path locations.

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

Date: 11/19/2024

Checked by: LH

Date: 11/26/2024

Table 4B. Vertical Gradients
Prairie Creek Generating Station / SCS Engineers Project #25224074.00
2024

Vertical Hydraulic Gradients	MW-301/MW-301A		MW-306/MW-306A		MW-309/MW-309A		MW-310/MW-310A	
	Shallow Well Screen midpoint ⁽²⁾ (feet amsl)	MW-301 712.45		MW-306 683.13		MW-309 698.11		MW-310 698.09
Deep Well Screen midpoint (feet amsl)	MW-301A 678.42		MW-306A 652.15		MW-309A 665.73		MW-310A 665.71	
Measurement Date	Distance Between Midpoints ⁽²⁾ (ft)	Vertical Gradient (ft/ft)	Distance Between Midpoints (ft)	Vertical Gradient (ft/ft)	Distance Between Midpoints ⁽²⁾ (ft)	Vertical Gradient (ft/ft)	Distance Between Midpoints ⁽²⁾ (ft)	Vertical Gradient (ft/ft)
April 15-18, 2024	31.6	-0.188	31.0	0.007	31.9	0.007	31.5	0.010
October 1-3, 2024	31.8	-0.194	31.0	0.007	31.7	0.008	31.6	0.008

Notes:

1: A positive vertical gradient indicates upward groundwater flow. A negative gradient indicates downward flow.

Last rev. by: NLB
Checked by: LH

Date: 11/18/2024
Date: 11/26/2024

**Table 5. Groundwater Analytical Summary - November 2023 and April 2024
Prairie Creek Generating Station, Cedar Rapids, IA / SCS Engineers Project #25224074.00**

Parameter Name	UPL/UTL Method	UPL	GPS	Background Wells				Compliance Wells											
				MW-301		MW-302		MW-303		MW-304		MW-305		MW-306		MW-307		MW-308	
				11/6/2023	4/18/2024	11/7/2023	4/17/2024	11/7/2023	4/15/2024	11/7/2023	4/15/2024	11/7/2023	4/16/2024	11/7/2023	4/15/2024	11/7/2023	4/18/2024	11/7/2023	4/18/2024
Groundwater Elevation, ft amsl				712.29	712.62	711.86	712.69	701.55	702.14	701.54	702.08	701.38	701.96	701.68	702.25	704.67	706.22	702.18	703.51
Appendix III																			
Boron, µg/L	P	63.3		<76	<76	<76	<76	1200	1000	1100	1200	1,300	1300	2,200	2,300	1,200	1,300	5,000	5,300
Calcium, mg/L	P	184		180	180	170	190	110	130	130	150	150	170	74	86	23	31	58	120
Chloride, mg/L	P	32.6		100	100	150	180	13	22	11	13.0	20	19	19	19	2.4 J	5.9	6	6.7
Fluoride, mg/L	NP	0.28		<0.38	<0.38	<0.38	<0.38	0.39 J	<0.38	0.46 J	0.41 J	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Field pH, Std. Units	P	7.42		6.68	6.69	6.60	6.64	6.77	6.90	6.83	6.87	6.87	6.89	7.31	7.40	9.48	9.38	9.03	8.88
Sulfate, mg/L	P	131		98	99	85	91	91	140	230	270	330	370	130	160	50	70	170	260
Total Dissolved Solids, mg/L	P	810		730	760	740	830	550	620	710	760	890	900	450	480	110	140	370	520
Appendix IV		UTL	GPS																
Antimony, µg/L	NP	1.1	6	1.2 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2 J	<1.0	<1.0
Arsenic, µg/L	NP	9	10	1.50 J	0.87 J	0.86 J	1.1 J	48	32	21	17	11	10.0	0.63 J	0.64 J	7.7	6.1	42	34
Barium, µg/L	P	333	2,000	270	270	230	250	110	120	110	120	160	150	68	78	41	52	50	83
Beryllium, µg/L	NP	0.27	4	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Cadmium, µg/L	NP	0.38	5	0.33	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chromium, µg/L	P	7.52	100	5.5	5.2	1.9 J	1.3 J	<1.1	<1.2	<1.1	<1.2	<1.1	<1.2	<1.1	<1.2	<1.1	<1.2	<1.1	<1.2
Cobalt, µg/L	P	6.12	6	0.25 J	<0.17	<0.17	0.38 J	0.3 J	0.3 J	0.61	0.53	0.38 J	0.29 J	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Fluoride, mg/L	NP	0.28	4	<0.38	<0.38	<0.38	<0.38	0.39 J	<0.38	0.46 J	0.41 J	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Lead, µg/L	P	1.16	15	0.52	<0.26	<0.24	<0.26	<0.24	<0.26	<0.24	<0.26	<0.24	<0.26	<0.24	<0.26	<0.24	<0.26	<0.24	<0.26
Lithium, µg/L	P	18.2	40	16	15	9.5 J	9.3 J	19	18	17	16	22	21	<2.5	2.7 J	7.7 J	9.3 J	44	62
Mercury, µg/L	DQ	DQ	2	<0.14	<0.11	<0.14	<0.11	<0.14	<0.11	<0.14	<0.11	<0.14	<0.11	<0.14	<0.11	<0.14	<0.11	<0.14	<0.11
Molybdenum, µg/L	NP	1.3	100	2.5	<1.3	1.1 J	<1.3	13	10	37	36	60	42	150	160	10	15	63	93
Selenium, µg/L	P	2.9	50	3.1 J	1.6 J	<1.4	1.9 J	<1.4	<1.4	<1.4	<1.4	<1.4	1.8 J	<1.4	<1.4	5.8	8.5	<1.4	<1.4
Thallium, µg/L	NP	0.5	2	<0.26	0.57 J	0.26 J	<0.57	<0.26	<0.57	<0.26	<0.57	<0.26	<0.57	<0.26	<0.57	<0.26	<0.57	<0.26	<0.57
Radium 226/228 Combined, pCi/L	P	2.91	5	1.05	1.07	0.746	1.00	0.624	1.57	0.728	0.515	0.446	0.609	0.620	0.328	0.230	0.386	0.267	0.462
Additional Parameters Monitored for Selection of Remedy																			
Iron, µg/L	UPL or GPS not applicable			<36	<36	96 J	430	3,000	3,200	1,300	3,700	74 J	48 J	2,200	2,700	<36	<36	<36	<36

4.4 Blue highlighted cell indicates the compliance well result exceeds the UPL or UTL (background) and the LOQ.
 30.8 Yellow highlighted cell indicates the compliance well result exceeds the GPS.
 17 Grayscale indicates Additional Parameters sampled for selection of remedy and evaluation of Monitored Natural Attenuation.

**Table 5. Groundwater Analytical Summary - November 2023 and April 2024
Prairie Creek Generating Station, Cedar Rapids, IA / SCS Engineers Project #25224074.00**

Parameter Name	UPL/UTL Method	UPL	GPS	Delineation Wells								Supplemental Background Wells					
				MW-306A		MW-309		MW-309A		MW-310		MW-310A		MW-301A		MW-312	
				11/7/2023	4/15/2024	11/7/2023	4/15/2024	11/7/2023	4/15/2024	11/7/2023	4/15/2024	11/7/2023	4/16/2024	11/7/2023	4/17/2024	11/7/2023	4/15/2024
Groundwater Elevation, ft amsl				701.92	702.48	701.59	702.06	701.70	702.27	701.34	701.73	701.51	702.05	681.93	706.69	702.24	702.65
Appendix III																	
Boron, µg/L	P	63.3		--	--	--	--	--	--	--	--	--	--	85 J	<76	250	250
Calcium, mg/L	P	184		--	--	--	--	--	--	--	--	--	--	74	78	85	100
Chloride, mg/L	P	32.6		--	--	--	--	--	--	--	--	--	--	6.7	4.4 J	74	80
Fluoride, mg/L	NP	0.28		--	--	--	--	--	--	--	--	--	--	<0.38	<0.38	<0.38	<0.38
Field pH, Std. Units	P	7.42		7.09	7.11	7.32	7.10	7.16	7.02	7.19	7.13	7.30	7.17	6.67	6.96	6.83	6.72
Sulfate, mg/L	P	131		--	--	--	--	--	--	--	--	--	--	6.4	<2.1	15	44
Total Dissolved Solids, mg/L	P	810		--	--	--	--	--	--	--	--	--	--	320	290	430	450
Appendix IV		UTL	GPS														
Antimony, µg/L	NP	1.1	6	--	--	--	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0
Arsenic, µg/L	NP	9	10	<0.53	<0.53	46	34	1.0 J	0.84 J	27	22	<0.53	<0.53	4.7	2.1	3.2	7.3
Barium, µg/L	P	333	2,000	--	--	--	--	--	--	--	--	--	--	140	120	130	150
Beryllium, µg/L	NP	0.27	4	--	--	--	--	--	--	--	--	--	--	<0.33	<0.33	<0.33	<0.33
Cadmium, µg/L	NP	0.38	5	--	--	--	--	--	--	--	--	--	--	<0.10	<0.10	<0.10	<0.10
Chromium, µg/L	P	7.52	100	--	--	--	--	--	--	--	--	--	--	<1.1	<1.2	<1.1	<1.2
Cobalt, µg/L	P	6.12	6	--	--	--	--	--	--	--	--	--	--	0.75	0.59	<0.17	<0.17
Fluoride, mg/L	NP	0.28	4	--	--	--	--	--	--	--	--	--	--	<0.38	<0.38	<0.38	<0.38
Lead, µg/L	P	1.16	15	--	--	--	--	--	--	--	--	--	--	<0.24	<0.26	<0.24	<0.26
Lithium, µg/L	P	18.2	40	5.8 J	6.3 J	16	15	6.2 J	7.2 J	16	17	4.6 J	4.8 J	<2.5	<2.5	6.6 J	5.7 J
Mercury, µg/L	DQ	DQ	2	--	--	--	--	--	--	--	--	--	--	<0.14	<0.11	<0.14	<0.11
Molybdenum, µg/L	NP	1.3	100	20	20	20	17	8.9	11	40	32	16	17	5.6	2.8	5.7	5.0
Selenium, µg/L	P	2.9	50	--	--	--	--	--	--	--	--	--	--	<1.4	<1.4	<1.4	<1.4
Thallium, µg/L	NP	0.5	2	--	--	--	--	--	--	--	--	--	--	<0.26	<0.57	<0.26	<0.57
Radium 226/228 Combined, pCi/L	P	2.91	5	--	--	--	--	--	--	--	--	--	--	--	1.52	1.380	1.670
Additional Parameters Monitored for Selection of Remedy																	
Iron, µg/L	UPL or GPS not applicable			--	--	--	--	--	--	--	--	--	--	6,700	3,100	4,600	7,100

4.4	Blue highlighted cell indicates the compliance well result exceeds the UPL or UTL (background) and the LOQ.
30.8	Yellow highlighted cell indicates the compliance well result exceeds the GPS.
17	Grayscale indicates Additional Parameters sampled for selection of remedy and evaluation of Monitored Natural Attenuation.

**Table 5. Groundwater Analytical Summary - November 2023 and April 2024
Prairie Creek Generating Station, Cedar Rapids, IA / SCS Engineers Project #25224074.00**

Abbreviations:

UPL = Upper Prediction Limit
UTL = Upper Tolerance Limit
µg/L = micrograms per liter
mg/L = milligrams per liter

GPS = Groundwater Protection Standard
LOD = Limit of Detection
LOQ = Limit of Quantitation
-- = Not Analyzed

DQ= Double Quantification
P = Parametric UPL or UTL
NP = Nonparametric UPL or UTL

Notes:

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

1. An individual result above the UPL or GPS does not constitute an SSI above background or statistically significant level above the GPS. See the accompanying report text for identification of statistically significant results.
2. GPS is the United States Environmental Protection Agency (USEPA) Maximum Contamination Level (MCLs), if established; otherwise, the values from 40 CFR 257.95(h)(2).
3. Interwell UPLs and UTLs calculated based on results from background wells MW-301 and MW-302. UPLs and UTLs were calculated in December 2022 based on background monitoring results through October 2022.

Created by: NDK
Last revision by: EMS
Checked by: JM
Proj Mgr QA/QC: TK

Date: 4/22/2021
Date: 9/20/2024
Date: 9/20/2024
Date: 1/13/2025

Table 6. Groundwater Field Data Summary
Prairie Creek Generating Station / SCS Engineers Project #25224074.00

Well	Sample Date	Groundwater Elevation (feet)	Field Temperature (deg C)	Field pH (Std. Units)	Oxygen Dissolved (mg/L)	Field Specific Conductance (umhos/cm)	Field Oxidation Potential (mV)	Turbidity (NTU)
MW-301	11/6/2023	712.29	13.7	6.68	4.21	1282	118.3	1.91
	4/18/2024	712.62	10.9	6.69	4.92	1296	159.3	7.15
MW-301A	11/7/2023	681.93	12.5	6.67	2.95	668	79.8	9.84
	4/17/2024	706.69	13.1	6.96	4.21	594	7.9	19.63
MW-302	11/7/2023	711.86	13.4	6.60	4.75	1447	83.5	7.08
	4/17/2024	712.69	9.3	6.64	2.07	1493	101.3	13.89
MW-303	11/7/2023	701.55	15.4	6.77	0.40	1026	-6.7	7.08
	4/15/2024	702.14	10.8	6.90	0.15	1067	-92.7	13.35
MW-304	11/7/2023	701.54	14.6	6.83	0.30	1196	17	6.37
	4/15/2024	702.08	10.4	6.87	2.33	1204	-68.1	14.46
MW-305	11/7/2023	701.38	14.4	6.87	0.41	1408	64.5	6.21
	4/16/2024	701.96	9.1	6.89	0.89	1308	77.7	6.05
MW-306	11/7/2023	701.68	12.2	7.31	0.49	803	-58.2	7.16
	4/15/2024	702.25	12.8	7.40	0.97	767	-113	6.34
MW-306A	11/7/2023	701.92	12.6	7.09	0.24	1285	29.7	8.30
	4/15/2024	702.48	12.8	7.11	0.15	1215	-66.9	9.15
MW-307	11/7/2023	704.67	18.6	9.48	0.18	199.7	-164.6	3.95
	4/18/2024	706.22	11.6	9.38	0.26	244.1	54.8	7.35
MW-308	11/7/2023	702.18	14.6	9.03	0.11	572	-219.3	6.89
	4/18/2024	703.51	12.1	8.88	0.29	788	-112.9	6.45
MW-309	11/7/2023	701.59	16.7	7.32	0.22	945	-142.7	6.06
	4/15/2024	702.06	14.4	7.10	1.00	1036	-93.9	7.26
MW-309A	11/7/2023	701.70	15.4	7.16	0.39	917	-150.2	3.70
	4/15/2024	702.27	15.0	7.02	0.45	907	-115.7	4.00
MW-310	11/7/2023	701.34	16.2	7.19	0.17	1014	-149.8	8.31
	4/15/2024	701.73	13.7	7.13	0.17	1097	-119.7	6.56
MW-310A	11/7/2023	701.51	15.2	7.30	0.51	1025	-158.6	3.26
	4/16/2024	702.05	14.7	7.17	0.35	1075	-122.9	6.11
MW-312	11/7/2023	702.24	23.5	6.83	0.23	825	-142.8	4.21
	4/15/2024	702.65	20.4	6.72	2.90	874	-77.3	21.32

Abbreviations:

deg C = Degrees Celsius

Std. Units = Standard Units

mg/L = milligrams per liter

umhos/cm = micromhos per centimeter

mV = millivolts

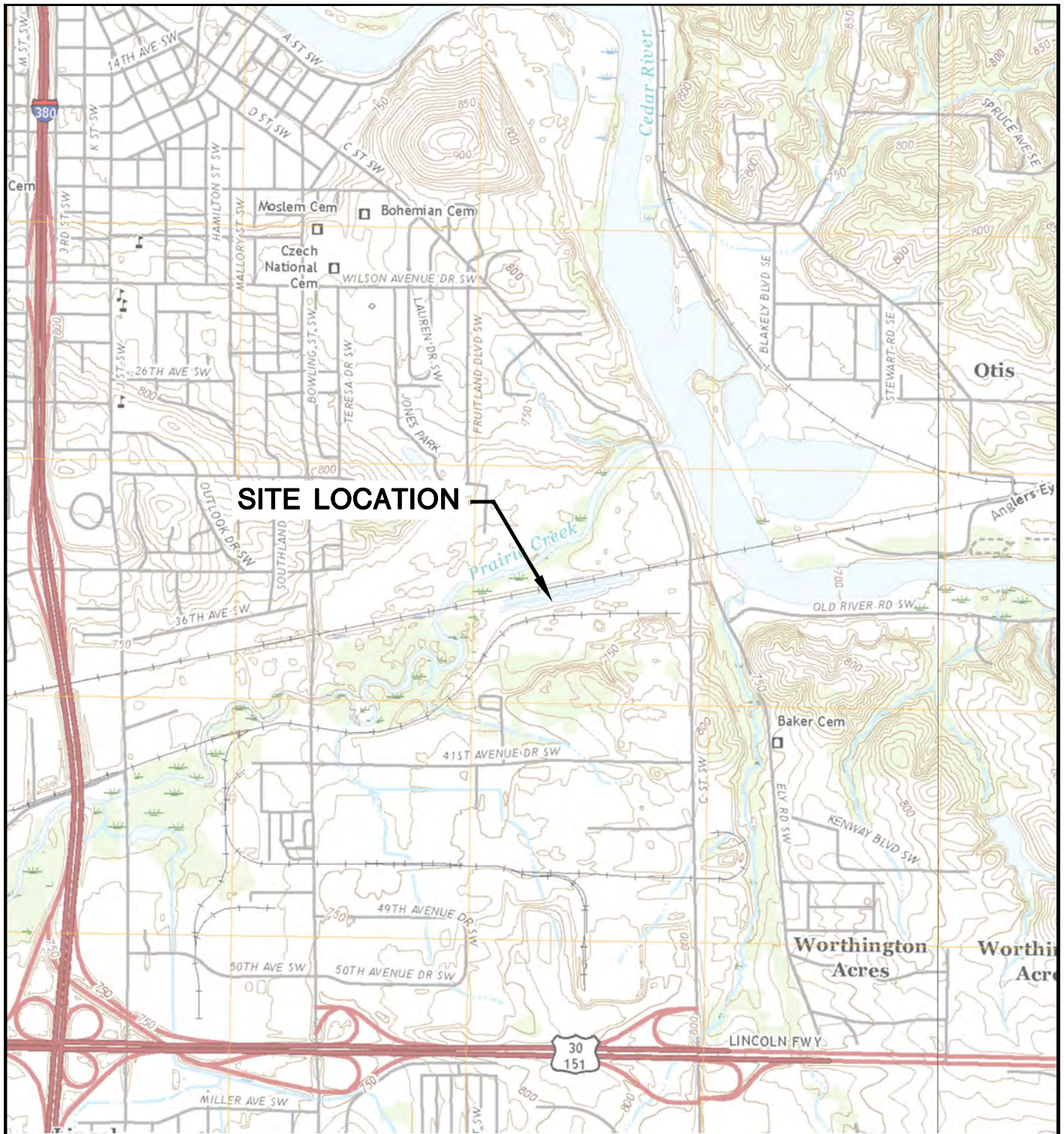
NTU = Nephelometric Turbidity Units

Created by: NDK
 Last revision by: EMS
 Checked by: JM

Date: 4/22/2021
 Date: 9/20/2024
 Date: 9/20/2024

Figures

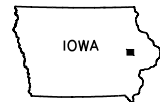
- 1 Site Location Map
- 2 Site Plan and Monitoring Well Locations
- 3 Water Table Map – April 2024
- 4 Water Table Map – October 2024



SITE LOCATION

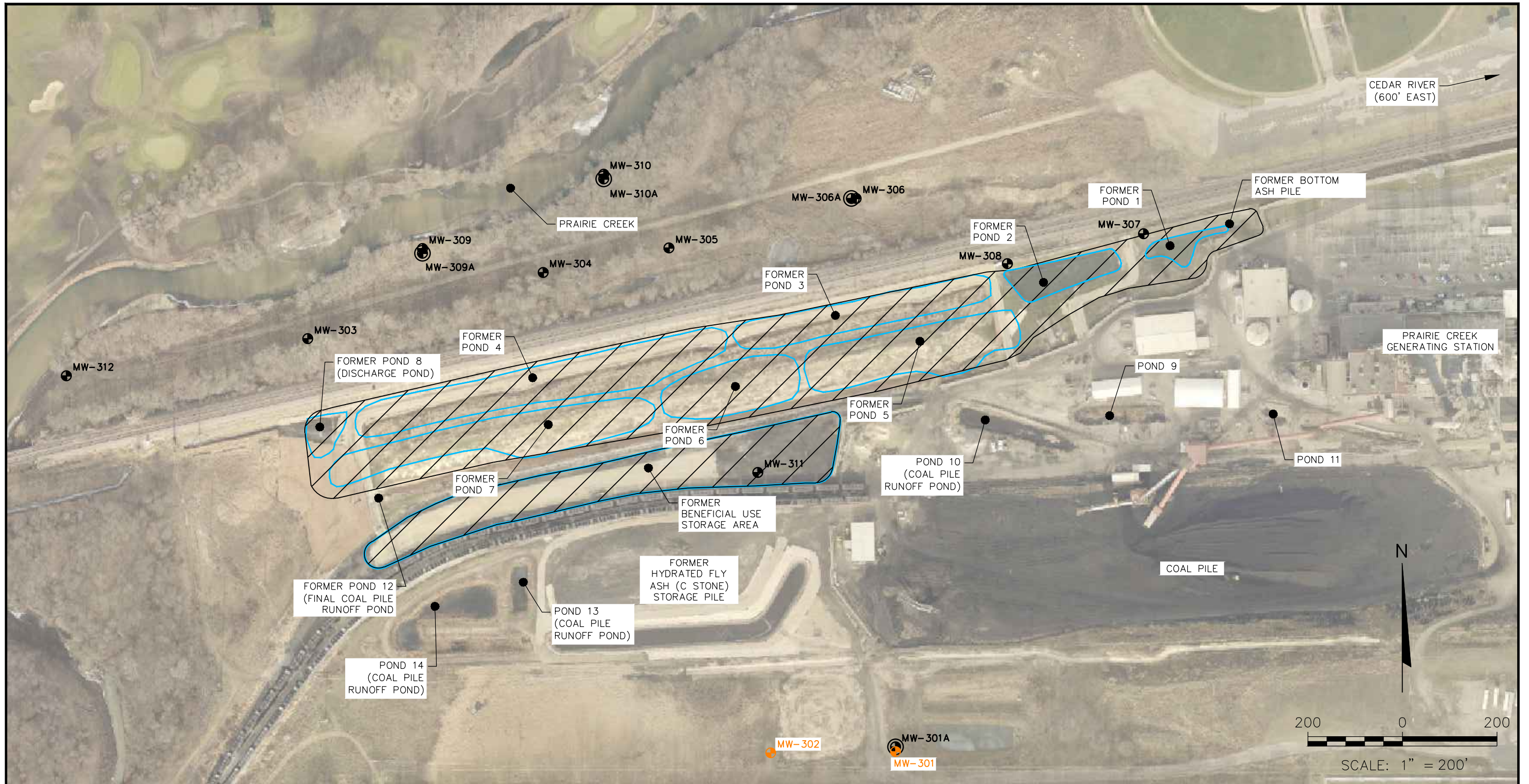


CEDAR RAPIDS SOUTH QUADRANGLE
 IOWA-LINN CO.
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 2018
 SCALE: 1" = 2,000'



CLIENT	ALLIANT ENERGY 4902 N. BILTMORE LANE, #1000 MADISON, WI 53718		SITE	ALLIANT ENERGY PRAIRIE CREEK GENERATING STATION CEDAR RAPIDS, IA		ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE	1
	PROJECT NO.	25219074.00		DRAWN BY:	BSS				
	DRAWN:	11/18/2019	CHECKED BY:	MDB					
	REVISED:	01/14/2020							

I:\25219074.00\Drawings\CCR 2019 Annual Report\Site Location Map.dwg, 1/30/2020 3:28:29 PM



LEGEND

- MONITORING WELL
- BACKGROUND MONITORING WELL
- PIEZOMETER
- FORMER CCR UNITS
- APPROXIMATE CLOSURE AREA (SEE NOTE 1)

NOTES:

1. PCS PONDS 1-8, THE BOTTOM ASH PILE, AND THE BENEFICIAL USE STORAGE AREA WERE CLOSED IN DECEMBER 2018. LIMITS ARE APPROXIMATE.
2. AERIAL PHOTO IMPORTED FROM THE ARCMAP BASEMAP (CEDAR RAPIDS, IOWA GIS - DECEMBER 22, 2018).
3. MONITORING WELLS MW-301 THROUGH MW-306 INSTALLED BY CASCADE DRILLING BETWEEN OCTOBER 31 AND DECEMBER 6, 2016.
4. MONITORING WELLS MW-307 AND MW-308 INSTALLED BY CASCADE DRILLING ON NOVEMBER 27, 2018.
5. MONITORING WELLS MW-309 AND MW-310 INSTALLED BY ROBERTS ENVIRONMENTAL DRILLING ON AUGUST 5-6, 2019.
6. MONITORING WELLS MW-301A AND MW-306A INSTALLED BY CASCADE DRILLING ON JUNE 22-24, 2020.
7. MONITORING WELLS MW-309A AND MW-310A WERE INSTALLED BY CASCADE DRILLING ON JULY 23, 2020.
8. THE BACKGROUND MONITORING WELLS FOR THE PRAIRIE CREEK GENERATING STATION ARE: MW-301 AND MW-302.

PROJECT NO.	25222074.00	DRAWN BY:	BSS/KP
DRAWN:	11/18/2019	CHECKED BY:	RM
REVISED:	01/19/2024	APPROVED BY:	TK 1/19/2024

SCS ENGINEERS
 2830 DAIRY DRIVE MADISON, WI 53718-6751
 PHONE: (608) 224-2830

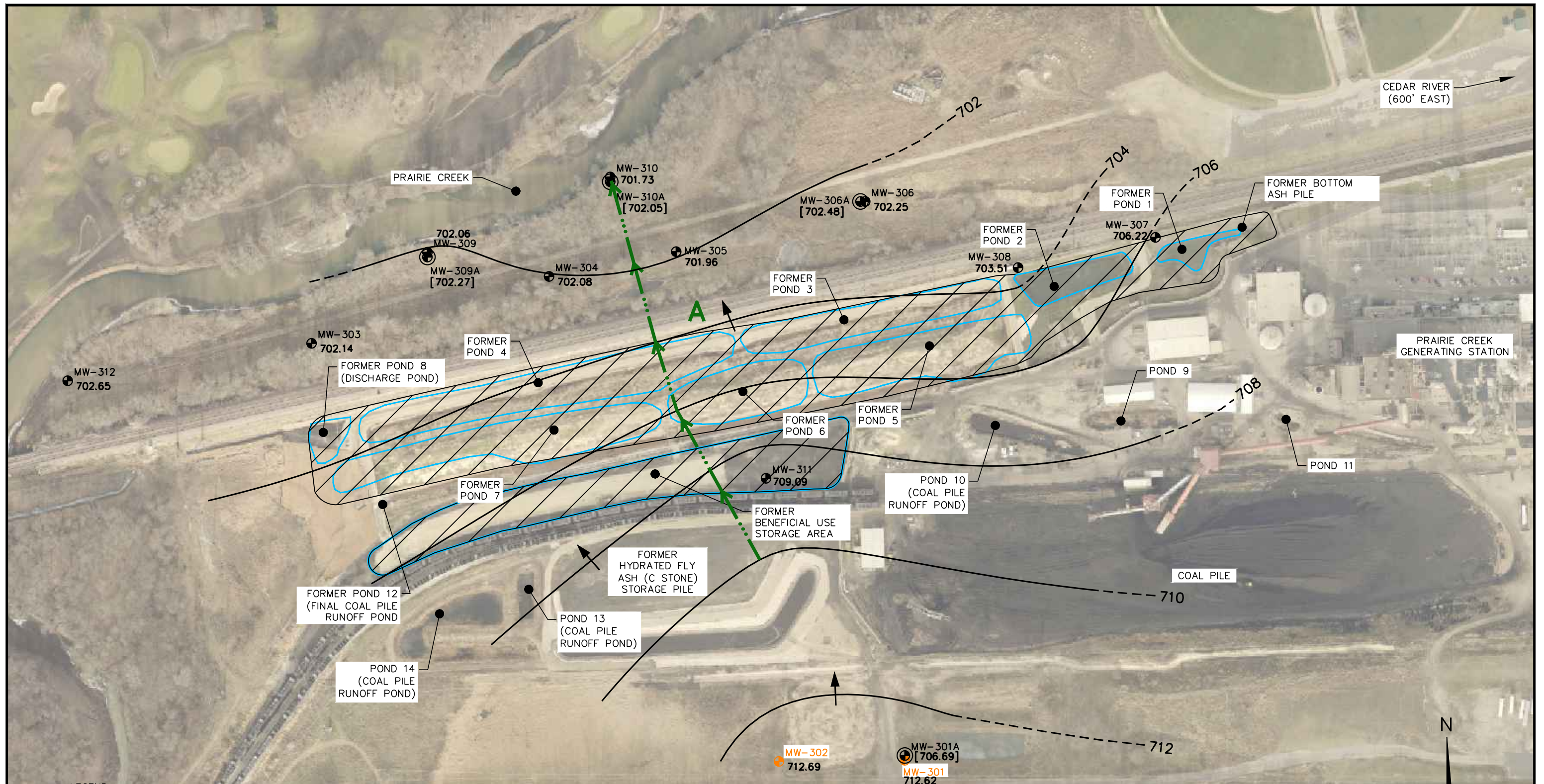
CLIENT: INTERSTATE POWER AND LIGHT
 4902 N. BILTMORE LANE, #1000
 MADISON, WI 53718

SITE: ALLIANT ENERGY
 PRAIRIE CREEK GENERATING STATION
 CEDAR RAPIDS, IA

SITE PLAN AND
 MONITORING WELL LOCATIONS

FIGURE
 2

I:\25222074.00\Drawings\Site Plan and Monitoring Well Locations.dwg, 1/19/2024 4:31:07 PM

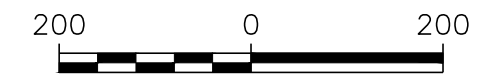


LEGEND

- MONITORING WELL
- BACKGROUND MONITORING WELL
- PIEZOMETER
- CCR UNITS
- APPROXIMATE CLOSURE AREA
- 712.62** WATER TABLE ELEVATION (APRIL 15-18, 2024)
- [706.69]** PIEZOMETER WELL PIEZOMETRIC SURFACE ELEVATION (NOT CONTOURED)
- WATER TABLE CONTOUR (DASHED WHERE INFERRED) (2-FOOT CONTOUR INTERVAL)
- FLOW PATH FOR VELOCITY CALCULATION (SEE TABLE 4A)
- APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTES:

1. SEE FIGURE 2 FOR BASE MAP NOTES.



SCALE: 1" = 200'



PROJECT NO.	25224074.00	DRAWN BY:	SB/RVG
DRAWN:	07/29/2024	CHECKED BY:	BRK
REVISED:	01/27/2024	APPROVED BY:	BRK (08/15/2024)

SCS ENGINEERS
 2830 DAIRY DRIVE MADISON, WI 53718-6751
 PHONE: (608) 224-2830

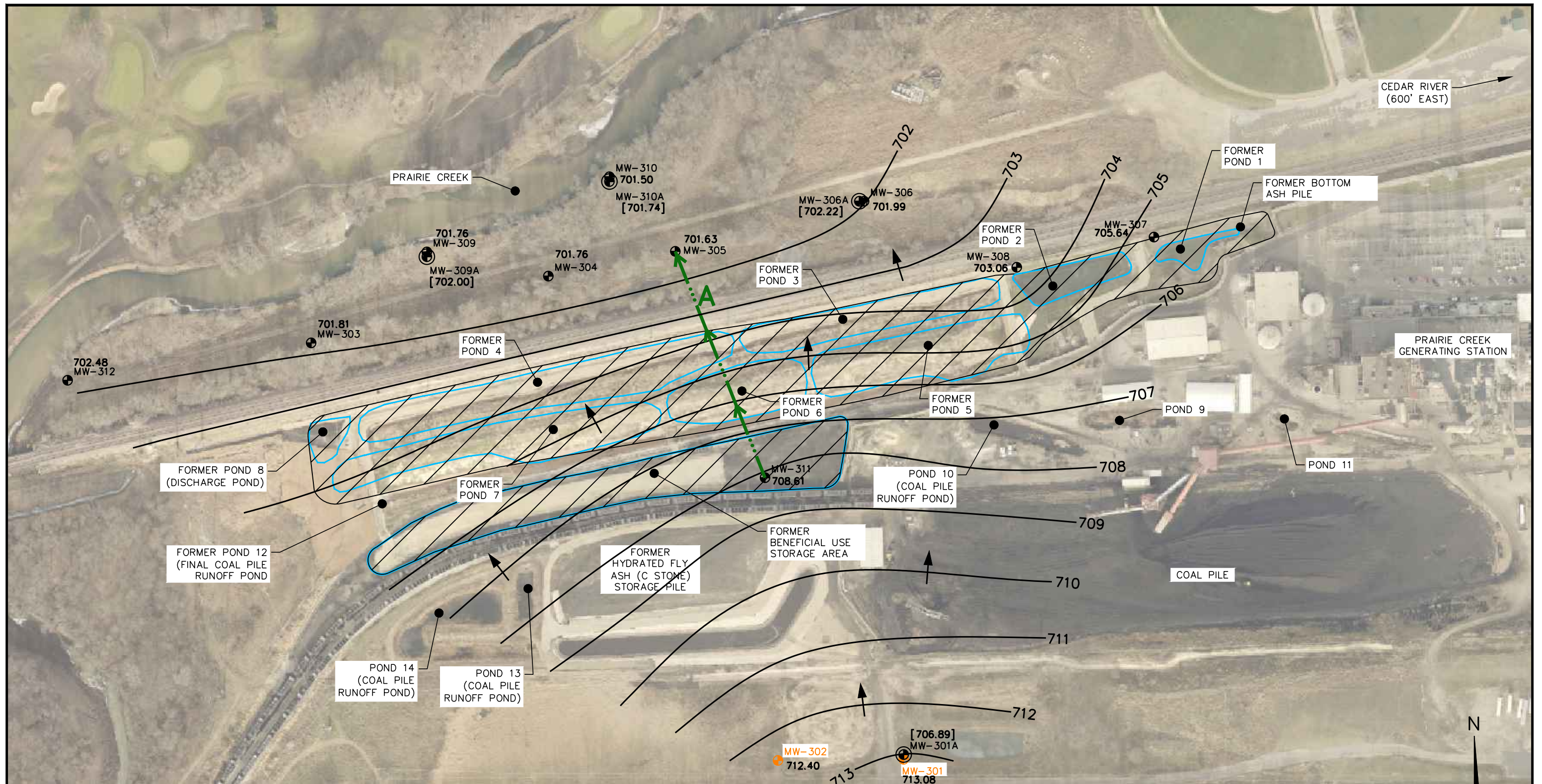
CLIENT: ALLIANT ENERGY
 4902 N. BILTMORE LANE, #1000
 MADISON, WI 53718

SITE: ALLIANT ENERGY
 PRAIRIE CREEK GENERATING STATION
 CEDAR RAPIDS, IA

WATER TABLE MAP
 APRIL 2024

FIGURE
 3

I:\25224074.00\Drawings\2024_Wtbl.dwg, 1/27/2025 11:06:31 AM



CEDAR RIVER
(600' EAST)

PRAIRIE CREEK

MW-310
701.50
MW-310A
[701.74]

MW-306A
[702.22] MW-306
701.99

FORMER POND 1
FORMER BOTTOM
ASH PILE

701.76
MW-309
MW-309A
[702.00]

701.76
MW-304

701.63
MW-305

FORMER POND 2
MW-308
703.06

MW-307
705.64

701.81
MW-303

FORMER POND 4

FORMER POND 3

702.48
MW-312

PRAIRIE CREEK
GENERATING STATION

FORMER POND 8
(DISCHARGE POND)

FORMER POND 7

FORMER POND 6

FORMER POND 5

POND 9

FORMER POND 12
(FINAL COAL PILE
RUNOFF POND)

FORMER
HYDRATED FLY
ASH (C STONE)
STORAGE PILE

MW-311
708.61

POND 10
(COAL PILE
RUNOFF POND)

707

POND 11

FORMER BENEFICIAL USE
STORAGE AREA

708

COAL PILE

POND 14
(COAL PILE
RUNOFF POND)

POND 13
(COAL PILE
RUNOFF POND)

709

710

711

712

MW-302
712.40

[706.89]
MW-301A
MW-301
713.08



LEGEND

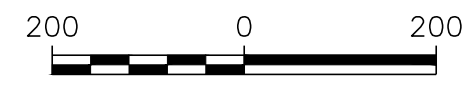
- MONITORING WELL
- BACKGROUND MONITORING WELL
- PIEZOMETER

- CCR UNITS
- APPROXIMATE CLOSURE AREA
- 712.62** WATER TABLE ELEVATION (OCTOBER 1-3, 2024)

- [706.69]** PIEZOMETER WELL PIEZOMETRIC SURFACE ELEVATION (NOT CONTOURED)
- WATER TABLE CONTOUR (DASHED WHERE INFERRED) (1-FOOT CONTOUR INTERVAL)
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- FLOW PATH FOR VELOCITY CALCULATION (SEE TABLE 4A)

NOTES:

1. SEE FIGURE 2 FOR BASE MAP NOTES.
2. WATER TABLE CONTOURS ARE ESTIMATED BASED ON DATA OBTAINED ON OCTOBER 1-3, 2024.
3. BACKGROUND AERIAL IMAGE FROM ESRI DATED 2018.



SCALE: 1" = 200'

PROJECT NO.	25224074.00	DRAWN BY:	SB/RVG
DRAWN:	11/01/2024	CHECKED BY:	NLB/BRK
REVISED:	01/27/2025	APPROVED BY:	BRK (11/20/2024)

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830


CLIENT: ALLIANT ENERGY
4902 N. BILTMORE LANE, #1000
MADISON, WI 53718

SITE: ALLIANT ENERGY
PRAIRIE CREEK GENERATING STATION
CEDAR RAPIDS, IA

WATER TABLE ELEVATION CONTOUR MAP
OCTOBER 1-3, 2024

FIGURE
4

I:\Client\Alliant_PROJECT SITES\Prairie Creek\CAD Master References PCS\Water Table Maps\Alliant PCS Oct 2024 WTBL Map.dwg, 1/27/2025 11:13:35 AM



Appendix A
Regional Hydrogeologic Information

**Table PC-2. Regional Hydrogeologic Stratigraphy
Prairie Creek Generating Station / SCS Engineers Project #25215053.01**

Age of Rocks	Hydrogeologic Unit	General Thickness (feet)	Name of Rock Unit*	Type of Rock
Quaternary (0-1 million years old)	Surficial Aquifers • Alluvial • Buried-Channel • Drift	0 to 400	Undifferentiated	<ul style="list-style-type: none"> • Sand, gravel, silt, and clay • Sand, gravel, silt, and clay • Till (sandy, pebbly clay), sand, and silt
Pennsylvanian (280 to 310 million years old)	Aquiclude, locally contains waterbearing sandstone	0 to 70	Undifferentiated	<ul style="list-style-type: none"> • Shale, sandstone, limestone, and coal
Mississippian (310 to 345 million years old)	Mississippian Aquifer	0 to 220	Meramecian Series Osagean Series Kinderhookian Series	<ul style="list-style-type: none"> • Limestone and sandstone • Dolomite, limestone, and shale • Limestone, dolomite, and siltstone
Devonian (345 to 400 million years old)	Devonian Aquiclude	0 to 350	Yellow Spring Group Lime Creek Group	<ul style="list-style-type: none"> • Shale, dolomite, and siltstone • Dolomite and shale
	Devonian Aquifer	0 to 400	Cedar Valley Limestone Wapsipinicon Limestone	<ul style="list-style-type: none"> • Limestone and dolomite • Dolomite, limestone, and shale
Silurian (400 to 425 million years old)	Silurian Aquifer	0 to 450	Gower Dolomite Hopkinton Dolomite Kankakee Limestone Edgewood Dolomite	<ul style="list-style-type: none"> • Dolomite, with some chert and limestone
Ordovician (425 to 500 million years old)	Aquiclude	300 to 600	Maquoketa Shale Galena Dolomite Decorah Formation Platteville Formation	<ul style="list-style-type: none"> • Dolomite and shale • Dolomite and chert • Limestone and shale • Limestone and shale
	Cambrian-Ordovician aquifer	400 to 650	St. Peter sandstone Prairie du Chien Formation Jordan Sandstone St. Lawrence Dolomite	<ul style="list-style-type: none"> • Sandstone • Dolomite, sandstone, and shale • Sandstone • Dolomite
Cambrian (500 to 600 million years old)	Cambrian confining beds	90 to 290	Franconia Sandstone	<ul style="list-style-type: none"> • Shale, siltstone, and sandstone
	Dresbach Aquifer	157 to 1644	Dresbach Group Galesville Sandstone Eau Claire Sandstone Mt. Simon Sandstone	<ul style="list-style-type: none"> • Sandstone • Sandstone, shale, and dolomite • Sandstone
Precambrian (600 million to more than 2 billion years old)	Precambrian rocks	Unknown	Crystalline rocks, undifferentiated	<ul style="list-style-type: none"> • Sandstone, igneous and metamorphic rocks

*This nomenclature and classification of rock units in this report are those of the Iowa Geological Survey and do not necessarily coincide with those accepted by the U.S. Geological Survey.

Source: "Water Resources of East-Central Iowa," Iowa Geologic Survey Water Atlas No. 6.

I:\25215053\Reports\Report 8 - OGS\Tables\Regional_Hydrogeologic_Stratigraphy.doc

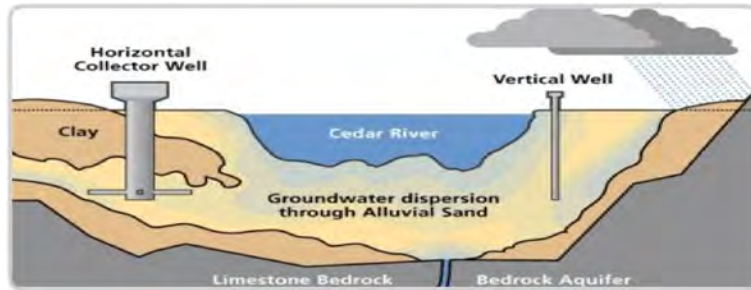
GO

- Things to See & Do
- Resident Resources
- Doing Business
- City Council
- Government
- City News
- CR Talks

Resident Resources

- Parks & Recreation
- Utilities
- Energy Management
- Garbage & Recycling
- Utility Bills
- Water
- About Us
- Backflow Prevention
- Outages/Main Breaks
- Our Treatment Process
- Water Quality
- Our Watershed
- Water Quality Report
- Best Tasting Water
- Water Engineering
- In the Home
- Drought
- Water Conservation
- Utility Bills
- 5 in 1 Dam
- Sewer Maintenance
- Water Pollution Control
- Sewer
- Storm Water
- City Buses
- Rental Services
- Neighborhood Services
- Streets Services
- Housing Services
- CleanUpCR
- iGreenCR
- Library
- Public Safety
- City Services
- Get Involved
- Americans with Disabilities Act

Our Watershed



SHARE

Where Does Our Water Come From?

The City of Cedar Rapids obtains its drinking water supplies from shallow vertical and collector wells constructed in the sand and gravel deposits along the Cedar River. Those deposits form an underground water-bearing layer called an alluvial aquifer. Because of continuous pumping of the City's wells, most of the water in the aquifer is pulled from the river. The rest of the water is supplied as water percolates up from a deeper bedrock aquifer or down from the top of the ground.

Our drinking water from those wells benefits from natural filtration through the riverbank. This natural sand filtration has proven beneficial, pre-treating the water before it ever reaches the City's two treatment plants (both conventional lime-softening facilities).

Watershed Monitoring

In order to most effectively manage our water resources, the Cedar Rapids Water Division has worked with state and federal agencies to complete a source water assessment, identifying potential contamination sources in the Cedar River watershed. The results of that assessment, paired with a continuous monitoring program, help us better understand our watershed. We have confirmed that some contaminants, including nitrate, herbicides and bacteria, enter the Cedar River watershed upstream from our wells. The watershed of the Cedar River upstream from Cedar Rapids is over 6,500 square miles and extends into southern Minnesota. Monitoring of these contaminants will continue to ensure a strong watershed protection program.

If you are interested in reviewing our source water assessment or any monitoring results, please contact the CRWD at 319-286-5910.

- | | | | |
|-----------------------------|------------------------|---------------------------|--------------------|
| How do I...? | Building Permit Viewer | Flood Recovery Progress | Parks & Recreation |
| Contact Us | City Buses | Garbage Pickup | Public Safety |
| Subscribe | City Departments | Licenses, Permits & Taxes | Utility Bills |
| Bid Opportunities & Results | Report a Problem | Maps | FAQ |

Select Language ▼

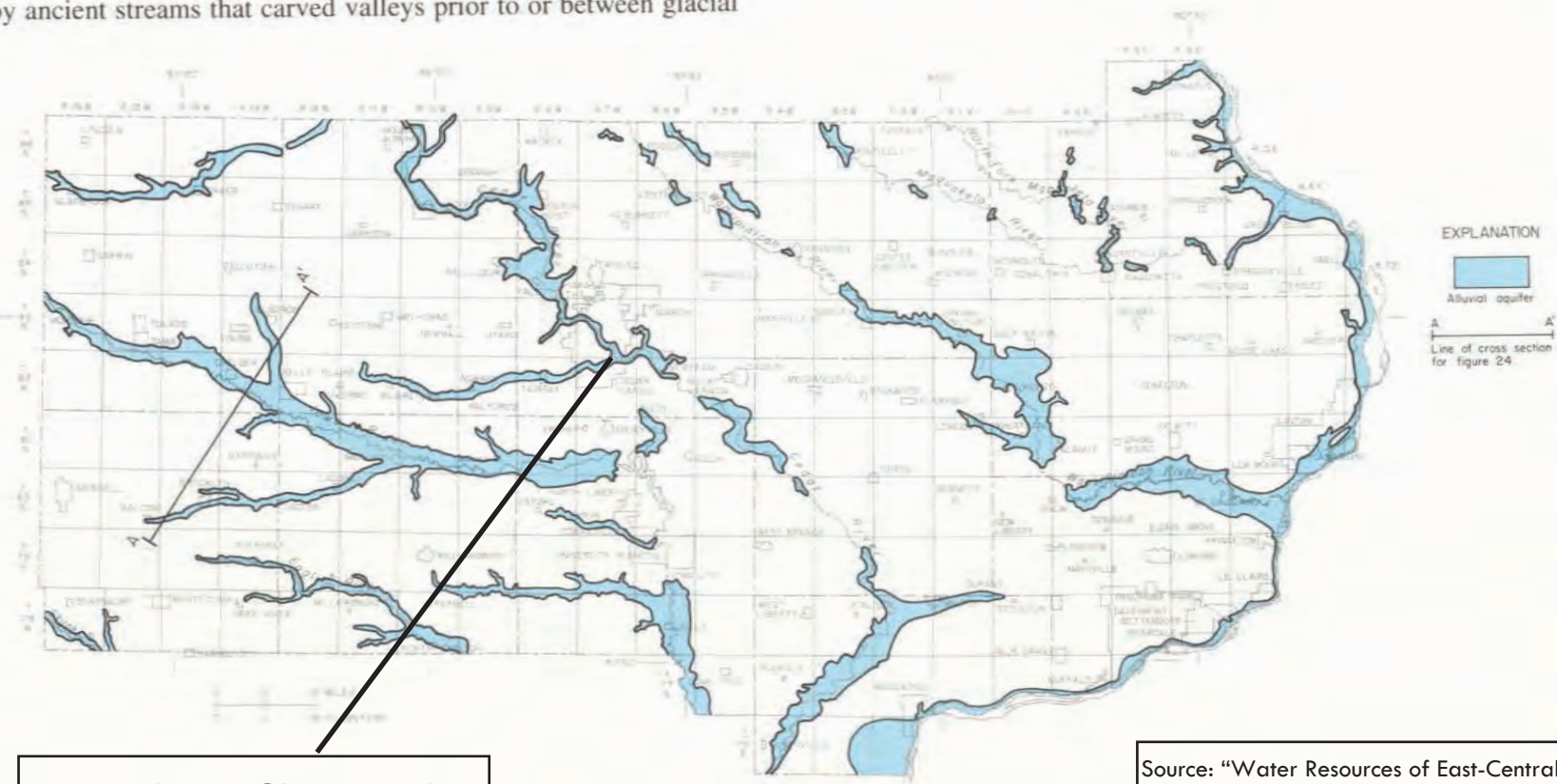
Surficial Aquifers

The surficial aquifers are located within the unconsolidated materials above the bedrock surface. They are subdivided into alluvial, buried-channel, and drift aquifers.

The alluvial aquifers are deposits located along present-day watercourses. They consist of sands and gravels interbedded with less-permeable silts and clays and lie beneath the flood plains of larger rivers and creeks. In the eastern half of the report area, the Iowa, Cedar, Wapsipinicon, and Maquoketa Rivers as well as Buffalo Creek alternately flow through narrow bedrock gorges and wide flood plains (fig. 22). Thus the alluvial aquifers occur irregularly in the valleys of these rivers.

The buried-channel aquifers (fig. 23) are the unconsolidated material deposited by ancient streams that carved valleys prior to or between glacial

advances. Many of these ancient valleys were scoured deeply into the bedrock and are much wider than the valleys of present streams (fig. 24). Buried channels may be easily recognized on the bedrock topography map (fig. 25), but are only poorly expressed in the modern landscape. While they are not generally expressed as primary features of present topography, they exert noticeable influences on modern drainage. Prairie Creek near Cedar Rapids, Deep Creek near Preston, and the lower stretches of the Cedar, Wapsipinicon, and Maquoketa Rivers follow the courses of buried channels. See figures 22 and 23. In addition, most of the irregularly occurring alluvial aquifers in the eastern half of the report area are located where modern stream valleys intersect buried bedrock channels.



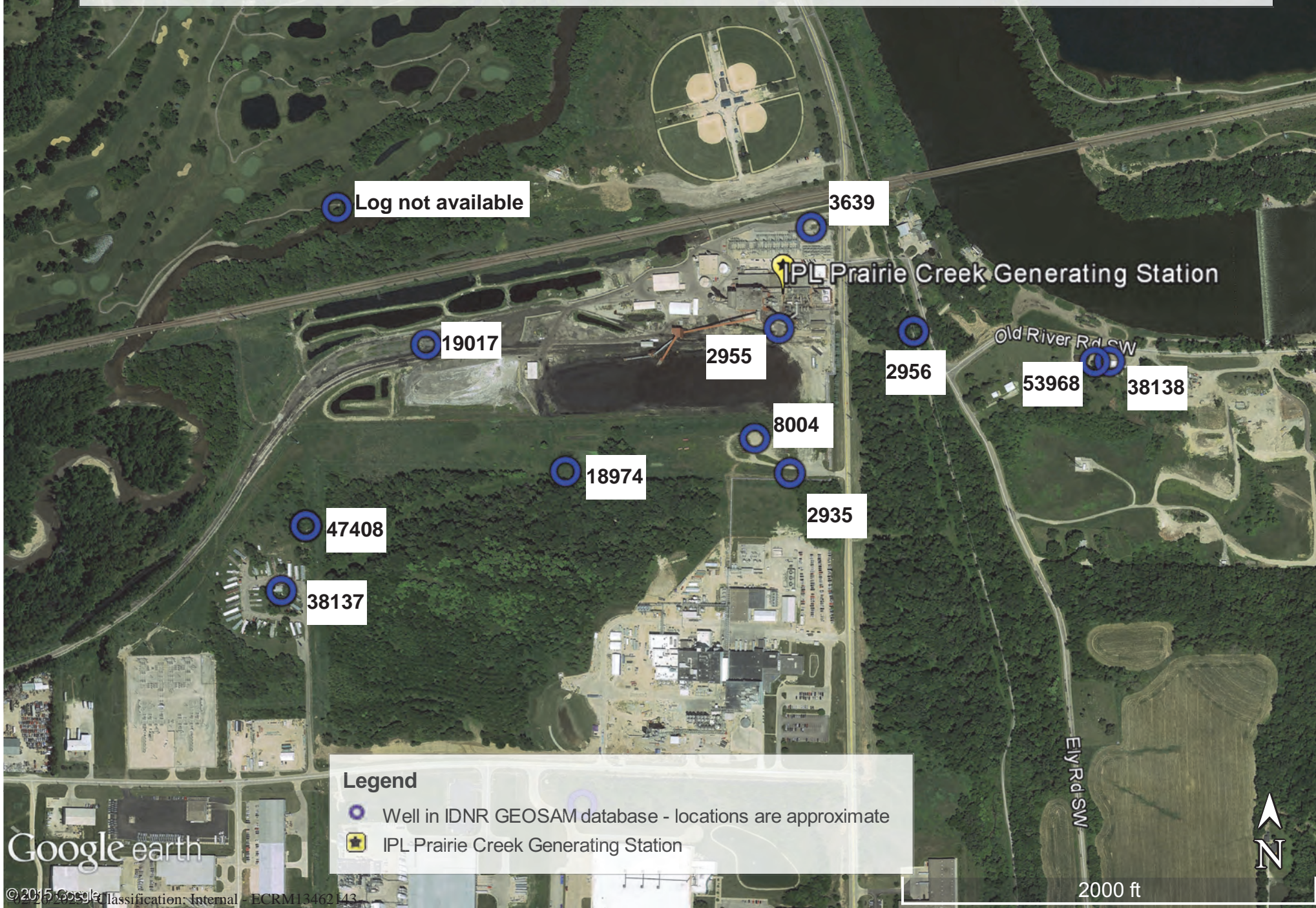
Approximate Site Location

Source: "Water Resources of East-Central Iowa," Iowa Geologic Survey Water Atlas No. 6.

Figure 22.—Areal distribution of alluvial aquifers in east-central Iowa

Historical Well Logs Near Prairie Creek Generating Station

Labeled well locations are included in IDNR's GEOSAM database. Logs are not available for all well borings. Well locations are approximate.



Legend

- Well in IDNR GEOSAM database - locations are approximate
- IPL Prairie Creek Generating Station

Google earth

2000 ft



FORM NO. 79 - In stock and for sale by Mid-West Prtg. Co., Tulsa W-2935

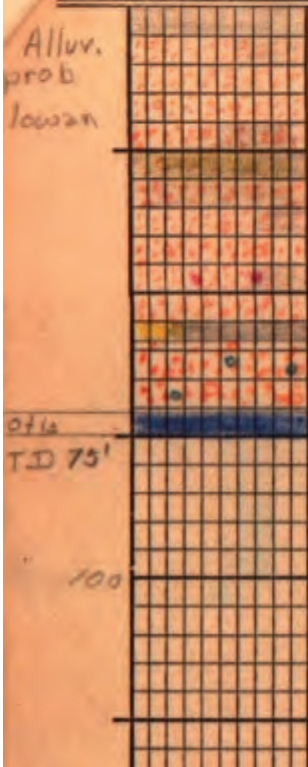
STATE IOWA CEDAR RAPIDS (LINN)
 NE/SE NE CENTRAL IOWA POWER CO-OP
 SEC. 3 Test hole No. 1
 TWP. 82N RGE. 7W COMMENCED COMPLETED



Art Bruinekool
 CASING RECORD
 LOGGED BY
 Aug 11, 1947 SBT+Gp.

REMARKS
 Elev. 722 ± S.W.L. 19.6' below L.S. - 8-11-47
 T.D. 75'

CB7-3



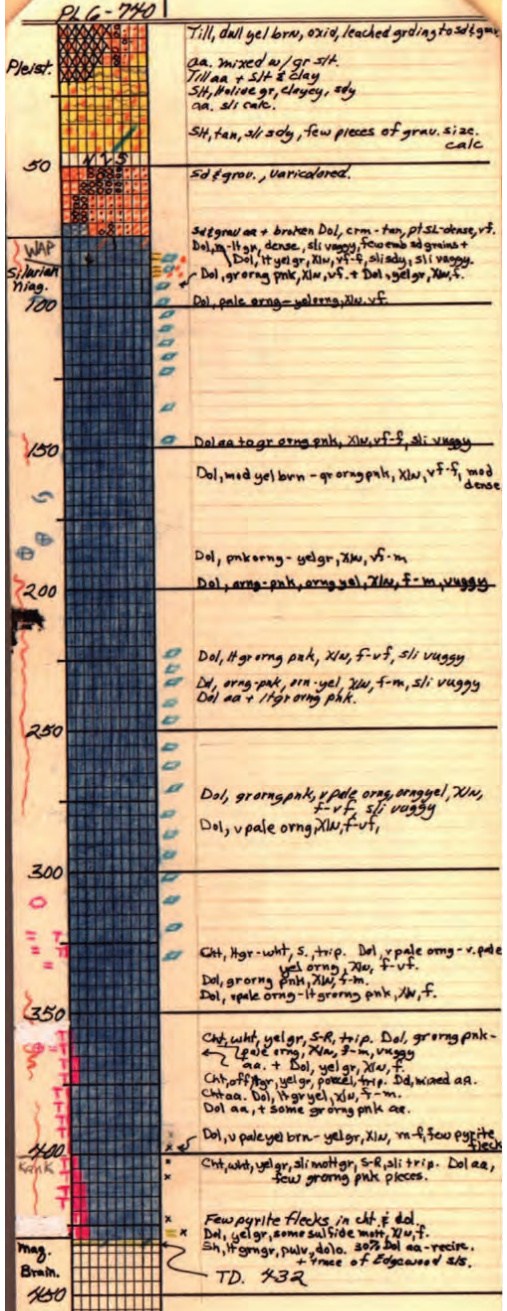
soil reddish brn, silty
 sd med to crse, dirty, brn to red
 yel crser this is clean
 Gray clay masses sdy
 silt sdy, calc, Gr. Aluv.
 sd crs pbls
 some pbls
 cht pbls
 sd med poorly sorted, rd, bright
 silt clay bl gr. v. fn; silt lam; wh, qtz
 sd, crse to v. crsw. some grav.
 yel bedrock reported
 Z1
 Bertram

General	Construction	Logs	Stratigraphy	Water	Storage
---------	--------------	------	--------------	-------	---------

Identification		Location	
Date Received		State	Iowa
Owner Name	Hide-A-Way Manor	County	Linn
Alt Name		Quadrangle	Cedar Rapids South, Iowa
WNumber	38137	Township	T82N
PWTS ID		Range	R7W
Storet ID		Section	3
SDWIS ID	2411834	Quarter	SW NE NE
USGS ID		Latitude	41.9401300000
Project	SOURCE WATER PROTECTION	Longitude	-91.6478370000
Operator	Unknown	Accuracy	GPS +/- 20 m.
		UTM X	612089
		UTM Y	4644013
Site		Drilling	
Site Type	Drilled hole	Drilling Company	Unknown
Well Status	Active	Drilling Date	
Field Located		Drill Method	Unknown
Elevation	741 ft	Bedrock Depth	
Elevation Accuracy	Digital Elevation Model Accurate to 5 ft	Well Depth	142 ft
Landscape Position	Valley	Total Depth	142 ft
		Well Types	Public Access
		Aquifers	Silurian

STATE Iowa Cedar Rapids (Linna)
 SW NW SW NE Iowa Elec. L & P #5
 SEC. 3
 TWP. 82 RGE. 7W COMMENCED _____ COMPLETED 10/66
 Casing Record: Thorpe
 LOGGED July 1974 BY Gilmore

REMARKS
 El. 715' Top.
 TD. 432'



715
 28
 640

430
 75
 355

STATE Iowa Cedar Rapids (Linn)

SENESEWNE Central Iowa Power #4

SEC. 3

TWP. 82 RGE. 7W COMMENCED 8-22-66 COMPLETED 9-17-66

	30		

Thorpe well co.

CASING RECORD
42" csg 0-5', 32" csg +1'-23', 24" csg

+17'-69'7", 16" csg +2'10"-90'

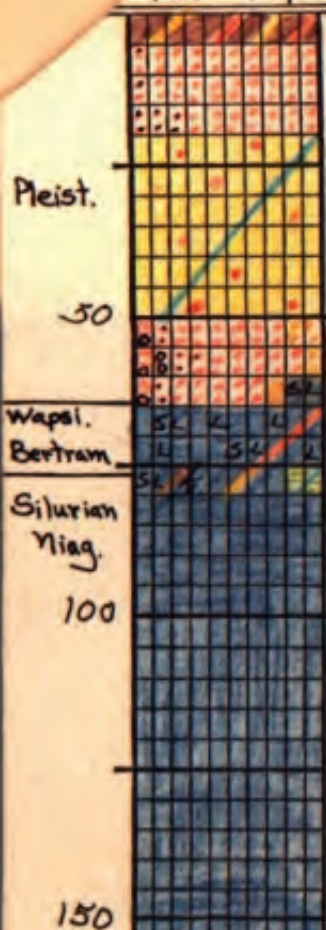
LOGGED 10-22-71 BY Gilmore

EL. 722' REMARKS Cable tools

TD. 439' SWL-40-58', PL-113.9'

Yield-600 gpm

PL6-717



Fil, pale yel brn, sdy, silty, calc.
Sd, yel brn, med, sli clayey

Sd, yel brn, m-crs, sli clayey
Silt, dusty yel, calc, few emb'd grains, calc.

Sd & Gravel, 95% grtz, clean

Sd & gr aa + Dol, pale yel org, SL-L, oxid.

Dol, brn gr-mgr, SL-L, vuggy, tr emb sd, hard

Dol aa - lt gr - lt brn gr

Dol aa, sli dker & ending to crs alt yrd. Dol, pale-v pale

Dol, pale yel brn, xlv, vf, tr emb sd, sh, grgrn, chunky calc.

Dol, pale yel brn, yel gr, xlv, vf-crs.

aa + Dol, pale org, dense

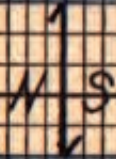
Dol, pale org, dense-f, few mugs, few dk gr zones.

Dol, pale org, dense - xlv tr emb calcite

Dol aa, more Xlu, some pin point por.
Dol, pale org - pink org, Xlu, f, pt dense, few gr zones

200

Dol, org pink - pale org, Xlu, v.f., pin point por.



Dol, mod org pink - pale org, Xlu, v.f., pt dense, sli por, vuggy, calcite - clear - yel.

250

Dol, gr org, org pink, dense, f, emb calcite



Dol aa few gr zones
Dol, v. pale org, dense - f, emb calcite - yel - clear
Dol aa + some org pink

300

Dol pale org, tr pink, Xlu, f, emb calcite, pin point por
cht, yel gr, wht, trip. Dol aa.
cht aa foss.

cht, lt gr, wht, trip, foss. Dol, v. pale org, Xlu, f,
sli vuggy - por, trace org pink,
cht aa. Dol, v. pale org, trace org pink, Xlu, f - v.f.
Dol, pale org, gr org pink, dense, f, sli vuggy & por.

350

cht, v. lt gr, wht, sli trip. S Dol, pale - v pale org, Xlu, f-m.
Dol aa, sli vuggy

cht aa. Dol, v. pale org, Xlu, f - v.f.
cht, lt gr, wht, sli trip. Dol, v. pale yel brn, pale org, Xlu, f - m.
cht, lt - v. lt gr, S. Dol aa.
cht, lt gr, wht, pale yel brn, S, sli trip. Dol aa sli vuggy
cht aa. Dol, pale gr org, Xlu, f - m.
cht, lt - v. lt gr, S, sli mett. Dol aa.

400

cht, off wht, lt gr, S-R, sli trip. Dol aa, some disse. pyrite.
cht aa. Dol, v. pale yel brn, Xlu, f - m.
cht, off wht, yel brn, lt gr, S-R, sli trip. Dol aa w/ dk gr mett.,
pt sli row f ang.

Kaak

Sh, gr gr, chunky, dolo.

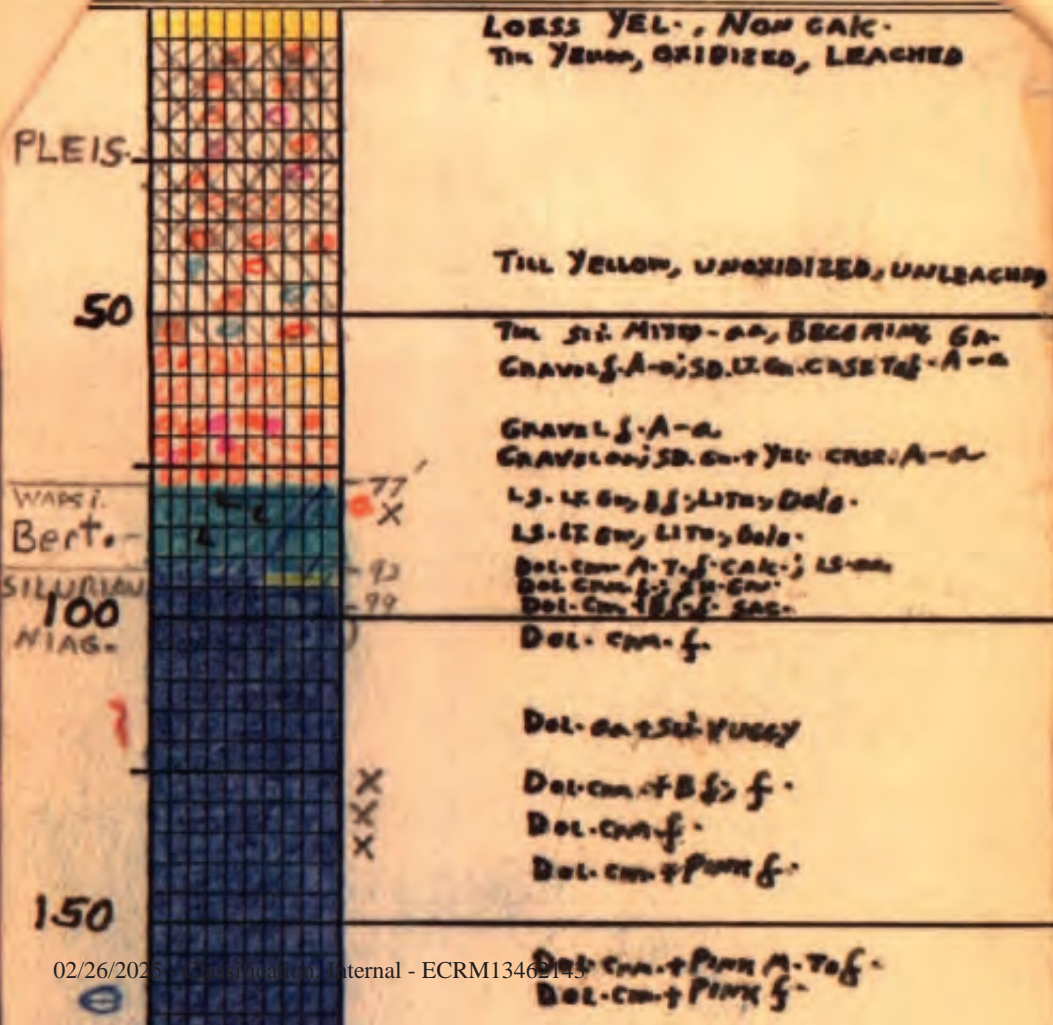
Mag. 450

TD. 439'

$$\begin{array}{r} 720 \\ 60 \\ \hline 660 \end{array}$$

$$\begin{array}{r} 722 \\ 436 \\ \hline 286 \end{array}$$

STATE		CEDAR RAPIDS (LINN)	
IOWA		CENTRAL IOWA POWER COOP #3	
NW NE SE NE APP. C NE SE		(REA)	
SEC. 3		COMMENCED	
TWP. 82N		AUG. 21 - SEPT. 14, 1956	
RGE. 7W		COMPLETED	
[Grid]		HORG & AMES	
[Grid]		CASING RECORD	
[Grid]		77' OF 20" CASING	
[Grid]		99' OF 12" CASING (CEMENT)	
[Grid]		LOGGED FEB. 25, 1957 BY NORTROP	
EL 722'		REMARKS	
TD 434		SWL 38.67'	
		PL 144.9' @	
		SWL 39.12'	
3/59		SWL 145' @ 476 gpm	
EK8-1			



Dol. Bl. + Pink f.

Dol. Bl. f.; sil. porous - some pink f.

Dol. con + pink f. - porous
Dol. pink f., vuggy
Dol. con + pink f., vuggy
Dol. con + pink f., sil. porous

Dol. con f.

Dol. con + pink f.
Dol. mostly con. f. - some pink f.
Dol. con. f., sil. vuggy

Dol. con. + pink f. > sil. porous

CHZ. W. - R. con, Tap; Dol. con + pink f.
sil. porous
CHZ. con; Dol. mostly con. f. sil. porous
Dol. con + pink f. - some pink f.

CHZ. W. - R. con, Tap; Dol. con. A. Taf.
CHZ. W. - R. con, Tap, P. f.; Dol. con
CHZ. W. - R. con + S. med; Dol. con. A. Taf.
CHZ. W. - R. con, Tap; Dol. con. A. Taf.
CHZ. W. - R. con, S. med; Dol. con.

CHZ. con + R. con, Tap; Dol. con. A. Taf.

X Dol. con. A. Taf.

CHZ. W. - R. con, Tap, + S. med; Dol. con. A. Taf.

CHZ. con; Dol. con. f.

CHZ. con; Dol. con. + sil. vuggy, con. f.

Dol. con. f.; sil. vuggy con. f., Dol. con. f. Lumpy

Handwritten vertical text: "Handwritten notes" (partially obscured)

722 722
95 97
--- ---
627 625

Note: The location of this

well should be checked. The map provided by the Company indicates the plant is in the

NE 1/4 sec. 3-82-7W
Elev. should be checked also.

A set of geophysical logs was run 3-23-76. Caliper and radiation logs gave indications of major cavities from 200-220' and 300-320'. These

logs are on file with the Carbonate Hydrology Project data.

3-24-76
Bunker.

LB

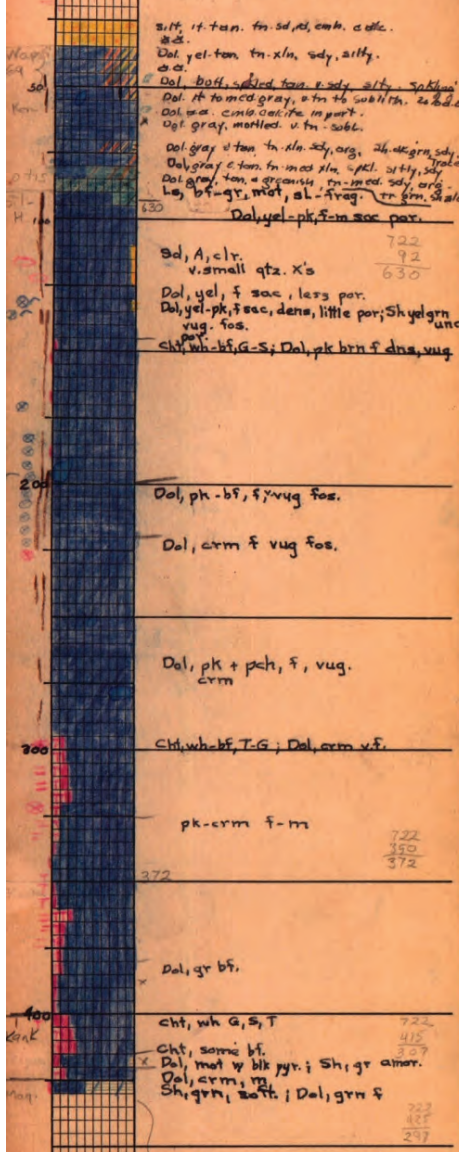
722
+30

292

STATE IOWA Cedar Rapids P.O. (Linn) #1
 SESE-NE-NE Central Iowa Power Co-op #1
 SEC. 3 (NORTH) R.E.A.
 TWP. 82N RGE. 7W COMMENCED May 5-1999 COMPLETED June 1, 1999
 HOES & GAMES - Ed Martin
 CASING RECORD
 110' of 12" casing cemented in
 20" hole - (from 12" hole balance)
 LOGGED BY M. Parker

EL. 722' Pump setting 290'
 TO 434' 2nd Prod. Test after 1st and.
 SWL. 24.50'
 P.W.L. 250±' @ 248 gpm

CE10-6 for 1/2 hrs. when water was measured to 250 gpm well started pumping oil



silt, lt tan. fr. sd, cl, conch. c. calc.
 Dol, yel. tan fr. xln, sdy, silty.
 Dol, buff, sdy, tan, sdy, silty, shaly.
 Dol. lt to med gray, s to sh sublt. sh. s.d. a.
 Dol. w. c. m. calc. in part.
 Dst gray, mottled. v. fr. sublt.
 Dol. gray s tan fr. sh. sdy, org. sh. med. gray, sdy.
 Dol. gray s tan fr. med xln, v. silty, sdy.
 Dol. gray tan, a greenish, fr. med sdy, org.
 Ls, bf-gr, med, sl. fr. org. or sm. sh. calc.
 Dol, yel-pk, f-m sac par.

Dol, ph-bf, f, vug fos.
 Dol, crm f vug fos.

Dol, pk + pcht, f, vug.
 crm
 Chl, wh-bf, T-G; Dol, crm v.f.

pk-crm f-m
 Dol, gr bf.
 Chl, wh G, S, T

Chl, some bf.
 Dol, med w blk pyr. i Sh; gr amor.
 Dol, crm, m
 Sh, grn, buff; Dol, grn f

Driller reports shale at 432' - TO 434'. When measured hole was found to be 5' deeper than shown on samples.

722
 434
 297

STATE Iowa CEDAR RAPIDS (LINN)

NW-SW-NW Central Iowa Power Co-op #3(47)
 SEC. 2

TWP. 82N RGE. 7W COMMENCED August 13, 1947 COMPLETED

Pella Tank & Pipe Co. Brown & Keel
 CASING RECORD
cased with 5 3/16" casing (retained)

LOGGED Aug. 25, 1947 BY M. Parker

REMARKS El. 719.5
No water level data

T.O. 55'
Test hole abandoned

CB8-1



Top soil dk. brn. silty sdy.
 sd. fn-med. r.-a dirty clay tan v. sdy.
 sd med-urse r.-a. dirty.
 sd. a. a. some gravel
 clay th. gray silty sdy v. silty calc
 a. a.
 Clay H. gray-tan v. sdy.
 clay a. a. r' sd. fn-med a-r.
 sd. med-urse a-r. dirty some gravel

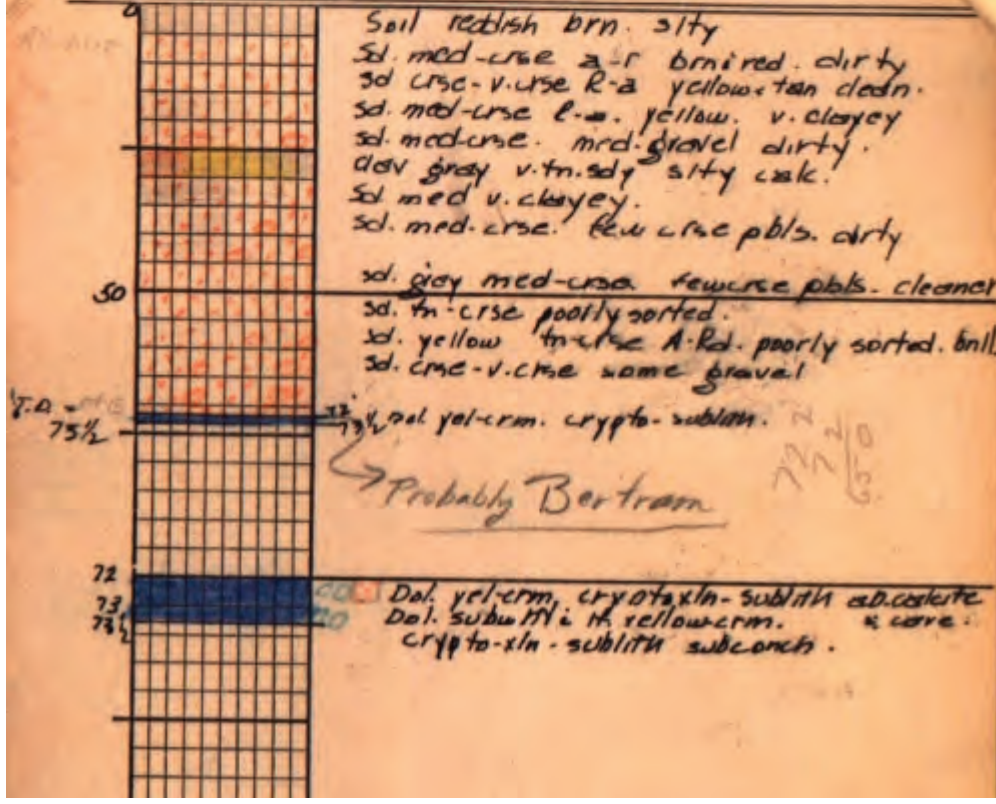
715
 55

 660

FORM NO. 79 - In stock and for sale by Mid-West Prtg. Co., Tulsa W. 2953

STATE <u>Iowa</u>		<u>CEDAR RAPIDS (LINN)</u>																	
NE-SE-NE SEC. <u>3</u>		<u>Central Iowa Power Coop. Test hole #</u>																	
TWP. <u>82N</u>	RGE. <u>7W</u>	COMMENCED	COMPLETED																
<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																		<u>Art Brunekool</u>	
CASING RECORD <u>5 3/4" casing tubed rock</u>		LOGGED BY <u>Aug 13, 1947 M Parker</u>																	
REMARKS <u>EL. 722⁻</u> <u>T.D. 73 1/2</u>																			

CB7-9



Identification

Date Received
Owner Name New Shack Tavern, The
Alt Name
WNumber 38138
PWTS ID
Storet ID
SDWIS ID 2409013
USGS ID
Project SOURCE WATER PROTECTION
Operator Unknown

Site

Site Type Drilled hole
Well Status Not Used
Field Located
Elevation 728 ft
Elevation Accuracy Digital Elevation Model Accurate to 5 ft
Landscape Position Valley

Location

State Iowa
County Linn
Quadrangle Cedar Rapids South, Iowa
Township T82N
Range R7W
Section 2
Quarter NW SW NE
Latitude 41.9431790000
Longitude -91.6330300000
Accuracy GPS
UTM X 613311
UTM Y 4644371

Drilling

Drilling Company Unknown
Drilling Date
Drill Method Unknown
Bedrock Depth
Well Depth 120 ft
Total Depth 120 ft
Well Types Public Access
Aquifers Silurian

Identification

Date Received
Owner Name New Shack Tavern, The
Alt Name
WNumber 53968
PWTS ID
Storet ID
SDWIS ID 2413414
USGS ID
Project SOURCE WATER PROTECTION
Operator Unknown

Site

Site Type Drilled hole
Well Status Not Used
Field Located
Elevation 731 ft
Elevation Accuracy Digital Elevation Model Accurate to 5 ft
Landscape Position Valley

Location

State Iowa
County Linn
Quadrangle Cedar Rapids South, Iowa
Township T82N
Range R7W
Section 2
Quarter NW SW NE
Latitude 41.9431730000
Longitude -91.6332960000
Accuracy GPS +/- 20 m.
UTM X 613289
UTM Y 4644370

Drilling

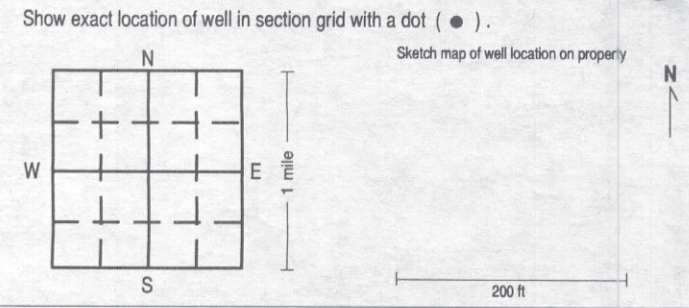
Drilling Company Unknown
Drilling Date
Drill Method Unknown
Bedrock Depth
Well Depth 40 ft
Total Depth 40 ft
Well Types Public Access
Aquifers Alluvium

Site identification
 Property Owner Kloubec Aquaculture Well Number _____
 Address 3800 cst SW C.R.
 Tenant _____
 Well Depth 335 ft Date Completed 7/25/96

Drill method rotary auger cable other _____
Hole size
 18 inch from 0 ft to 20 ft hole size continued
 6 inch from 100 ft to 335 ft
 8 inch from 20 ft to 100 ft _____ inch from _____ ft to _____ ft
 Record all depth measurements from ground level (GL). Use (+) for above GL measurements.

Location County Linn
 _____ mi. N and _____ mi. E of intersection of _____ and _____
 _____ mi. S and _____ mi. W
 1/4 of the _____ 1/4 of the _____ 1/4 of Sec 3 TWP 82 RNG 7 W

Casing Drive shoe (yes/no) Pitless adaptor (yes/no)
 Size (ID/OD) Type / Wt Depth top Depth bottom Amount (length)
6 SDR 21 PVC +1 100 101
~~5 1/2 SDR 21 PVC~~
4 1/2 SCH 40 PVC 95 215 120



Perforated or slotted casing? (yes/no)
 Perforated / slotted from 175 ft to 215 ft
 Perforated / slotted from _____ ft to _____ ft

upland hillside valley Elevation (if known) _____

Casing grouted? (yes/no)
 Type Depth Top Depth Bottom Amount
Bensaul 0 20 25ACKS
Bentonite + Dellenite 20 100

Formation log

From	To	Color	Hardness	Formation description
0	38	Yellow		Clay
38	78			Limestone
78	170			Devonian
170	335			Silurian

Well screen? (yes/no)
 Diameter Slot size Depth Top Depth Bottom Length Material

 Bottom capped (yes/no) with _____
 Seals / Packers (yes/no) kind _____ depth _____ ft
 Gravel packed (yes/no) from _____ ft to _____ ft
 type _____ amount _____

Well developed? (yes/no)
 Explain A.R.

Pump installed? (yes/no) Date _____ / _____ / _____
 Installer's name SAVE
 Type of pump sub Depth to intake 200 ft
 Pump diameter 4 Rated capacity 70 GPM

Water information Aquifer: sand/gravel limestone sandstone
 Main water-supply zone from 175 ft to 335 ft
 Final water level (static water level) 110 ft below / above GL.
 Pumping water level 170 ft below GL; tape airline E-line EST
 At yield of 100 GPM; orifice volumetric estimate Date 7/25

Remarks (including depth of lost drilling fluids, materials, or tools)

Water quality test? (yes/no) Date tested _____ / _____ / _____
 Tested by _____
 Test results _____

Well use
 Domestic Municipal Industrial
 Livestock Public Supply Monitoring
 Test Well Irrigation Other _____ (explain)

Contractor Gingerich Well & Pump
 Address 13210 Locust Ave, Kalona
 Driller Kit Gingerich Certification no. 40046

Bedrock Aquifers

The bedrock hydrogeologic map (fig. 26) shows the aquifers and confining beds that make up the bedrock surface in east-central Iowa. Pennsylvanian confining beds are the bedrock in the extreme southwest corner of the area, in southeast Muscatine County and southwest Scott County, and in other small outlying localities. The Mississippian aquifer is found beneath the surficial deposits in most of the southwest part of the region. The Devonian confining beds comprise the bedrock surface in an area about 25 miles wide extending from the northwest corner to the south-central part of the report area. They have been partly or completely removed in parts of the Belle Plaine and Poweshiek buried bedrock channels.

The Devonian aquifer is the bedrock in a broad belt that parallels the northeast side of the Devonian confining beds. This belt is from 12 to 25 miles wide and extends from northern Benton and Linn Counties to the southern border of Muscatine County. The Devonian and Silurian aquifers are separated by an irregular zone of relatively thin shale occurring near the base of the Devonian and represented by a single line on figure 26.

The Silurian aquifer comprises the bedrock surface over most of the eastern half of the area. In the extreme northeastern border area the Ordovician confining beds are found at the bedrock surface. They also appear in several buried bedrock channels where the Silurian aquifer has been removed locally by erosion.

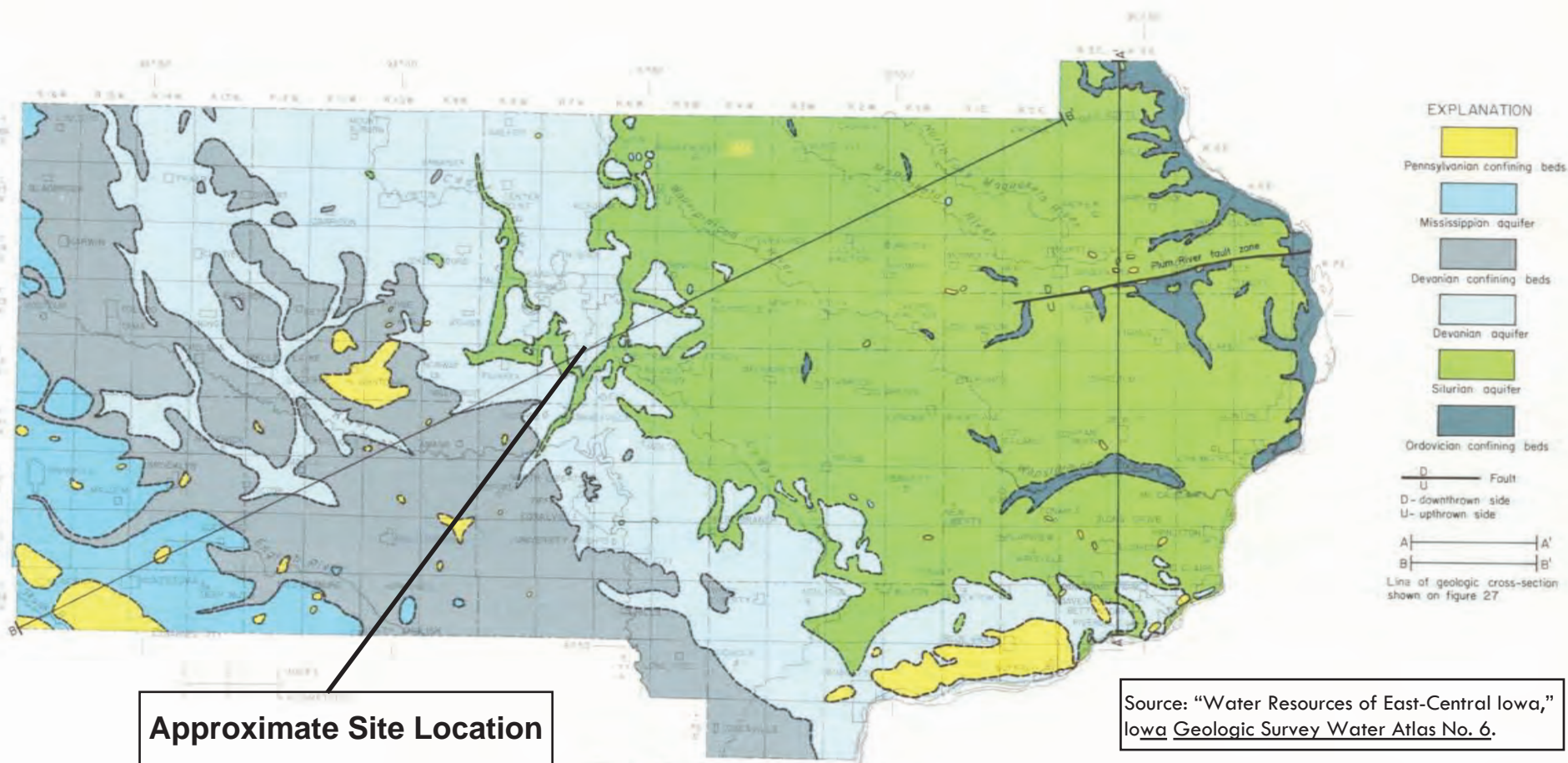


Figure 26.—Bedrock hydrogeologic map

The Cambrian-Ordovician aquifer and the underlying Dresbach aquifer are not at the bedrock surface in east-central Iowa. These aquifers are shallowest in the northeastern part of the area; they slope southwest and become progressively deeper in the subsurface. Figure 27 shows that all the rock units are approximately parallel to each other and dip (slope) toward the southwest.

A major structural feature, the Plum River fault zone, extends approximately 30 miles through southern Jackson County and northwest Clinton County. This structure continues eastward approximately 40 miles into northwest Illinois, where it was originally recognized and mapped (Kolata and Buschbach, 1976). As much as 400 feet of vertical displacement has been inferred by the Illinois State Geological Survey in the vicinity of Savannah, Illinois, and similar displacements may occur in Iowa between Preston and Maquoketa. In the vicinity of Preston, an uplifted area south of the fault zone

is indicated by the anomalous presence of the Ordovician confining beds at the land surface. Preliminary results from an ongoing research drilling program in the Devonian and Silurian aquifers have indicated a possible extension of the structure as far west as southern Linn County, Iowa. The Plum River fault zone is probably quiescent, as no evidence of geologically recent movement along the fault has been found.

The fault zone has cut the various bedrock aquifers and confining beds, and faulting has placed them adjacent to rock units of dissimilar hydrologic characteristics (fig. 27). Depending on the local displacement or associated fracturing, the fault may serve either as a barrier to or a conduit for ground water movement. Where an aquifer is placed against a confining bed the fault may serve as an impediment to ground-water movement. Where two different aquifers are placed against one another by the fault there may be continuity between the two aquifers.

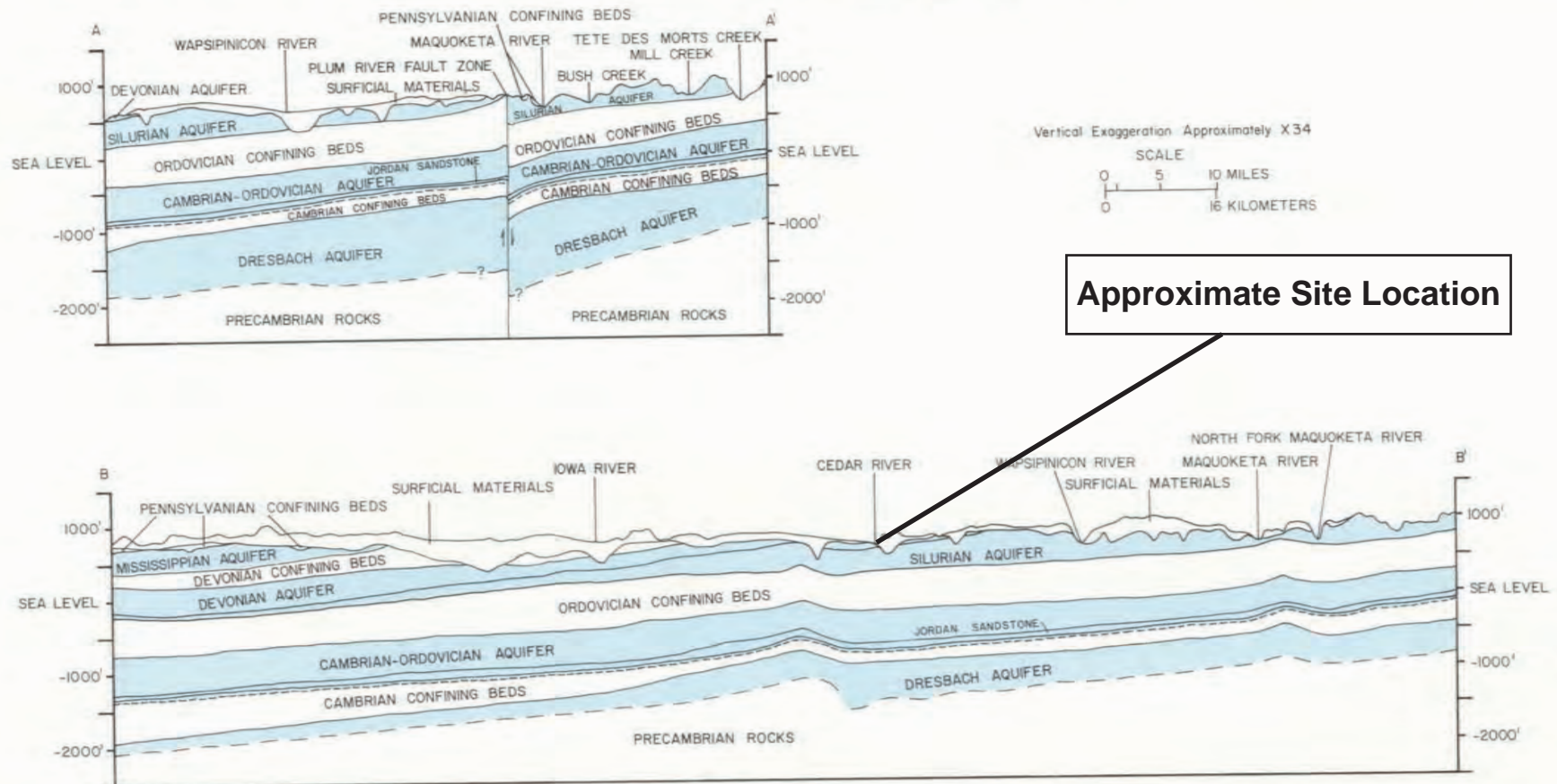



Figure 27.—Hydrogeologic cross sections

Source: "Water Resources of East-Central Iowa," Iowa Geologic Survey Water Atlas No. 6.



Appendix B
Boring Logs and Well Construction Documentation

SCS ENGINEERS

Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION

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

Facility/Project Name IPL - Prairie Creek Generating Station SCS#: 25215135.60		License/Permit/Monitoring Number		Boring Number MW-301	
Boring Drilled By: Name of crew chief (first, last) and Firm Mike Mueller Cascade Drilling		Date Drilling Started 10/31/2016		Date Drilling Completed 10/31/2016	
Unique Well No.		DNR Well ID No.		Common Well Name MW-301	
Final Static Water Level Feet		Surface Elevation 730.0 Feet		Borehole Diameter 8.5 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane 3,447,401 N, 5,426,409 E S/C/N		Local Grid Location	
SW 1/4 of NE 1/4 of Section 3, T 82 N, R 7 W		Lat _____"		Long _____"	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids	

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	TOPSOIL.											
S1	19	3 4 4 6	3-4	SILT WITH SAND, very dark grayish brown (10YR 3/2).	ML			0.5		M					
S2	24	2 7 6 9	6-7	LEAN CLAY WITH SAND, dark grayish brown (10YR 4/2).	CL			0.3		M					
S3	22	3 3 4 6	8-9	POORLY GRADED SAND WITH SILT, dark yellowish brown (10YR 3/4), medium grained.	SP			0.4		M					
S4	23	3 4 4 5	10-11	SANDY SILT, dark yellowish brown (10YR 3/4).	ML			0.3		M					
S5	12	4 9 11 12	13-14	POORLY GRADED GRAVEL, dark yellowish brown (10YR 3/4), coarse grained.	GP			0.3		W					water at 12.5 ft bgs.

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

Signature <i>Mike Mueller</i>	Firm SCS Engineers 2830 Dairy Drive Madison, WI 53711	Tel: (608) 224-2830 Fax:
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Boring Number MW-301

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	
S6	17	5 11 11 11	17	POORLY GRADED GRAVEL, dark yellowish brown (10YR 3/4), coarse grained. (continued)	GP			0.3		W				
S7	17	5 8 9 9	18 19					0.2		W				
S8	23	2 2 1 4	20 21 22 23					0.2		W				
				End of boring at 23.5 ft bgs.										

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

Facility/Project Name Prairie Creek Generating Station SCS#: 25220057		License/Permit/Monitoring Number		Boring Number MW301A	
Boring Drilled By: Name of crew chief (first, last) and Firm Roy Buckenberger Cascade		Date Drilling Started 6/23/2020		Date Drilling Completed 6/23/2020	
Unique Well No.		DNR Well ID No.		Common Well Name MW301A	
Final Static Water Level Feet		Surface Elevation Feet		Borehole Diameter 6.0 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input type="checkbox"/> State Plane N, E S/C/N		Lat ° ' " Long ° ' "		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of		1/4 of Section		T N, R	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids, Iowa	

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	36		1	Topsoil. 10YR3/4.	ML									
			2	Silt with trace fine sand. 10YR3/4.	ML				1.0	M				
2	36		3											
			4											
	0		5											
			6											
			7											
			8											
			9											
			10	No Return.										
			11											
			12											
			13											
			14											
			15											

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

Signature <i>Zach Watson</i>	Firm SCS Engineers 2830 Dairy Dr., Madison, WI, 53718	Tel: Fax:
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Boring Number MW301A

Page 2 of 3

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	60		16	Silty Sand. Fine Sand. Well Graded. 10YR3/4.	SM										
			17												
			18												
4	60		19	Tan and Rust colored Silty Sand. 2.5Y4/3 and 10YR3/4.	SM										
			20												
			21												
5	60		22	Silty Gravel. 2.5Y2.5/1	GM										
			23												
			24												
6	60		25	Lean Clay. Stiff and uniform. No coarse material. Grey. 5Y4/1.	CL				1.3						
			26												
			27												
7	60		28												
			29												
			30												
			31												
			32												
			33												
			34												
			35												
			36												
			37												
			38												
			39												
			40												

Boring Number MW301A

Page 3 of 3

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)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200											
8	60		41	Lean Clay. Stiff and uniform. No coarse material. Grey. 5Y4/1. (continued)	CL				41	1.0	W													
			42																					
9	60		43											43	1.0	W								
			44																					
			45																					
			46																					
			47																					
10	48		48																48	1.5	W			
			49																					
			50																					
			51																					
			52																					
			53																					
			54																					

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

Facility/Project Name IPL - Prairie Creek Generating Station SCS#: 25215135.60		License/Permit/Monitoring Number		Boring Number MW-302	
Boring Drilled By: Name of crew chief (first, last) and Firm Mike Mueller Cascade Drilling		Date Drilling Started 10/31/2016		Date Drilling Completed 10/31/2016	
Unique Well No.		DNR Well ID No.		Common Well Name MW-302	
Final Static Water Level Feet		Surface Elevation 720.3 Feet		Borehole Diameter 8.5 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane 3,447,399 N, 5,426,146 E S/C/N		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NE 1/4 of Section 3, T 82 N, R 7 W		Lat _____ ' _____ "		Long _____ ' _____ "	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids	

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	
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200		
			1	TOPSOIL.											
S1	5	14 89	2-4	SILT WITH SAND, very dark grayish brown (10YR 3/2).	ML			0.5		M					
S2	14	23 37	5-6	SILTY SAND, greenish gray (5GY 6/1).	SM			1.0		W					
S3	12	12 22	7-9	POORLY GRADED SAND, greenish gray (5GY 6/1), coarse grained.				0.7		W					
S4	24	23 46	10-12	Same as above except, dark yellowish brown (10YR 3/4).	SP			0.5		W					
S5	14	12 22	13-14					0.5		W					

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:
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Boring Number MW-302

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	
56	23	2 3 4 4	17	SILT, greenish gray (5GY 6/1).	ML			0.3	W					
				End of boring at 17 ft bgs.										

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

Facility/Project Name IPL - Prairie Creek Generating Station SCS#: 25215135.60		License/Permit/Monitoring Number		Boring Number MW-303	
Boring Drilled By: Name of crew chief (first, last) and Firm Mike Mueller Cascade Drilling		Date Drilling Started 12/6/2016		Date Drilling Completed 12/6/2016	
Unique Well No.		DNR Well ID No.		Common Well Name MW-303	
Final Static Water Level Feet		Surface Elevation 707.0 Feet		Borehole Diameter 8.5 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane 3,448,275 N, 5,425,166 E S/C/N		Local Grid Location	
NW 1/4 of NE 1/4 of Section 3 , T 82 N, R 7 W		Lat _____ ' _____ "		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids	

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
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
S1	20	20 20 27 34	1	SILT, very dark grayish brown (10YR 3/2).	ML			0.2	M					
			2											
S2	12	2 17 20 21	3	POORLY GRADED SAND, very dark grayish brown (10YR 3/2), coarse grained.	SP			0.2	W					saturation @ 5ft.
			4											
			5											
S3	16	7 8 8 6	6	Same as above except, brown (10YR 5/3), trace fine gravel.	SP			0.2	W					
			7											
S4	17	4 3 3 3	8	Same as above except, brown (10YR 5/3), trace fine gravel.	SP			0.2	W					
			9											
S5	17	1 1 2 3	10	Same as above except, brown (10YR 5/3), trace fine gravel.	SP			0.2	W					
			11											
				End of boring at 15.5 ft bgs.										

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

Facility/Project Name IPL - Prairie Creek Generating Station SCS#: 25215135.60		License/Permit/Monitoring Number		Boring Number MW-304	
Boring Drilled By: Name of crew chief (first, last) and Firm Mike Mueller Cascade Drilling		Date Drilling Started 12/6/2016		Date Drilling Completed 12/6/2016	
Unique Well No.		DNR Well ID No.		Common Well Name MW-304	
Final Static Water Level Feet		Surface Elevation 707.1 Feet		Borehole Diameter 8.5 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane 3,448,415 N, 5,425,664 E S/C/N		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
NW 1/4 of NE 1/4 of Section 3, T 82 N, R 7 W		Lat _____ ' _____ "		Long _____ ' _____ "	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids	

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		
S1	6	50/0.2	1-3	SILT, very dark grayish brown (10YR 3/2),	ML			0.2		M				water in borehole at 3 ft bgs.	
S2	5	65/77	4-6					0.3		W				saturation @ 5ft.	
S3	5	34/69	7-9	POORLY GRADED SAND, very dark grayish brown, medium to coarse grained.						W					
S4	12	12/22	10-12		SP					W					
S5	23	46/68	13-14							W					
			15	SILTY CLAY, gray.	CL										
				End of boring at 15.5 ft bgs.											

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

Signature <i>Mike Mueller</i>	Firm SCS Engineers 2830 Dairy Drive Madison, WI 53711	Tel: (608) 224-2830 Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name IPL - Prairie Creek Generating Station SCS#: 25215135.60		License/Permit/Monitoring Number		Boring Number MW-305	
Boring Drilled By: Name of crew chief (first, last) and Firm Mike Mueller Cascade Drilling		Date Drilling Started 12/5/2016		Date Drilling Completed 12/5/2016	
Unique Well No.		DNR Well ID No.		Common Well Name MW-305	
Final Static Water Level Feet		Surface Elevation 707.1 Feet		Borehole Diameter 8.5 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane 3,448,467 N, 5,425,930 E S/C/N		Local Grid Location	
NW 1/4 of NE 1/4 of Section 3, T 82 N, R 7 W		Lat _____"		_____ E	
		Long _____"		_____ S _____ W	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids	

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
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
S1	17	13 5 6	1	SILT, very dark grayish brown (10YR 3/2), trace sand.	ML			0.2	M					water in borehole at 3 ft bgs.
			4											
S2	12	13 4 5	5	POORLY GRADED SAND, dark brown (10YR 3/3), coarse sand.	SP			0.1	W					saturation @ 5ft.
			6											
S3	18	11 3 4	7		SP			0.9	W					
			8											
S4	14	9 13 21 19	9		SP			0.4	W					
			10											
S5	16	14 15 23	11		CL				W					
			12											
			13	LEAN CLAY, very dark gray (10YR 3/1).										
			14											
			15											
				End of boring at 15.5 ft bgs.										

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

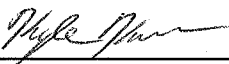
Signature	Firm SCS Engineers 2830 Dairy Drive Madison, WI 53711	Tel: (608) 224-2830 Fax:
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Route To: Watershed/Wastewater Waste Management
 Remediation/Redevelopment Other

Facility/Project Name IPL - Prairie Creek Generating Station SCS#: 25215135.60		License/Permit/Monitoring Number		Boring Number MW-306	
Boring Drilled By: Name of crew chief (first, last) and Firm Mike Mueller Cascade Drilling		Date Drilling Started 11/2/2016		Date Drilling Completed 11/2/2016	
Unique Well No.		DNR Well ID No.		Common Well Name MW-306	
Final Static Water Level Feet		Surface Elevation 710.1 Feet		Borehole Diameter 8.5 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		Local Grid Location			
State Plane 3,448,572 N, 5,426,326 E S/C/N		Lat _____ ' _____ "		<input type="checkbox"/> N <input type="checkbox"/> E	
NW 1/4 of NE 1/4 of Section 3, T 82 N, R 7 W		Long _____ ' _____ "		Feet <input type="checkbox"/> S Feet <input type="checkbox"/> W	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids	

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
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
S1	9.5	4 5 5 5	1	SILT, dark yellowish brown (10YR 3/4).	ML			0.7	-	-	-	-	-	Plastic debris- water at 4 ft bgs
			2	POORLY GRADED SAND, very dark grayish brown (10YR 3/2), coarse grained.										
S2	14	11 11	3	SILT, very dark grayish brown (10YR 3/2).	ML			0.5	-	-	-	-	-	plastic debris
			4											
S3	NR	3 2 1 1	5		ML			-	-	-	-	-	-	plastic debris
			6											
S4	NR	1 1 2 3	7		ML			-	-	-	-	-	-	plastic and glass debris
			8											
S5	10	1 2 3 3	9	POORLY GRADED SAND, vcrly dark gray (10YR 3/1), coarse grained.	SP			0.1	-	-	-	-	-	plastic and glass debris
			10											
			11											
			12											
			13											
			14											
			15											
			16											

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:
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Boring Number MW-306

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)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200								
S6	22	2 1 1 1	17 18	POORLY GRADED SAND, very dark gray (10YR 3/1), coarse grained. <i>(continued)</i>				0.4	W				plastic debris								
S7	19	2 1 1 1	19 20																		
S8	6	2 1 1 2	21 22																		
S9	14	8 4 4 12	23 24											Same as above except, dark gray (5Y 4/1).	SP		0.6	W			
S10	20	4 4 15 22	25 26																		
S11	12	8 8 20 31	27 28																		
End of boring at 30.5 ft bgs.																					

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

Facility/Project Name Prairie Creek Generating Station		SCS#: 25220057		License/Permit/Monitoring Number		Boring Number MW306A	
Boring Drilled By: Name of crew chief (first, last) and Firm Roy Buckenberger Cascade				Date Drilling Started 6/23/2020		Date Drilling Completed 6/23/2020	
Unique Well No.		DNR Well ID No.		Common Well Name MW306A		Final Static Water Level Feet	
						Surface Elevation Feet	
						Borehole Diameter 6.0 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input type="checkbox"/> State Plane N, E S/C/N				Lat ° ' "		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of 1/4 of Section , T N, R				Long ° ' "		Feet <input type="checkbox"/> S Feet <input type="checkbox"/> W	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids, Iowa			



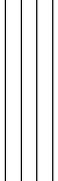





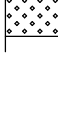

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1	60		1	Topsoil. Organic Material.	ML									
			2	Waste. Plastic wrapping. Soil.										
2	60		3	Tan/Brown soil/silt. 10YR3/4.	ML									
			4											
			5	Dark Black Sand and Silt. Well Graded. 10YR2/1.	SW									
3	60		6											
			7											
			10	Well Graded Sand. Light Grey. 2.5Y3/1.	SW									
			12	Silt with fine sand.	ML									
			13											
			14											
			15											

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

Signature <i>Zach Watson</i>	Firm SCS Engineers 2830 Dairy Dr., Madison, WI, 53718	Tel: Fax:
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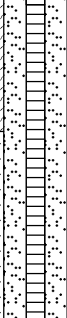
Boring Number MW306A

Page 2 of 3

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	
4	60		16	Well graded sand. 2.5Y3/1.	SW									
			17											
			18											
			19											
5	60		20	Silt with Sand. 5Y4/2.	ML									
			21											
			22											
			23											
6	60		24	Well Graded Sand.	SW									
			25											
			26											
			27											
7	60		28	Well Graded Sand.	SW									
			29											
			30											
			31											
8	60		32	Finer sand than above.	SW									
			33											
			34											
			35											

Boring Number MW306A

Page 3 of 3

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	
9	60		41	Well Graded Sand. Fine sand to gravel. Some rocks greater than 1 inch in size.	SW									
			42											
			43											
			44											
			45											
10	60		46	Lean Clay. Soft. 2.5Y3/2. Sand Lens at 54 feet.	CL									
			47											
			48											
			49											
			50											
11	60		51	Well Graded Sand. Fine to Coarse grained. Few fines.	SW									
			52											
			53											
			54											
			55											
12	60		56	Well Graded Sand. Fine to Coarse grained. Few fines.	SW									
			57											
			58											
			59											
			60											
			61											

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

Facility/Project Name Prairie Creek Generating Station SCS#: 25218184		License/Permit/Monitoring Number	Boring Number MW-307
Boring Drilled By: Name of crew chief (first, last) and Firm Mike Mueller Cascade Drilling, LP		Date Drilling Started 11/27/2018	Date Drilling Completed 11/27/2018
Common Well Name MW-307		Final Static Water Level 708.5 Feet	Surface Elevation 718.9 Feet
		Borehole Diameter 6.5 in	

Local Grid Origin (estimated:) or Boring Location

State Plane **3,448,497 N, 5,426,934 E** S/C/N Lat N E
NE 1/4 of NE 1/4 of Section 3, T 83 N, R 7 W Long S W

Facility ID _____ County **Linn** Civil Town/City/ or Village **Cedar Rapids**

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
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
S1			1	Topsoil and clay, black, (10YR 2/1), (Fill).										
			2								M			
S2			3											
			4											
S3			5	Black ash? (Fill).										
			6	LEAN CLAY, black (10YR 2/1), (Fill).	CL							M		
S4			7	SILT, dark gray/black, (5YR 3/1).	ML									
			8								M			
S5			9	LEAN CLAY, dark gray, (5YR 2.5/2).	CL									
			10								M			
			11											
			12											
			13											
			14	SILTY SAND, coarse sand, light brown, (2.5YR 3/1).	SM									
			15											

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

Signature *[Signature]* Firm **SCS Engineers** 3900 Kilroy Airport Way Long Beach, CA 90806 Tel: _____ Fax: _____

Boring Number MW-307

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	
S6			16	SILTY SAND, fine to medium, light brown, (2.5YR 4/4).	SM					W				
			17	SILTY SAND, medium to coarse, light brown, (2.5YR 5/4).										
S7			18		SM					W				
			19											
			20											
			21	End of boring at 21 feet below ground surface.										

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

Facility/Project Name Prairie Creek Generating Station		License/Permit/Monitoring Number SCS#: 25218184		Boring Number MW-308	
Boring Drilled By: Name of crew chief (first, last) and Firm Mike Mueller Cascade Drilling, LP		Date Drilling Started 11/27/2018		Date Drilling Completed 11/27/2018	
Common Well Name MW-308		Final Static Water Level 711.5 Feet		Surface Elevation 717.5 Feet	
Local Grid Origin <input type="checkbox"/> (estimated <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		Final Static Water Level		Surface Elevation	
State Plane 3,448,434 N, 5,426,646 E		S/C/N		Local Grid Location	
NE 1/4 of NE 1/4 of Section 3, T 83 N, R 7 W		Lat _____"		<input type="checkbox"/> N <input type="checkbox"/> E	
		Long _____"		Feet <input type="checkbox"/> S Feet <input type="checkbox"/> W	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids	

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		
			0	Topsoil, black.											
S1			1	LEAN CLAY, black, (2.5YR 2.5/1), (Fill).	CL										
S2			4	LEAN CLAY, brown, (2.5YR 4/4), (Fill).	CL				1.5		M				
S3			6	Ash, black, (2.5YR 3/1), (Fill).							M				
S4			8	LEAN CLAY with silt, gray, (5YR 5/1).	CL						M				
S5			9		CL						M				
S6			10	SANDY SILT, dark gray, (5YR 2.5/1).							W				
S7			14	Same as above but (5YR 2.5/2).	ML						W				

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

Signature 	Firm SCS Engineers 3900 Kilroy Airport Way Long Beach, CA 90806	Tel: Fax:
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Boring Number MW-308

Page 2 of 2

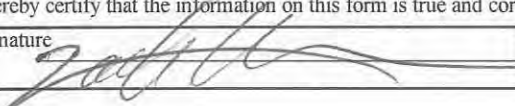
Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			16	SANDY SILT, dark gray, (5YR 2.5/1). (continued)										
SB			17	Same as above but (5YR 2.5/1).	ML						W			
			18											
			19											
SB			20	SILTY SAND, coarse, (5YR 4/2).	SM						W			
			21	End of boring at 21 feet below ground surface.										

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

Facility/Project Name IPL - Prairie Creek Generating Station SCS#: 25218218.00		License/Permit/Monitoring Number		Boring Number MW-309	
Boring Drilled By: Name of crew chief (first, last) and Firm Jeff Crank Roberts Environmental Drilling, Inc.		Date Drilling Started 8/5/2019		Date Drilling Completed 8/5/2019	
Unique Well No.		DNR Well ID No.		Common Well Name MW-309	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		Final Static Water Level Feet MSL		Surface Elevation 708.1 Feet MSL	
State Plane 3,448,466 N, 5,425,409 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 NE 1/4 of Section 3 , T 82 N, R 7 W		Long ° ' "		Feet <input type="checkbox"/> S Feet <input type="checkbox"/> W	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids	


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		
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200			
S1	8	13 34	1	SILT, dark brown, (10YR 2/1), with sand, trace gravel.	ML											
S2	18	33 23	2-3	SILTY SAND.	SM											
S3	12	11 12	4-5	SILT, with sand, brown, (10YR 3/2), soft.	ML											
S4	12	22 12	6-7	SILTY SAND, mottled grey, tan, and brown.	SM											
S5	20	01 21	8-9	Variable color - grey, rust, and tan. Coarser sand.	SM											
S6	12	00 11	10-11	POORLY GRADED SAND, coarse, some fine and medium sand.	SP											
S7	12	11 33	12-13	With organic material.	SP											

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

Signature 	Firm SCS Engineers	Tel:
		Fax:

Boring Number MW-309

Page 2 of 2

Sample			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)	Blow Counts							Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
58	12	12 4 5	16 17	End of Boring.	SP					W				Blind drilled from 16' to 17'

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

Facility/Project Name Prairie Creek Generating Station SCS#: 25220057		License/Permit/Monitoring Number		Boring Number MW309A	
Boring Drilled By: Name of crew chief (first, last) and Firm Roy Buckenberger Cascade		Date Drilling Started 7/23/2020		Date Drilling Completed 7/23/2020	
Unique Well No.		DNR Well ID No.		Common Well Name MW309A	
Final Static Water Level Feet		Surface Elevation Feet		Borehole Diameter 6.0 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input type="checkbox"/> State Plane N, E S/C/N		Lat ° ' "		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of T N, R		1/4 of Section , T N, R		Long ° ' "	
Facility ID		County Linn		Civil Town/City/ or Village Cedar Rapids, Iowa	

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
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
1	60		1	Topsoil. Organic material, roots, trace coarse material. 10YR2/1.	ML									
			2											
			3											
			4											
			5											
2	60		6	Silty Sand. Fine to medium grained sand. Well Graded. 10YR3/4.	SM									
			7											
			8											
			9											
			10											
3	60		11	Well graded Gravel with sand. Four inch lens of silt with sand. 7.5YR2/1. Well Graded sand with gravel towards base (14-15 feet).	GW									
			12											
			13											
			14											
			15											

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

Signature <i>Zach Watson</i>	Firm SCS Engineers 2830 Dairy Dr., Madison, WI, 53718	Tel: Fax:
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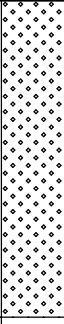
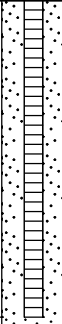
Boring Number MW309A

Page 2 of 3

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	
4	60		16	Silty Sand. Fine to coarse sand with a few lenses of silt with sand. 2.5Y3/2.	SM					W				
			17											
5	60		25	Well graded Sand. Fine to coarse grained sand. 2.5Y3/2.	SW					W				
			26											
6	60		38							W				
			39											
7	60		38							W				
			39											
8	60		38							W				
			39											

Boring Number MW309A

Page 3 of 3


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	
9	60		41 42 43 44 45 46	Well graded Sand. Fine to coarse grained sand. 2.5Y3/2. <i>(continued)</i>	SW					W				

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

Facility/Project Name IPL - Prairie Creek Generating Station SCS#: 25218218.00		License/Permit/Monitoring Number		Boring Number MW-310		
Boring Drilled By: Name of crew chief (first, last) and Firm Jeff Crank Roberts Environmental Drilling, Inc.		Date Drilling Started 8/6/2019		Date Drilling Completed 8/6/2019		
Drilling Method 4 1/4" hollow stem auger		Final Static Water Level Feet MSL		Surface Elevation 708.09 Feet MSL		
WI Unique Well No.	DNR Well ID No.	Common Well Name MW-310		Borehole Diameter 8.5 in.		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location			
State Plane 3,448,623 N, 5,425,792 E S/C/N			Feet <input type="checkbox"/> N <input type="checkbox"/> E			
NW 1/4 of NE 1/4 of Section 3, T 82 N, R 7 W			Feet <input type="checkbox"/> S <input type="checkbox"/> W			
Facility ID		County Linn	County Code	Civil Town/City/ or Village Cedar Rapids		


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					
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200						
S1	12	12 24	1	SILTY SAND, brown, (10YR 2/1), (topsoil).															
			2		SM														
S2	2	66 44	3																
			4																
S3	10	44 23	5	LEAN CLAY, brown, (10YR 2/1), some lenses of silty sand, organic material.															
			6		CL														
S4	6	31 12	7																
			8																
S5	20	32 11	9	SILTY SAND, coarse.															
			10																
S6	18	32 11	11		SM														
			12																
S7	12	11 22	13																
			14																
			15	SILTY GRAVEL, with sand.	GM														

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 53718	Tel: 608-224-2830 Fax:
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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 **MW-310** 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	
58	12	1 4 5 4	16 17		GM				W					
				End of Boring.										Blind drilled from 16' to 17'

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

Facility/Project Name Prairie Creek Generating Station SCS#: 25220057		License/Permit/Monitoring Number		Boring Number MW310A	
Boring Drilled By: Name of crew chief (first, last) and Firm Roy Buckenberger Cascade		Date Drilling Started 7/23/2020		Date Drilling Completed 7/23/2020	
Unique Well No.		DNR Well ID No.		Common Well Name MW310A	
Final Static Water Level Feet		Surface Elevation Feet		Borehole Diameter 6.0 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input type="checkbox"/> State Plane N, E S/C/N		Lat ° ' " Long ° ' "		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of Section T N, R		Facility ID		County Linn	
				Civil Town/City/ or Village Cedar Rapids, Iowa	










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	60		1	Topsoil. Organic material, roots and plant material.	ML														
			2	Lean Clay. Soft, trace coarse material. 2.5Y3/2.															
2	60		3		CL				0.5	W									
			4																
3	60		5		SW					W									
			6																
			7																
			8																
			9																
			10																
			11																
			12																
			13																
			14																
			15																

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

Signature <i>Zach Watson</i>	Firm SCS Engineers 2830 Dairy Dr., Madison, WI 53718	Tel: Fax:
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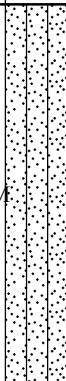
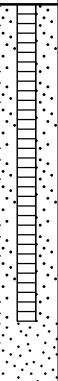
Boring Number MW310A

Page 2 of 3

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	
4	60		16	Lean Clay, trace coarse material (Fine Sand). 5Y4/1.	CL				1.5	W				
			17											
			18											
			19											
5	60		20	Well graded sand with silt and gravel. 5Y4/2.	SW-SM					W				
			21											
			22											
			23											
			24											
			25											
6	60		26	Well graded sand with silt and gravel. 5Y4/2.	SW-SM					W				
			27											
			28											
			29											
			30											
			31											
7	60		32	Silt with gravel.	ML					W				
			33											
			34											
8	60		35	Well graded sand with silt and gravel. 5Y4/2.	SW-SM					W				
			36											
			37											
			38											
			39											
			40											

Boring Number MW310A

Page 3 of 3

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	
9	60		41 42 43 44 45 46	Well graded sand with silt and gravel. 5Y4/2. (continued)	SW-SM					W				

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

Facility/Project Name Prairie Creek Generating Station SCS#: 25222074.00		License/Permit/Monitoring Number		Boring Number MW-311	
Boring Drilled By: Name of crew chief (first, last) and Firm Duncan List Terracon		Date Drilling Started 5/9/2022		Date Drilling Completed 5/9/2022	
Unique Well No.		DNR Well ID No.		Common Well Name MW-311	
Final Static Water Level 10.84 Feet MSL		Surface Elevation 721.6 Feet MSL		Borehole Diameter 8.25" in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input type="checkbox"/> State Plane 3,447,992 N, 5,426,118 E S/C/N		Lat _____ ° _____ ' _____ "		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of _____		1/4 of Section _____ , T _____ N, R _____		Long _____ ° _____ ' _____ "	

Facility ID	County Linn	Civil Town/City/ or Village Cedar Rapids
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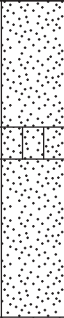



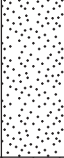

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200		
			1	Hydrovaced through gravel, sand, and silt, black to gray.											
			2												
			3												
			4												
			5												
			6												
			7												
			8												
S1	12	3 5 5 5	9	POORLY GRADED SAND, fine to coarse grained, gray to black.	SP										
			10												
S2	12	3 5 5 5	11	SILT, black with roots.	ML										
			12												
S3	14	2 3 3 5	13	POORLY GRADED SAND, fine to coarse grained, gray with trace silt.	SP										
			14	Same as above but transitions to brown at 14 feet below ground surface (bgs).											
			15												

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

Signature 	Firm SCS Engineers 3900 Kilroy Airport Way Long Beach, CA 90806	Tel: Fax:
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Boring Number MW-311

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	
S4	6	3 4	15	POORLY GRADED SAND, fine to coarse grained, gray with trace silt. <i>(continued)</i> POORLY GRADED SAND, fine to coarse grained, brown.	SP									
		5 5	16											
S5	20	2 3	17	SILTY SAND, brown.	SM									
		4 4	18	POORLY GRADED SAND, fine to coarse grained, brown. Same as above but with gravel and light brown.	SP									
S6	20	4 3	19											
		2 3	20	End of Boring at 20' below ground surface.										

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

Facility/Project Name Prairie Creek Generating Station SCS#: 25222074.00		License/Permit/Monitoring Number		Boring Number MW-312	
Boring Drilled By: Name of crew chief (first, last) and Firm Duncan List Terracon		Date Drilling Started 5/9/2022		Date Drilling Completed 5/9/2022	
Unique Well No.		DNR Well ID No.		Common Well Name MW-312	
Final Static Water Level 703.85 Feet MSL		Surface Elevation 709.0 Feet MSL		Borehole Diameter 8.25" in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input type="checkbox"/> State Plane 3,448,197 N, 5,424,656 E S/C/N		Lat _____ ° _____ ' _____ "		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of _____ 1/4 of Section _____ , T _____ N, R _____		Long _____ ° _____ ' _____ "		Feet <input type="checkbox"/> S Feet <input type="checkbox"/> W	

Facility ID	County Linn	Civil Town/City/ or Village Cedar Rapids
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
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		
S1	17	23 22	1	SILT WITH SAND, dark brown (topsoil).	ML										
S2	17	52 23	2-3	SILT, black with roots.	ML										
S3	21	21 11	4-5	SILTY SAND, black.	SM										
S4	20	21 10	6-7	POORLY GRADED SAND, fine to coarse grained, gray with a thin lense of black silt around 7.6' below ground surface.											
S5	14	21 11	8-9	Same as above but mottled, medium brown to gray with trace gravel.	SP										
S6	16	1 WH 11	10-11												
S7	0	WH 1 11	12-13	No recovery.											
			14-15	No recovery.											

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

Signature 	Firm SCS Engineers 3900 Kilroy Airport Way Long Beach, CA 90806	Tel: Fax:
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Boring Number MW-312

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	
S8	0		16	End of boring at 16' below ground surface.										



IOWA DEPARTMENT OF NATURAL RESOURCES
MONITORING WELL/PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: IPL - Prairie Creek Generating Station Permit No.: _____

Well or Piezometer No: MW-301

Dates Started: 10/31/16 Date Completed: 10/31/16

A. SURVEYED LOCATIONS AND ELEVATIONS

Locations (± 0.5 ft): _____

Specify corner of site: SE of parcel 19031-51001-00000

Distance & direction along boundary: 145' W

Distance & direction from boundary to wall: 76' N

Elevations (± 0.01 ft MSL): _____

Ground Surface: 729.95

Top of protective casing: 732.97

Top of well casing: 732.55

Benchmark elevation: _____

Benchmark description: _____

B. SOIL BORING INFORMATION

Name & Address of Construction Company: _____

Cascade Drilling, LP

301 Alderson St

Schofield, WI 54476

Name of Driller: Mike Mueller

Drilling Method: HSA

Drilling Fluid: NA

Bore Hole Diameter: 8.5 inch

Soil Sampling Method: Spoon

Depth of Boring: 23.5 ft

C. MONITORING WELL INSTALLATION

Casing material: PVC sch 40

Length of casing: 12.5 ft

Outside casing diameter: 2.38"

Inside casing diameter: 2"

Casing joint type: threaded

Casing/screen joint type: threaded

Screen material: PVC

Screen opening size: 0.010"

Screen length: 10 ft

Depth of well: 22.5 ft

Filter Pack: _____

Material: Red Flint

Grain size: #40

Volume: 300 lbs

Seal (minimum 3 ft length above filter pack): _____

Material: 3/8 inch bentonite chips

Placement method: Gravity

Volume: 200 lbs

Backfill (if different from seal): _____

Material: _____

Placement method: _____

Volume: _____

Surface seal design: _____

Material of protective casing: Steel 6 inch

Material of grout between protective casing and well casing: sand

Protective cap: _____

Material: Steel, vented

Vented: Yes No Locking: Yes No

Well Cap: _____

Material: PVC

Vented: Yes No

D. GROUNDWATER MEASUREMENT (± 0.01 ft below top of inner well casing)

Water level: 16.27 Stabilization Time: ~5 min

Well development method: Pump and surge block

Average depth of frostline: _____

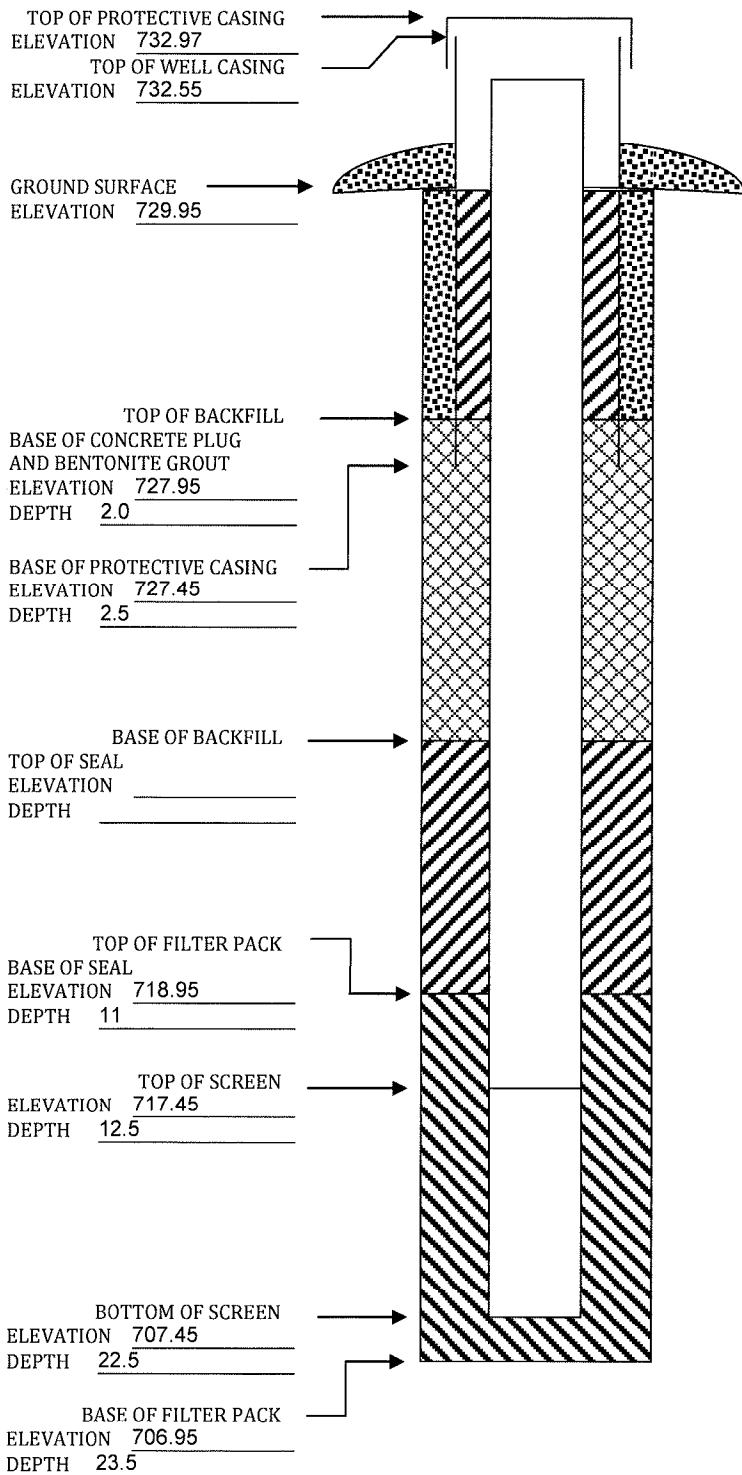
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed for to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319-0034.

Questions? Call or Email: Nina Koger, Environmental Engineer Sr., 515-281-8986, Nina.Koger@dnr.iowa.gov

ELEVATIONS: ± 0.01 ft MSL
DEPTHS: ± 0.1 ft FROM GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
(SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL.)





IOWA DEPARTMENT OF NATURAL RESOURCES
MONITORING WELL/PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: IPL - Prairie Creek Generating Station Permit No.: _____

Well or Piezometer No: MW-302

Dates Started: 10/31/16 Date Completed: 10/31/16

A. SURVEYED LOCATIONS AND ELEVATIONS

Locations (± 0.5 ft): _____

Specify corner of site: SE of parcel 19031-51001-00000

Distance & direction along boundary: 462' W

Distance & direction from boundary to wall: 79' N

Elevations (± 0.01 ft MSL): _____

Ground Surface: 720.29

Top of protective casing: 723.27

Top of well casing: _____ 722.68

Benchmark elevation: _____

Benchmark description: _____

B. SOIL BORING INFORMATION

Name & Address of Construction Company: _____

Cascade Drilling, LP

301 Alderson St

Schofield, WI 54476

Name of Driller: Mike Mueller

Drilling Method: HSA

Drilling Fluid: NA

Bore Hole Diameter: 8.5 inch

Soil Sampling Method: Spoon

Depth of Boring: 23.5 ft

C. MONITORING WELL INSTALLATION

Casing material: PVC sch 40

Length of casing: 5 ft

Outside casing diameter: 2.38"

Inside casing diameter: 2"

Casing joint type: threaded

Casing/screen joint type: threaded

Screen material: PVC

Screen opening size: 0.010"

Screen length: 10 ft

Depth of well: 15 ft

Filter Pack: _____

Material: Red Flint

Grain size: #40

Volume: 300 lbs

Seal (minimum 3 ft length above filter pack): _____

Material: 3/8 inch bentonite chips

Placement method: Gravity

Volume: 50 lbs

Backfill (if different from seal): _____

Material: _____

Placement method: _____

Volume: _____

Surface seal design: _____

Material of protective casing: Steel 6 inch

Material of grout between protective casing and well casing: sand

Protective cap: _____

Material: Steel, vented

Vented: Yes No Locking: Yes No

Well Cap: _____

Material: PVC

Vented: Yes No

D. GROUNDWATER MEASUREMENT (± 0.01 ft below top of inner well casing)

Water level: 6.39 Stabilization Time: ~5 min

Well development method: Pump and surge block

Average depth of frostline: _____

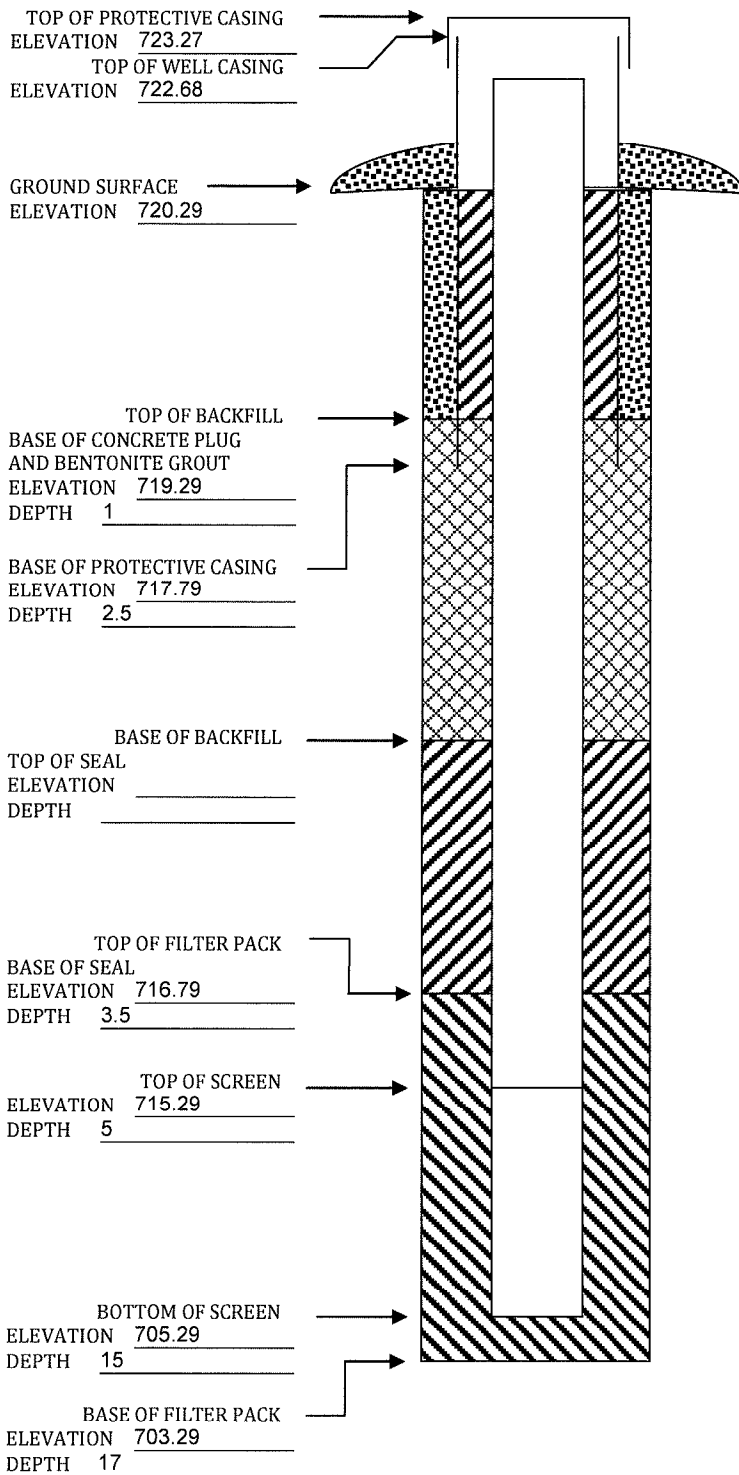
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed for to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319-0034.

Questions? Call or Email: Nina Koger, Environmental Engineer Sr., 515-281-8986, Nina.Koger@dnr.iowa.gov

ELEVATIONS: ± 0.01 ft MSL
DEPTHS: ± 0.1 ft FROM GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
(SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL.)





IOWA DEPARTMENT OF NATURAL RESOURCES
MONITORING WELL/PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: IPL - Prairie Creek Generating Station Permit No.: _____
 Well or Piezometer No: MW-303
 Dates Started: 12/6/16 Date Completed: 12/6/16

A. SURVEYED LOCATIONS AND ELEVATIONS

Locations (± 0.5 ft): _____
 Specify corner of site: NE of parcel 19032-01001-00000
 Distance & direction along boundary: 2,348' NW
 Distance & direction from boundary to wall: 1,477' S
 Elevations (± 0.01 ft MSL): _____
 Ground Surface: 706.95
 Top of protective casing: 709.85
 Top of well casing: _____ 709.46
 Benchmark elevation: _____
 Benchmark description: _____

B. SOIL BORING INFORMATION

Name & Address of Construction Company: _____
Cascade Drilling, LP
301 Alderson St
Schofield, WI 54476
 Name of Driller: Mike Mueller
 Drilling Method: HSA
 Drilling Fluid: NA
 Bore Hole Diameter: 8.5 inch
 Soil Sampling Method: Spoon
 Depth of Boring: 15.5 ft

C. MONITORING WELL INSTALLATION

<p>Casing material: _____ <u>PVC sch 40</u> Length of casing: _____ <u>4.5 ft</u> Outside casing diameter: _____ <u>2.38"</u> Inside casing diameter: _____ <u>2"</u> Casing joint type: _____ <u>threaded</u> Casing/screen joint type: <u>threaded</u> Screen material: _____ <u>PVC</u> Screen opening size: <u>0.010"</u> Screen length: _____ <u>10 ft</u> Depth of well: _____ <u>14.5 ft</u> Filter Pack: _____ Material: _____ <u>Red Flint</u> Grain size: _____ <u>#40</u> Volume: _____ <u>300 lbs</u> Seal (minimum 3 ft length above filter pack): _____ Material: <u>3/8 inch bentonite chips</u></p>	<p>Placement method: <u>Gravity</u> Volume: <u>50 lbs</u> Backfill (if different from seal): _____ Material: _____ Placement method: _____ Volume: _____ Surface seal design: _____ Material of protective casing: <u>Steel 6 inch</u> Material of grout between protective casing and well casing: <u>sand</u> Protective cap: _____ Material: <u>Steel, vented</u> Vented: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Locking: <input type="checkbox"/> Yes <input type="checkbox"/> No Well Cap: _____ Material: <u>PVC</u> Vented: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
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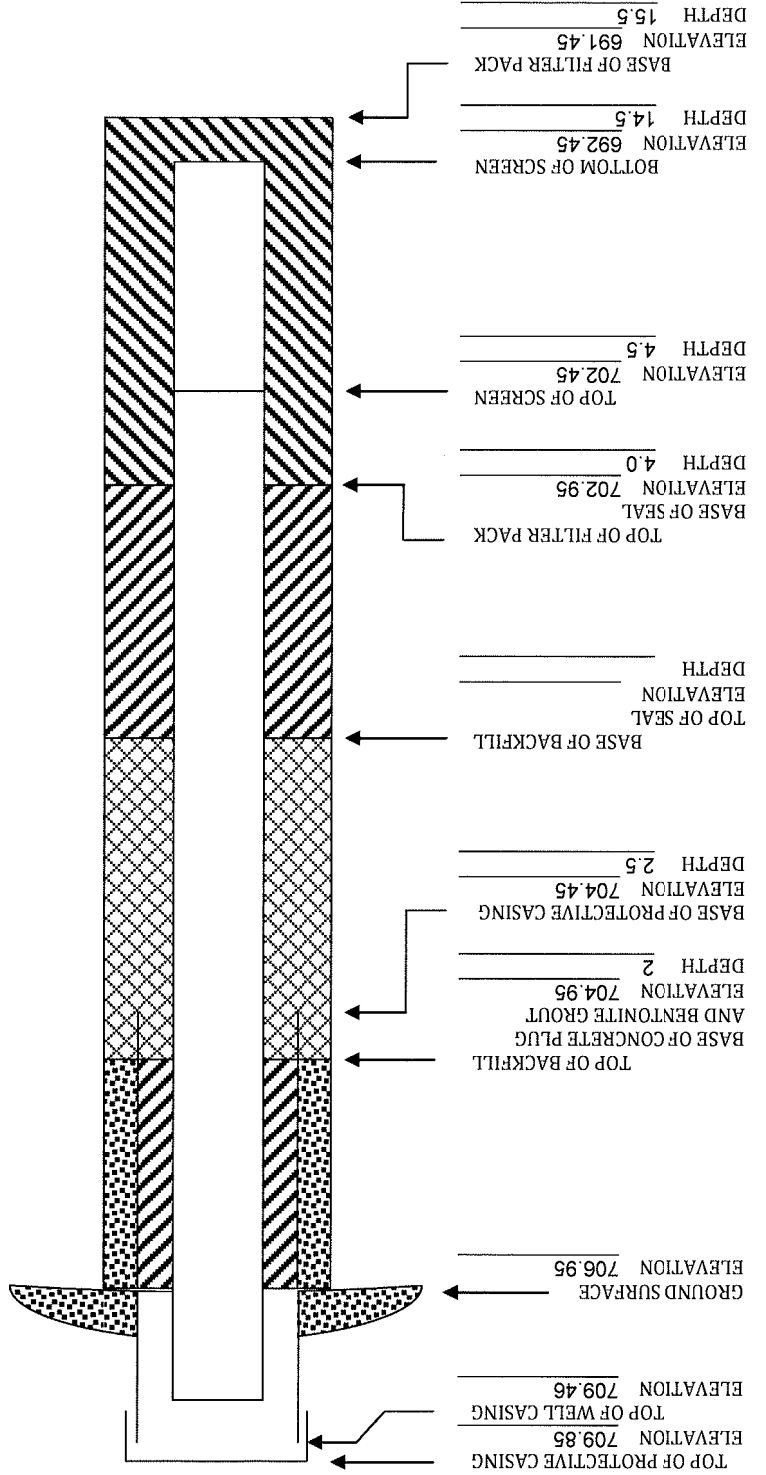
D. GROUNDWATER MEASUREMENT (± 0.01 ft below top of inner well casing)

Water level: 5.81 Stabilization Time: ~ 5 min
 Well development method: Pump and surge block
 Average depth of frostline: _____

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed for to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319-0034.

Questions? Call or Email: Nina Koger, Environmental Engineer Sr., 515-281-8986, Nina.Koger@dnr.iowa.gov



ELEVATIONS: ± 0.01 ft MSL
 DEPTHS: ± 0.1 ft FROM GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
 (SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL.)



IOWA DEPARTMENT OF NATURAL RESOURCES
MONITORING WELL/PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: IPL - Prairie Creek Generating Station Permit No.: _____
 Well or Piezometer No: MW-304
 Dates Started: 12/6/16 Date Completed: 12/6/16

A. SURVEYED LOCATIONS AND ELEVATIONS

Locations (± 0.5 ft): _____
 Specify corner of site: NE of parcel 19032-01001-00000
 Distance & direction along boundary: 1878' NW
 Distance & direction from boundary to wall: 1,317' S
 Elevations (± 0.01 ft MSL): _____
 Ground Surface: 707.07
 Top of protective casing: 710.12
 Top of well casing: _____ 709.66
 Benchmark elevation: _____
 Benchmark description: _____

B. SOIL BORING INFORMATION

Name & Address of Construction Company: _____
Cascade Drilling, LP
301 Alderson St
Schofield, WI 54476
 Name of Driller: Mike Mueller
 Drilling Method: HSA
 Drilling Fluid: NA
 Bore Hole Diameter: 8.5 inch
 Soil Sampling Method: Spoon
 Depth of Boring: 15.5 ft

C. MONITORING WELL INSTALLATION

Casing material: <u>PVC sch 40</u>	Placement method: <u>Gravity</u>
Length of casing: <u>4.5 ft</u>	Volume: <u>50 lbs</u>
Outside casing diameter: <u>2.38"</u>	Backfill (if different from seal): _____
Inside casing diameter: <u>2"</u>	Material: _____
Casing joint type: <u>threaded</u>	Placement method: _____
Casing/screen joint type: <u>threaded</u>	Volume: _____
Screen material: <u>PVC</u>	Surface seal design: _____
Screen opening size: <u>0.010"</u>	Material of protective casing: <u>Steel 6 inch</u>
Screen length: <u>10 ft</u>	Material of grout between protective casing and well casing: <u>sand</u>
Depth of well: <u>14.5 ft</u>	Protective cap: _____
Filter Pack: _____	Material: <u>Steel, vented</u>
Material: <u>Red Flint</u>	Vented: <input type="checkbox"/> Yes <input type="checkbox"/> No Locking: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Grain size: <u>#40</u>	Well Cap: _____
Volume: <u>300 lbs</u>	Material: <u>PVC</u>
Seal (minimum 3 ft length above filter pack): _____	Vented: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Material: <u>3/8 inch bentonite chips</u>	

D. GROUNDWATER MEASUREMENT (± 0.01 ft below top of inner well casing)

Water level: 5.89 Stabilization Time: ~ 5 min
 Well development method: Bailer and surge block
 Average depth of frostline: _____

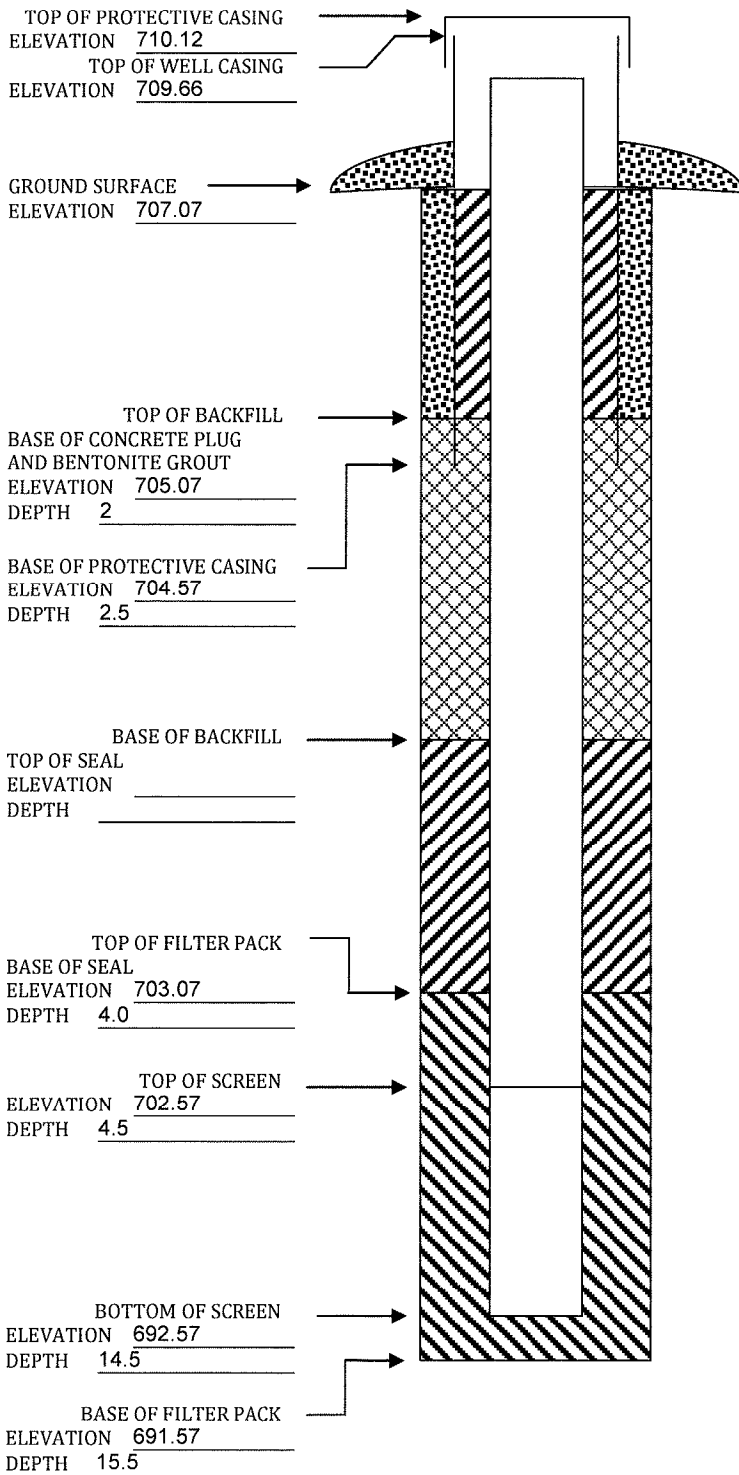
Attachments: Driller's log, Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed for to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319-0034.

Questions? Call or Email: Nina Koger, Environmental Engineer Sr., 515-281-8986, Nina.Koger@dnr.iowa.gov

ELEVATIONS: ± 0.01 ft MSL
DEPTHS: ± 0.1 ft FROM GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
(SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL.)





IOWA DEPARTMENT OF NATURAL RESOURCES
MONITORING WELL/PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: IPL - Prairie Creek Generating Station Permit No.: _____

Well or Piezometer No: MW-305

Dates Started: 12/5/16 Date Completed: 12/5/16

A. SURVEYED LOCATIONS AND ELEVATIONS	B. SOIL BORING INFORMATION
Locations (± 0.5 ft): Specify corner of site: <u>NE of parcel 19032-01001-00000</u>	Name & Address of Construction Company: <u>Cascade Drilling, LP</u>
Distance & direction along boundary: <u>1,594' NW</u>	<u>301 Alderson St</u>
Distance & direction from boundary to wall: <u>1,274' S</u>	<u>Schofield, WI 54476</u>
Elevations (± 0.01 ft MSL):	Name of Driller: <u>Mike Mueller</u>
Ground Surface: <u>707.11</u>	Drilling Method: <u>HSA</u>
Top of protective casing: <u>710.11</u>	Drilling Fluid: <u>NA</u>
Top of well casing: <u>709.61</u>	Bore Hole Diameter: <u>8.5 inch</u>
Benchmark elevation: _____	Soil Sampling Method: <u>Spoon</u>
Benchmark description: _____	Depth of Boring: <u>15.5 ft</u>

C. MONITORING WELL INSTALLATION	
Casing material: <u>PVC sch 40</u>	Placement method: <u>Gravity</u>
Length of casing: <u>4.5 ft</u>	Volume: <u>50 lbs</u>
Outside casing diameter: <u>2.38"</u>	Backfill (if different from seal): _____
Inside casing diameter: <u>2"</u>	Material: _____
Casing joint type: <u>threaded</u>	Placement method: _____
Casing/screen joint type: <u>threaded</u>	Volume: _____
Screen material: <u>PVC</u>	Surface seal design: _____
Screen opening size: <u>0.010"</u>	Material of protective casing: <u>Steel 6 inch</u>
Screen length: <u>10 ft</u>	Material of grout between protective casing and well casing: <u>sand</u>
Depth of well: <u>14.5 ft</u>	Protective cap: _____
Filter Pack: _____	Material: <u>Steel, vented</u>
Material: <u>Red Flint</u>	Vented: <input type="checkbox"/> Yes <input type="checkbox"/> No Locking: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Grain size: <u>#40</u>	Well Cap: _____
Volume: <u>250 lbs</u>	Material: <u>PVC</u>
Seal (minimum 3 ft length above filter pack): _____	Vented: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Material: <u>3/8 inch bentonite chips</u>	

D. GROUNDWATER MEASUREMENT (± 0.01 ft below top of inner well casing)	
Water level: <u>5.68</u>	Stabilization Time: <u>~5 min</u>
Well development method: <u>Bailer and surge block</u>	
Average depth of frostline: _____	

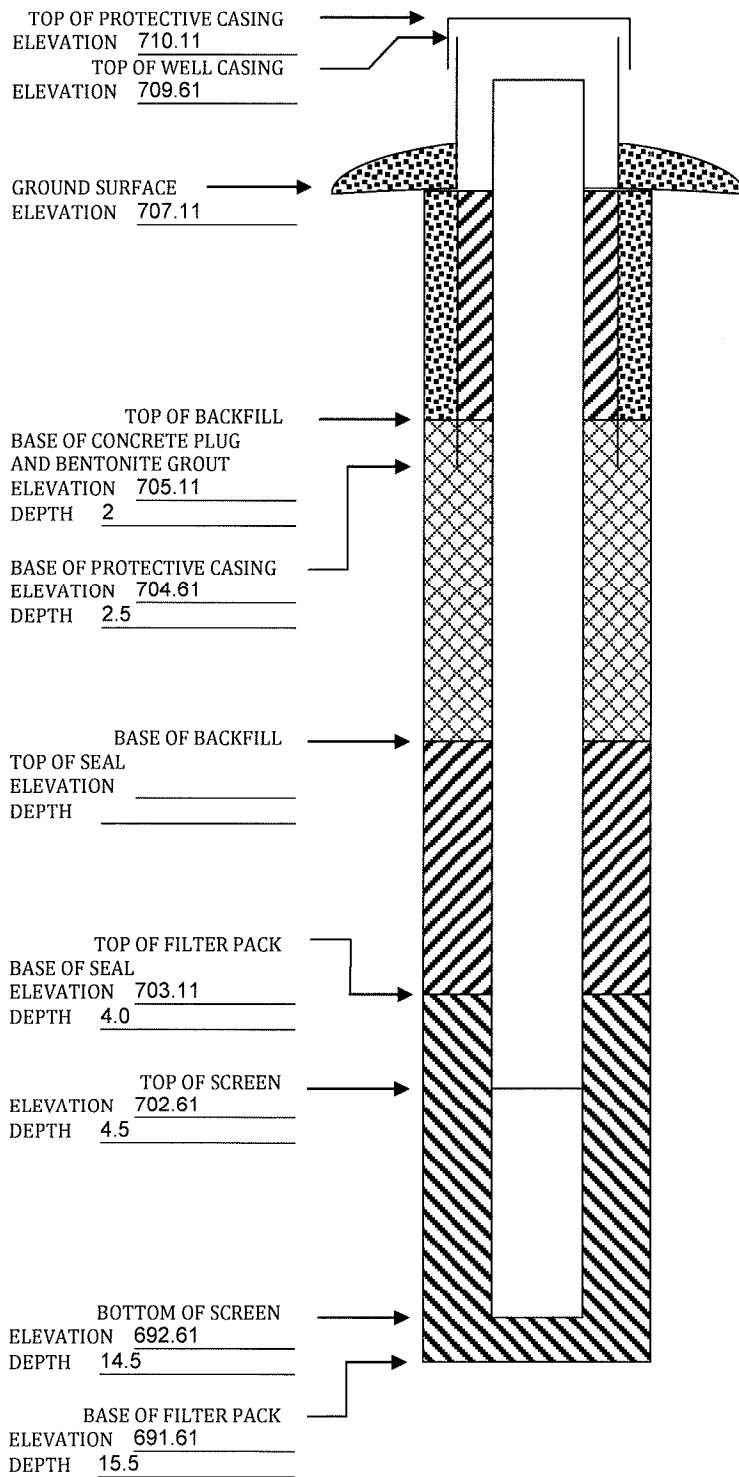
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed for to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319-0034.

Questions? Call or Email: Nina Koger, Environmental Engineer Sr., 515-281-8986, Nina.Koger@dnr.iowa.gov

ELEVATIONS: ± 0.01 ft MSL
DEPTHS: ± 0.1 ft FROM GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
(SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL.)





IOWA DEPARTMENT OF NATURAL RESOURCES
MONITORING WELL/PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: IPL - Prairie Creek Generating Station Permit No.: _____

Well or Piezometer No: MW-306

Dates Started: 11/2/16 Date Completed: 11/2/16

A. SURVEYED LOCATIONS AND ELEVATIONS

Locations (± 0.5 ft): _____

Specify corner of site: NE of parcel 19032-01001-00000

Distance & direction along boundary: 1,203' NW

Distance & direction from boundary to wall: 1,205' S

Elevations (± 0.01 ft MSL): _____

Ground Surface: 710.13

Top of protective casing: 712.9

Top of well casing: _____ 712.54

Benchmark elevation: _____

Benchmark description: _____

B. SOIL BORING INFORMATION

Name & Address of Construction Company: _____

Cascade Drilling, LP

301 Alderson St

Schofield, WI 54476

Name of Driller: Mike Mueller

Drilling Method: HSA

Drilling Fluid: NA

Bore Hole Diameter: 8.5 inch

Soil Sampling Method: Spoon

Depth of Boring: 30.5 ft

C. MONITORING WELL INSTALLATION

Casing material: PVC sch 40

Length of casing: 24.5 ft

Outside casing diameter: 2.38"

Inside casing diameter: 2"

Casing joint type: threaded

Casing/screen joint type: threaded

Screen material: PVC

Screen opening size: 0.010"

Screen length: 5 ft

Depth of well: 29.5 ft

Filter Pack: _____

Material: Red Flint

Grain size: #40

Volume: 150 lbs

Seal (minimum 3 ft length above filter pack): _____

Material: 3/8 inch bentonite chips

Placement method: Gravity

Volume: 500 lbs

Backfill (if different from seal): _____

Material: _____

Placement method: _____

Volume: _____

Surface seal design: _____

Material of protective casing: Steel 6 inch

Material of grout between protective casing and well casing: sand

Protective cap: _____

Material: Steel, vented

Vented: Yes No Locking: Yes No

Well Cap: _____

Material: PVC

Vented: Yes No

D. GROUNDWATER MEASUREMENT (± 0.01 ft below top of inner well casing)

Water level: 8.75 Stabilization Time: ~ 5 min

Well development method: Bailer and surge block

Average depth of frostline: _____

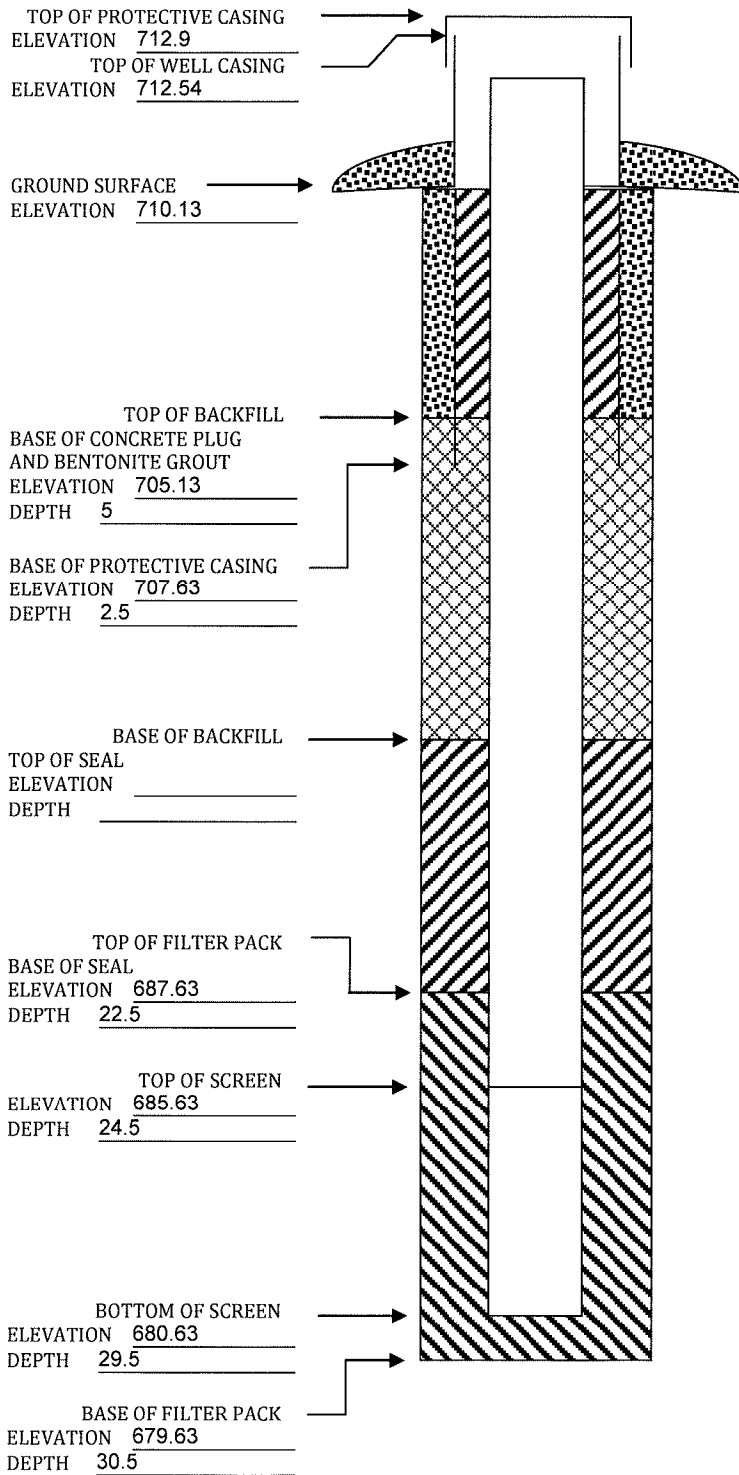
Attachments: Driller's log, Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed for to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E 9th St, Des Moines IA 50319-0034.

Questions? Call or Email: Nina Koger, Environmental Engineer Sr., 515-281-8986, Nina.Koger@dnr.iowa.gov

ELEVATIONS: ± 0.01 ft MSL
DEPTHS: ± 0.1 ft FROM GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
(SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL.)



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name IPL Prairie Creek Generating Station Permit No. PPW18-0051
Well or Piezometer No. MW-307 Dates Started 11/27/2018 Date Completed 11/27/2018

A. SURVEYED LOCATION AND ELEVATION OF POINT (+0.5 ft.)

Specify corner of site NE Distance and direction along boundary 1,140 W
Distance and direction from boundary to surface monitoring well 5 S
Elevation (+0.01 ft. MSL) _____
Ground Surface 718.89 Top of protective casing 721.35
Top of well casing 721.16 Benchmark elevation 718.58
Benchmark description CP #5

B. SOIL BORING INFORMATION

Construction Company Name Cascade Drilling LP
Address 301 Anderson St City, State, Zip Code Schofield, WI 54476
Name of driller Mike Mueller
Drilling method Sonic Drilling fluid NA Bore Hole diameter 6.5"
Soil sampling method Sonic soil core Depth of boring 21

C. MONITORING WELL INSTALLATION

Casing material PVC Sch. 40 Placement method Gravity
Length of casing 13.3' Volume 1.8 cu. ft
Outside casing diameter 2.38" Backfill (if different from seal): NA
Inside casing diameter 2" Material _____
Casing joint type Threaded Placement method _____
Casing/screen joint type Threaded Volume _____
Screen material PVC Sch. 40 Surface seal design: _____
Screen opening size 0.01" Material of protective casing: 6 inch Steel
Material of grout between protective casing and well casing: Bent. chips below grade
Screen length 10 ft Protective cap: _____
Depth of Well 21' Material Steel
Filter Pack: _____ Vented?: Y N Locking?: Y N
Material Red Flint Sand Well cap: _____
Grain Size #40 Material PVC
Volume 2.5 cu. ft Vented?: Y N
Seal (minimum 3 ft. length above filter pack): _____
Material 3/8" Bentonite Chips

D. GROUNDWATER MEASUREMENT (+0.01 foot below top of inner well casing)

Water level 13.12' Stabilization time <5 minutes
Well development method Surged and pumped until water ran clear, removed ~400 gallons.
Average depth of frost line 4'

DRILLER'S CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate, and complete.

Signature  Certification # 9362 Date 11/27/18

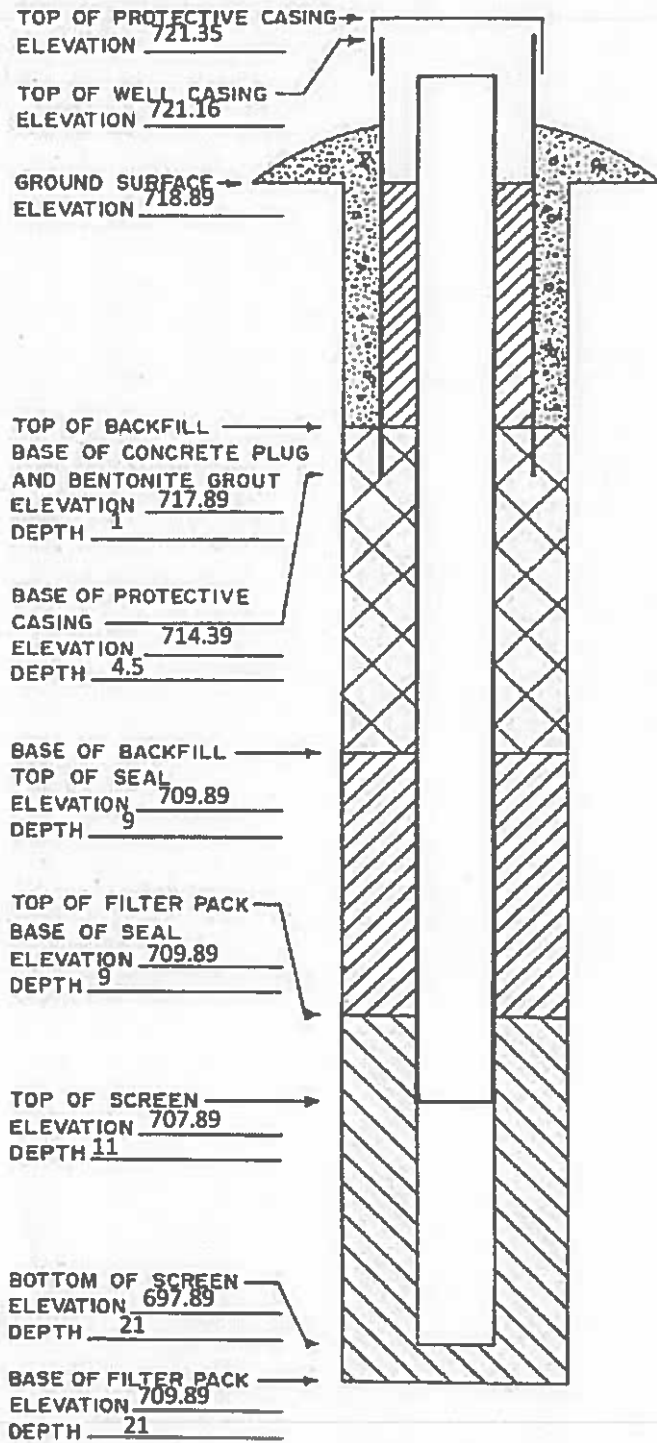
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.
Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-725-8309, nina.booker@dnr.iowa.gov
09/2017 cmc

DNR Form 542-1277

ELEVATIONS: ± 0.01 FT. MSL
DEPTHS: ± 0.1 FT. FROM
GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
(SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL).



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name IPL Prairie Creek Generating Station Permit No. PPW18-0051
Well or Piezometer No. MW-308 Dates Started 11/27/2018 Date Completed 11/27/2018

A. SURVEYED LOCATION AND ELEVATION OF POINT (+0.5 ft.)

Specify corner of site NE Distance and direction along boundary 950' W
Distance and direction from boundary to surface monitoring well 5 S
Elevation (+0.01 ft. MSL) _____
Ground Surface 717.46 Top of protective casing 719.98
Top of well casing 719.67 Benchmark elevation 718.58
Benchmark description CP #5

B. SOIL BORING INFORMATION

Construction Company Name Cascade Drilling LP
Address 301 Anderson St City, State, Zip Code Schofield, WI 54476
Name of driller Mike Mueller
Drilling method Sonic Drilling fluid NA Bore Hole diameter 6.5"
Soil sampling method Sonic soil core Depth of boring 21

C. MONITORING WELL INSTALLATION

Casing material <u>PVC Sch. 40</u>	Placement method <u>Gravity</u>
Length of casing <u>13.2'</u>	Volume <u>1.8 cu. ft</u>
Outside casing diameter <u>2.38"</u>	Backfill (if different from seal): <u>NA</u>
Inside casing diameter <u>2"</u>	Material _____
Casing joint type <u>Threaded</u>	Placement method _____
Casing/screen joint type <u>Threaded</u>	Volume _____
Screen material <u>PVC Sch. 40</u>	Surface seal design: _____
Screen opening size <u>0.01"</u>	Material of protective casing: <u>6 inch Steel</u>
Screen length <u>10 ft</u>	Material of grout between protective casing and well casing: <u>Bent. chips below grade</u>
Depth of Well <u>21'</u>	Protective cap: _____
Filter Pack: _____	Material <u>Steel</u>
Material <u>Red Flint Sand</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Grain Size <u>#40</u>	Well cap: _____
Volume <u>2.5 cu. ft</u>	Material <u>PVC</u>
Seal (minimum 3 ft. length above filter pack): _____	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Material <u>3/8" Bentonite Chips</u>	

D. GROUNDWATER MEASUREMENT (+0.01 foot below top of inner well casing)

Water level 14.49' Stabilization time <5 minutes
Well development method Surged and pumped until water ran clear, removed ~475 gallons.
Average depth of frost line 4'

DRILLER'S CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate, and complete.

Signature [Signature] Certification # 9362 Date 11/27/18

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

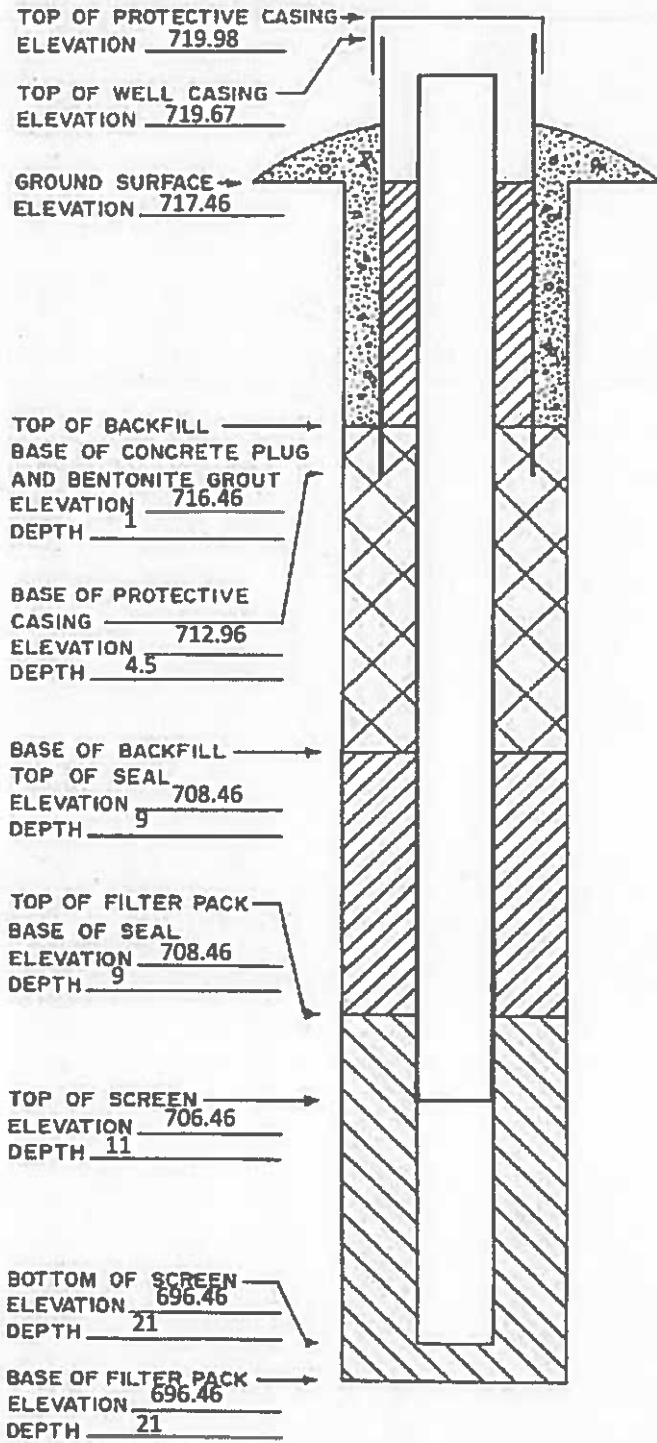
Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-725-8309, nina.booker@dnr.iowa.gov

09/2017 cnc

DNR Form 542-1277

ELEVATIONS: ± 0.01 FT. MSL
 DEPTHS: ± 0.1 FT. FROM
 GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
 (SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL).



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name Prairie Creek Generating Station Permit No. _____
Well or Piezometer No. MW301A Dates Started 6/23/2020 Date Completed 6/24/2020

A. SURVEYED LOCATION AND ELEVATION OF POINT (+0.5 ft.)

Specify corner of site SE of parcel 19031-51001-00 Distance and direction along boundary 145' W
Distance and direction from boundary to surface monitoring well 80' N
Elevation (+0.01 ft. MSL) _____
Ground Surface 729.40 Top of protective casing 732.45
Top of well casing 732.07 Benchmark elevation _____
Benchmark description On-site benchmark. NAVD_88 datum elevations.

B. SOIL BORING INFORMATION

Construction Company Name Cascade Drilling
Address 301 Alderson St. City, State, Zip Code Schofield, WI, 54476
Name of driller Mike Mueller
Drilling method Rotosonic Drilling fluid Water Bore Hole diameter 6 inches
Soil sampling method 5 foot sections Depth of boring 54 feet

C. MONITORING WELL INSTALLATION

Casing material <u>PVC</u>	Placement method <u>Tremie Pipe</u>
Length of casing <u>56 feet</u>	Volume <u>7.5 cubic feet</u>
Outside casing diameter <u>2.4 inches</u>	Backfill (if different from seal): <u>None</u>
Inside casing diameter <u>2.0 inches</u>	Material _____
Casing joint type <u>Threaded</u>	Placement method _____
Casing/screen joint type _____	Volume _____
Screen material <u>PVC</u>	Surface seal design: <u>Cememt</u>
Screen opening size <u>0.01 inches</u>	Material of protective casing: <u>Steel</u>
	Material of grout between protective casing and well casing: <u>Bentonite and Filter Sand</u>
Screen length <u>5 feet</u>	Protective cap: _____
Depth of Well <u>53 feet below ground surface</u>	Material <u>Aluminium</u>
Filter Pack: <u>Red Flint Filter Pack Sand</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Material <u>Sand</u>	Well cap: _____
Grain Size _____	Material <u>Plastic</u>
Volume <u>1.3 cubic feet</u>	Vented?: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Seal (minimum 3 ft. length above filter pack): <u>Bentonite Grout</u>	
Material <u>Bentonite Grout</u>	

D. GROUNDWATER MEASUREMENT (+0.01 foot below top of inner well casing)

Water level 27.75 Stabilization time <5 minutes
Well development method Surged & purged
Average depth of frost line 4 ft

DRILLER'S CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate, and complete.

Signature  Certification # 9362 Date 6-24-2020

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

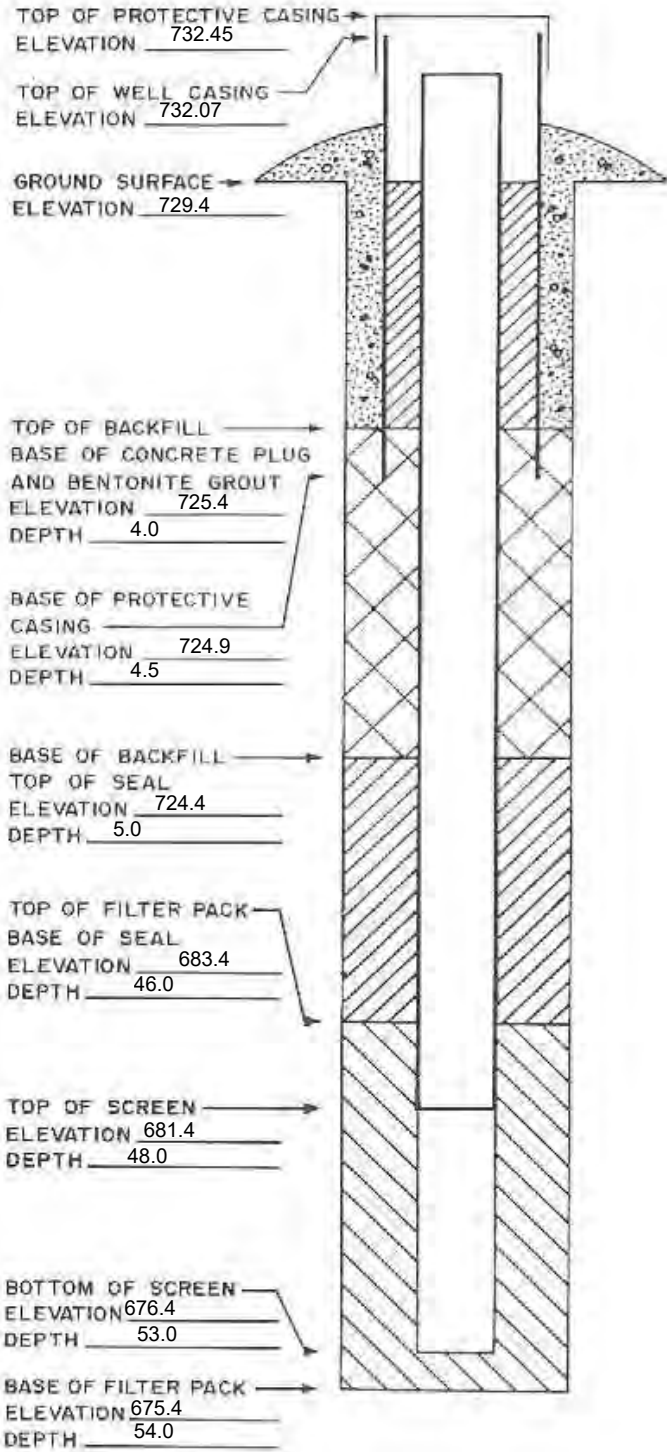
Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-725-8309, nina.booker@dnr.iowa.gov

09/2017 cmc

DNR Form 542-1277

ELEVATIONS: ± 0.01 FT. MSL
 DEPTHS: ± 0.1 FT. FROM
 GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
 (SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL)



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name Prairie Creek Generating Station Permit No. _____
Well or Piezometer No. MW306A Dates Started 6/23/2020 Date Completed 6/24/2020

A. SURVEYED LOCATION AND ELEVATION OF POINT (+0.5 ft.)

Specify corner of site NE of parcel 19032-01001-0 Distance and direction along boundary 1,210' W
Distance and direction from boundary to surface monitoring well 1,205' S
Elevation (+0.01 ft. MSL) _____
Ground Surface 708.9 Top of protective casing 712.50
Top of well casing 711.50 Benchmark elevation _____
Benchmark description On-site benchmark, NAVD_88 datum.

B. SOIL BORING INFORMATION

Construction Company Name Cascade Drilling
Address 301 Alderson St. City, State, Zip Code Schofield, WI, 54476
Name of driller Mike Mueller
Drilling method Rotosonic Drilling fluid Water Bore Hole diameter 6 inches
Soil sampling method 5 foot sections Depth of boring 61 feet

C. MONITORING WELL INSTALLATION

Casing material <u>PVC</u>	Placement method <u>Tremie Pipe</u>
Length of casing <u>63 feet</u>	Volume <u>8.5 cubic feet</u>
Outside casing diameter <u>2.4 inches</u>	Backfill (if different from seal): <u>None</u>
Inside casing diameter <u>2.0 inches</u>	Material _____
Casing joint type <u>Threaded</u>	Placement method _____
Casing/screen joint type _____	Volume _____
Screen material <u>PVC</u>	Surface seal design: <u>Cememt</u>
Screen opening size <u>0.01 inches</u>	Material of protective casing: <u>Steel</u>
	Material of grout between protective casing and well casing: <u>Bentonite and Filter Sand</u>
Screen length <u>5 feet</u>	Protective cap: _____
Depth of Well <u>60 feet below ground surface</u>	Material <u>Aluminium</u>
Filter Pack: <u>Red Flint Filter Pack Sand</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Material <u>Sand</u>	Well cap: _____
Grain Size _____	Material <u>Plastic</u>
Volume <u>1.3 cubic feet</u>	Vented?: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Seal (minimum 3 ft. length above filter pack): <u>Bentonite Grout</u>	
Material <u>Bentonite Grout</u>	

D. GROUNDWATER MEASUREMENT (+0.01 foot below top of inner well casing)

Water level 9.07 Stabilization time <5 minutes
Well development method Surged and purged
Average depth of frost line 4 ft

DRILLER'S CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate, and complete.

Signature  Certification # 9362 Date 6-24-2020

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

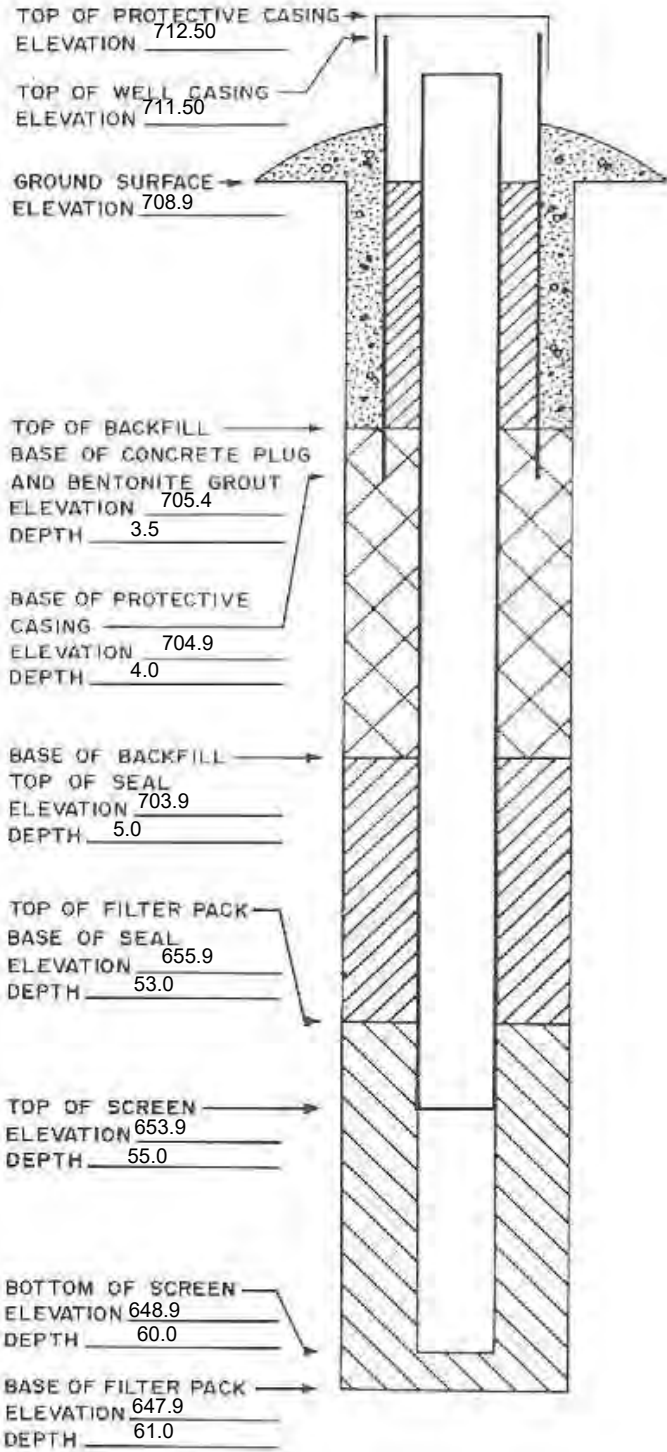
Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-725-8309, nina.booker@dnr.iowa.gov

09/2017 cmc

DNR Form 542-1277

ELEVATIONS: ± 0.01 FT. MSL
 DEPTHS: ± 0.1 FT. FROM
 GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
 (SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL)



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name Prairie Creek Generating Station Permit No. _____
Well or Piezometer No. MW309A Dates Started 7/23/2020 Date Completed 7/23/2020

A. SURVEYED LOCATION AND ELEVATION OF POINT (+0.5 ft.)

Specify corner of site NW of parcel 19031-7600-2 Distance and direction along boundary 320' E
Distance and direction from boundary to surface monitoring well 295' N
Elevation (+0.01 ft. MSL) _____
Ground Surface 708.0 Top of protective casing 711.05
Top of well casing 710.54 Benchmark elevation _____
Benchmark description On-site benchmark, NAVD_88 datum.

B. SOIL BORING INFORMATION

Construction Company Name Cascade Drilling
Address 301 Alderson St. City, State, Zip Code Schofield, WI, 54476
Name of driller Mike Mueller
Drilling method Rotosonic Drilling fluid Water Bore Hole diameter 6 inches
Soil sampling method 5 foot sections Depth of boring 46 feet

C. MONITORING WELL INSTALLATION

Casing material <u>PVC</u>	Placement method <u>Gravity</u>
Length of casing <u>47.5 feet</u>	Volume <u>5.9 cubic feet</u>
Outside casing diameter <u>2.4 inches</u>	Backfill (if different from seal): <u>None</u>
Inside casing diameter <u>2.0 inches</u>	Material _____
Casing joint type <u>Threaded</u>	Placement method _____
Casing/screen joint type _____	Volume _____
Screen material <u>PVC</u>	Surface seal design: <u>Cement</u>
Screen opening size <u>0.01 inches</u>	Material of protective casing: <u>Steel</u>
	Material of grout between protective casing and well casing: <u>Bentonite and Filter Sand</u>
Screen length <u>5 feet</u>	Protective cap: _____
Depth of Well <u>45 feet below ground surface</u>	Material <u>Aluminium</u>
Filter Pack: <u>Red Flint Filter Pack Sand</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Material <u>Sand</u>	Well cap: _____
Grain Size _____	Material <u>Rubber</u>
Volume <u>1.4 cubic feet</u>	Vented?: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Seal (minimum 3 ft. length above filter pack): <u>Bentonite Chips</u>	
Material <u>Bentonite Chips</u>	

D. GROUNDWATER MEASUREMENT (+0.01 foot below top of inner well casing)

Water level 8.37 Stabilization time < 5 minutes
Well development method Surged and purged
Average depth of frost line 4 ft

DRILLER'S CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate, and complete.

Signature  Certification # 9362 Date 7-23-2020

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

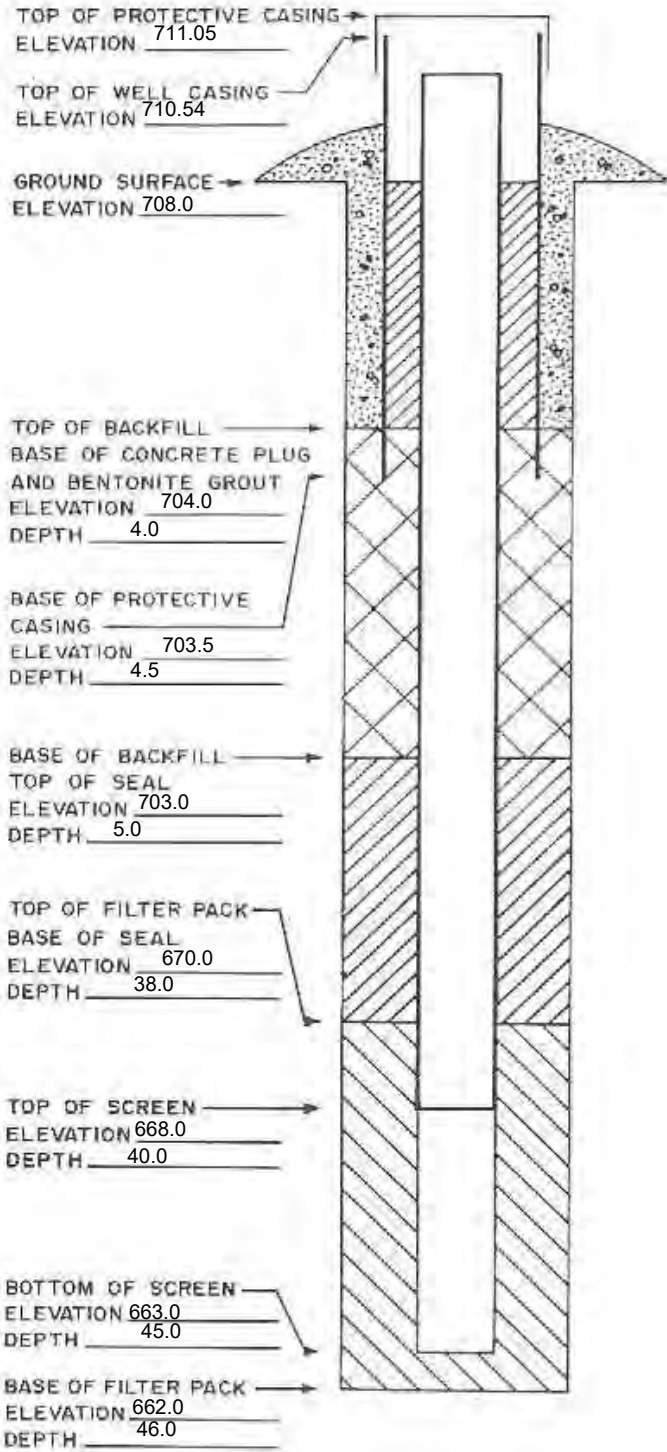
Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-725-8309, nina.booker@dnr.iowa.gov

09/2017 cmc

DNR Form 542-1277

ELEVATIONS: ± 0.01 FT. MSL
DEPTHS: ± 0.1 FT. FROM
GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
(SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL)



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name Prairie Creek Generating Station Permit No. _____
Well or Piezometer No. MW310A Dates Started 7/23/2020 Date Completed 7/23/2020

A. SURVEYED LOCATION AND ELEVATION OF POINT (+0.5 ft.)

Specify corner of site NW of parcel 19031-7600-2 Distance and direction along boundary 600' E
Distance and direction from boundary to surface monitoring well 345' N
Elevation (+0.01 ft. MSL) _____
Ground Surface 708.2 Top of protective casing 711.01
Top of well casing 710.68 Benchmark elevation _____
Benchmark description On-site benchmark, NAVD_88 datum.

B. SOIL BORING INFORMATION

Construction Company Name Cascade Drilling
Address 301 Alderson St. City, State, Zip Code Schofield, WI, 54476
Name of driller Mike Mueller
Drilling method Rotosonic Drilling fluid Water Bore Hole diameter 6 inches
Soil sampling method 5 foot sections Depth of boring 46 feet

C. MONITORING WELL INSTALLATION

Casing material <u>PVC</u>	Placement method <u>Gravity</u>
Length of casing <u>47.5 feet</u>	Volume <u>5.9 cubic feet</u>
Outside casing diameter <u>2.4 inches</u>	Backfill (if different from seal): <u>None</u>
Inside casing diameter <u>2.0 inches</u>	Material _____
Casing joint type <u>Threaded</u>	Placement method _____
Casing/screen joint type _____	Volume _____
Screen material <u>PVC</u>	Surface seal design: <u>Cement</u>
Screen opening size <u>0.01 inches</u>	Material of protective casing: <u>Steel</u>
	Material of grout between protective casing and well casing: <u>Bentonite and Filter Sand</u>
Screen length <u>5 feet</u>	Protective cap: _____
Depth of Well <u>45 feet below ground surface</u>	Material <u>Aluminium</u>
Filter Pack: <u>Red Flint Filter Pack Sand</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Material <u>Sand</u>	Well cap: _____
Grain Size _____	Material <u>Rubber</u>
Volume <u>1.4 cubic feet</u>	Vented?: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Seal (minimum 3 ft. length above filter pack): <u>Bentonite Chips</u>	
Material <u>Bentonite Chips</u>	

D. GROUNDWATER MEASUREMENT (+0.01 foot below top of inner well casing)

Water level 8.68 Stabilization time < 5 minutes
Well development method Surged and purged
Average depth of frost line 4 ft

DRILLER'S CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate, and complete.

Signature  Certification # 9362 Date 7-23-2020

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

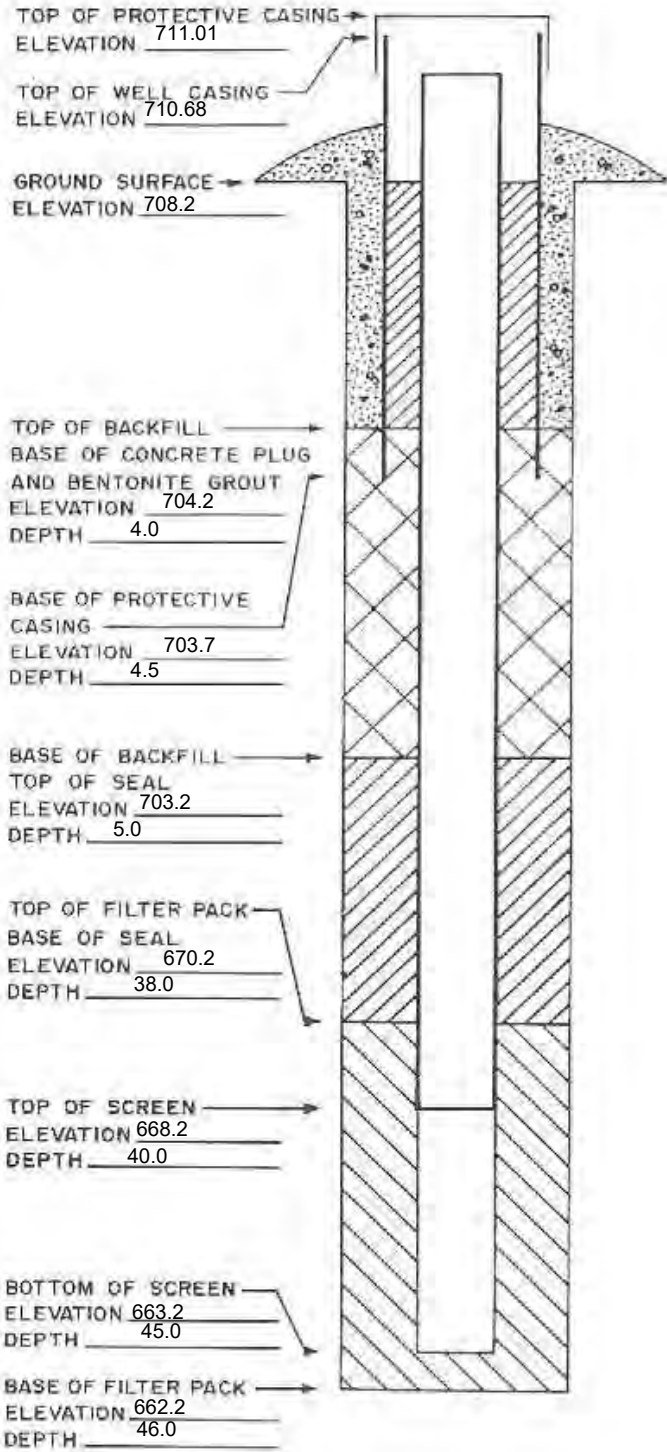
Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-725-8309, nina.booker@dnr.iowa.gov

09/2017 cmc

DNR Form 542-1277

ELEVATIONS: ± 0.01 FT. MSL
DEPTHS: ± 0.1 FT. FROM
GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
(SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL)



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name Prairie Creek Generating Station Permit No. PPW22-0010
Well or Piezometer No. MW-311 Dates Started 5/9/2022 Date Completed 5/9/2022

A. SURVEYED LOCATION AND ELEVATION OF POINT (+0.5 ft.)

Specify corner of site NW Distance and direction along boundary 188' S
Distance and direction from boundary to surface monitoring well 870' E
Elevation (+0.01 ft. MSL) _____
Ground Surface 721.55 Top of protective casing 724.71
Top of well casing 724.36 Benchmark elevation _____
Benchmark description _____

B. SOIL BORING INFORMATION

Construction Company Name Terracon
Address 2640 12th St SW City, State, Zip Code Cedar Rapids, IA 52404
Name of driller Duncan List
Drilling method Auger Drilling fluid None Bore Hole diameter 8"
Soil sampling method Split Spoon Depth of boring 20'

C. MONITORING WELL INSTALLATION

Casing material <u>Schedule 40 PVC</u>	Placement method <u>Gravity</u>
Length of casing <u>6'</u>	Volume <u>8 bags</u>
Outside casing diameter <u>2.37</u>	Backfill (if different from seal): _____
Inside casing diameter <u>2.01</u>	Material <u>NA</u>
Casing joint type <u>Thread</u>	Placement method <u>NA</u>
Casing/screen joint type <u>Thread</u>	Volume <u>NA</u>
Screen material <u>Schedule 40 PVC</u>	Surface seal design: _____
Screen opening size <u>0.010</u>	Material of protective casing: <u>Steel</u>
Screen length <u>10'</u>	Material of grout between protective casing and well casing: <u>Bentonite chips</u>
Depth of Well <u>16'</u>	Protective cap: _____
Filter Pack: _____	Material <u>Steel</u>
Material <u>Filter Sand</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Grain Size <u>16/30</u>	Well cap: _____
Volume <u>9 cu. ft.</u>	Material <u>Plastic</u>
Seal (minimum 3 ft. length above filter pack): _____	Vented?: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Material <u>3/8' Bentonite Chips</u>	

D. GROUNDWATER MEASUREMENT (± 0.01 foot below top of inner well casing)

Water level 14.50' Stabilization time < 1 hr
Well development method surged and pumped
Average depth of frost line 4'

DRILLER'S CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate, and complete.

Signature [Signature] Certification # 11183 Date 8/29/22

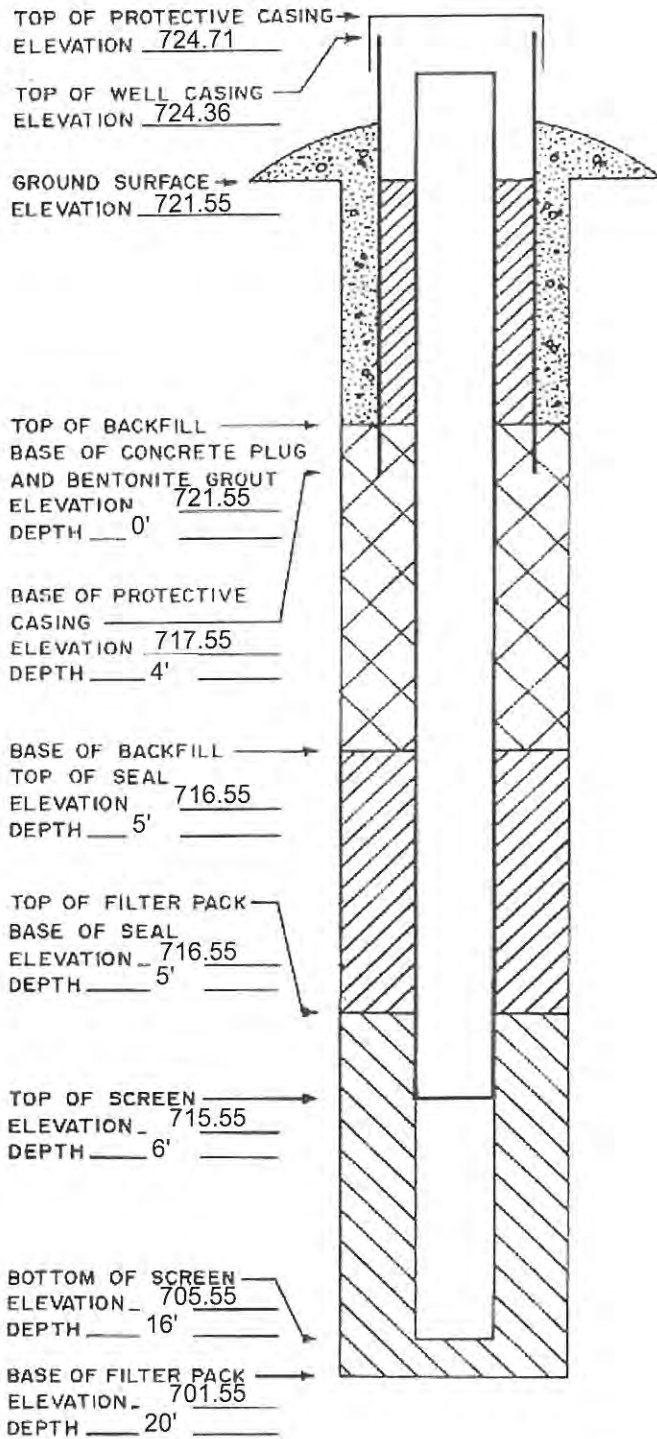
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-725-8309, nina.booker@dnr.iowa.gov

ELEVATIONS: ± 0.01 FT. MSL
DEPTHS: ± 0.1 FT. FROM
GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
(SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL).



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name Prairie Creek Generating Station Permit No. PPW22-0011
Well or Piezometer No. MW-312 Dates Started 5/9/2022 Date Completed 5/9/2022

A. SURVEYED LOCATION AND ELEVATION OF POINT (+0.5 ft.)

Specify corner of site SW Distance and direction along boundary 2,092' ENE
Distance and direction from boundary to surface monitoring well 60' NNW
Elevation (+0.01 ft. MSL) _____
Ground Surface 708.95 Top of protective casing 711.93
Top of well casing 711.60 Benchmark elevation _____
Benchmark description _____

B. SOIL BORING INFORMATION

Construction Company Name Terracon
Address 2640 12th St SW City, State, Zip Code Cedar Rapids, IA 52404
Name of driller Duncan List
Drilling method Auger Drilling fluid None Bore Hole diameter 8"
Soil sampling method Split Spoon Depth of boring 16'

C. MONITORING WELL INSTALLATION

Casing material <u>Schedule 40 PVC</u>	Placement method <u>Gravity</u>
Length of casing <u>5'</u>	Volume <u>2 bags</u>
Outside casing diameter <u>2.37</u>	Backfill (if different from seal): _____
Inside casing diameter <u>2.01</u>	Material <u>NA</u>
Casing joint type <u>Thread</u>	Placement method <u>NA</u>
Casing/screen joint type <u>Thread</u>	Volume <u>NA</u>
Screen material <u>Schedule 40 PVC</u>	Surface seal design: _____
Screen opening size <u>0.010</u>	Material of protective casing: <u>Steel</u>
Screen length <u>10'</u>	Material of grout between protective casing and well casing: <u>Filter Sand</u>
Depth of Well <u>15'</u>	Protective cap: _____
Filter Pack: _____	Material <u>Steel</u>
Material <u>Filter Sand</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Grain Size <u>16/30</u>	Well cap: _____
Volume <u>2 bags</u>	Material <u>Plastic</u>
Seal (minimum 3 ft. length above filter pack): _____	Vented?: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Material <u>3/8' Bentonite Chips</u>	

D. GROUNDWATER MEASUREMENT (± 0.01 foot below top of inner well casing)

Water level 8.08' Stabilization time < 1 hour
Well development method Surged and pumped
Average depth of frost line 4'

DRILLER'S CERTIFICATION

I certify under penalty of law I believe the information reported above is true, accurate, and complete.

Signature [Signature] Certification # 11183 Date 8/29/22

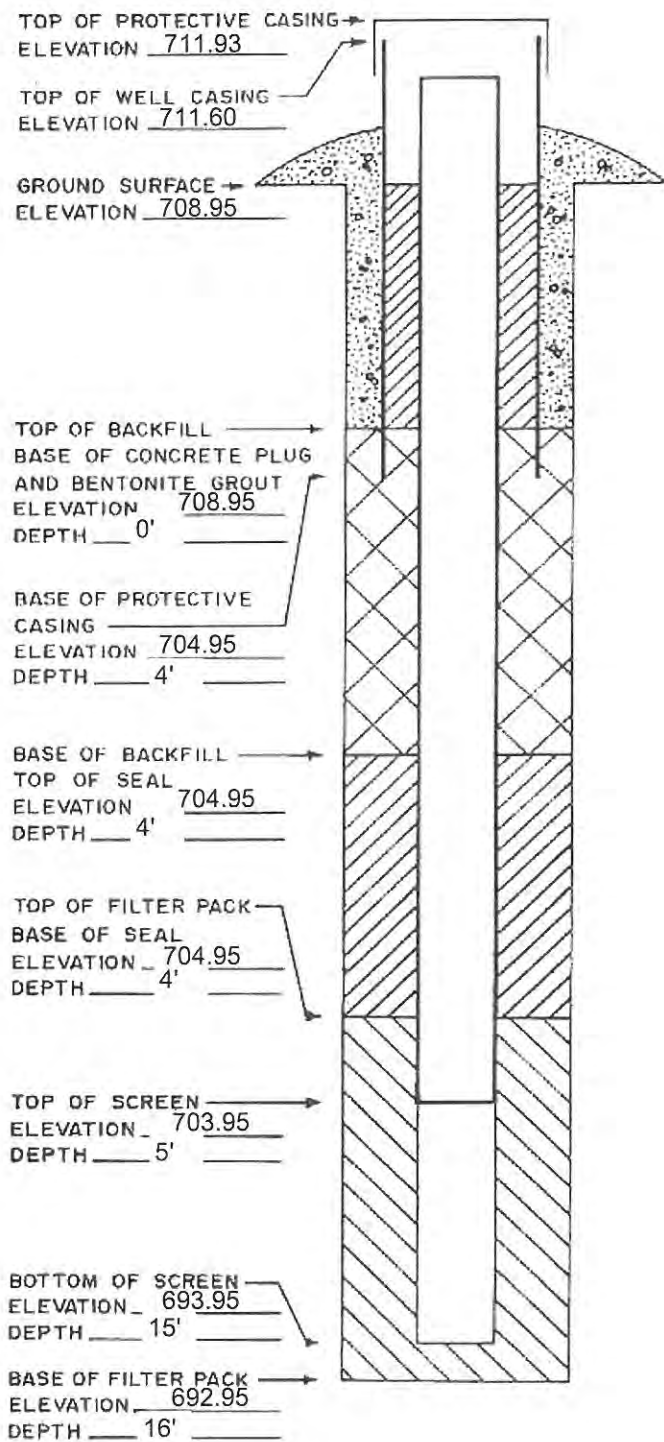
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-725-8309, nina.booker@dnr.iowa.gov

ELEVATIONS: \pm 0.01 FT. MSL
DEPTHS: \pm 0.1 FT. FROM
GROUND SURFACE

SPACE TO ATTACH ENTIRE SOIL BORING LOG
(SHOW SCREENED INTERVAL AND FILTER PACK INTERVAL).



Appendix C

Laboratory Reports

C1 November 2023 Assessment Monitoring



ANALYTICAL REPORT

PREPARED FOR

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718
Generated 3/1/2024 11:04:49 AM Revision 1

JOB DESCRIPTION

Prairie Creek Generating Station 25223074

JOB NUMBER

310-269190-1

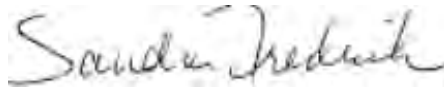
Eurofins Cedar Falls

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Generated
3/1/2024 11:04:49 AM
Revision 1

Authorized for release by
Sandie Fredrick, Senior Project Manager
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660



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Case Narrative

Client: SCS Engineers
Project: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Job ID: 310-269190-1

Eurofins Cedar Falls

Job Narrative 310-269190-1

Revision

The report being provided is a revision of the original report sent on 12/15/2023. The report (revision 1) is being revised due to: Revised to remove erroneous flag on Boron.

Receipt

The samples were received on 11/8/2023 3:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.3° C, 1.5° C and 3.0° C.

HPLC/IC

Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-301 (310-269190-1), MW-301A (310-269190-2), MW-302 (310-269190-3), MW-303 (310-269190-4), MW-304 (310-269190-5), MW-305 (310-269190-6), MW-306 (310-269190-7), MW-307 (310-269190-9), MW-308 (310-269190-10) and MW-312 (310-269190-15). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RAD

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Eurofins Cedar Falls

Sample Summary

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-269190-1	MW-301	Water	11/06/23 15:25	11/08/23 15:50
310-269190-2	MW-301A	Water	11/07/23 13:30	11/08/23 15:50
310-269190-3	MW-302	Water	11/07/23 14:20	11/08/23 15:50
310-269190-4	MW-303	Water	11/07/23 08:55	11/08/23 15:50
310-269190-5	MW-304	Water	11/07/23 09:50	11/08/23 15:50
310-269190-6	MW-305	Water	11/07/23 10:30	11/08/23 15:50
310-269190-7	MW-306	Water	11/07/23 11:50	11/08/23 15:50
310-269190-8	MW-306A	Water	11/07/23 12:35	11/08/23 15:50
310-269190-9	MW-307	Water	11/07/23 13:55	11/08/23 15:50
310-269190-10	MW-308	Water	11/07/23 15:00	11/08/23 15:50
310-269190-11	MW-309	Water	11/07/23 10:30	11/08/23 15:50
310-269190-12	MW-309A	Water	11/07/23 09:30	11/08/23 15:50
310-269190-13	MW-310	Water	11/07/23 12:45	11/08/23 15:50
310-269190-14	MW-310A	Water	11/07/23 11:55	11/08/23 15:50
310-269190-15	MW-312	Water	11/07/23 08:15	11/08/23 15:50
310-269190-16	Field Blank	Water	11/07/23 12:50	11/08/23 15:50



Detection Summary

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-301

Lab Sample ID: 310-269190-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	100		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	98		5.0	2.1	mg/L	5		9056A	Total/NA
Antimony	1.2	J	2.0	1.0	ug/L	1		6020B	Total/NA
Arsenic	1.5	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	270		2.0	0.64	ug/L	1		6020B	Total/NA
Cadmium	0.33		0.20	0.10	ug/L	1		6020B	Total/NA
Calcium	180		0.50	0.19	mg/L	1		6020B	Total/NA
Chromium	5.5		5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.25	J	0.50	0.17	ug/L	1		6020B	Total/NA
Lead	0.52		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	16		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	2.5		2.0	0.91	ug/L	1		6020B	Total/NA
Selenium	3.1	J	5.0	1.4	ug/L	1		6020B	Total/NA
Total Dissolved Solids	730		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.5	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	712.29				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	118.3				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	4.21				mg/L	1		Field Sampling	Total/NA
Field pH	6.68				SU	1		Field Sampling	Total/NA
Field Conductivity	1282				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.7				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	1.91				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-301A

Lab Sample ID: 310-269190-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.7		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	6.4		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	4.7		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	140		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	85	J	100	76	ug/L	1		6020B	Total/NA
Calcium	74		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.75		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	6700		100	36	ug/L	1		6020B	Total/NA
Molybdenum	5.6		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	320		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.7	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	681.93				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	79.8				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	2.95				mg/L	1		Field Sampling	Total/NA
Field pH	6.67				SU	1		Field Sampling	Total/NA
Field Conductivity	668				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.5				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	9.84				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-302

Lab Sample ID: 310-269190-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	150		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	85		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.86	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	230		2.0	0.64	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-302 (Continued)

Lab Sample ID: 310-269190-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	170		0.50	0.19	mg/L	1		6020B	Total/NA
Chromium	1.9	J	5.0	1.1	ug/L	1		6020B	Total/NA
Iron	96	J	100	36	ug/L	1		6020B	Total/NA
Lithium	9.5	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	1.1	J	2.0	0.91	ug/L	1		6020B	Total/NA
Thallium	0.26	J	1.0	0.26	ug/L	1		6020B	Total/NA
Total Dissolved Solids	740		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.6	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	711.86				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	83.5				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	4.75				mg/L	1		Field Sampling	Total/NA
Field pH	6.60				SU	1		Field Sampling	Total/NA
Field Conductivity	1447				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	7.08				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-303

Lab Sample ID: 310-269190-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		5.0	2.3	mg/L	5		9056A	Total/NA
Fluoride	0.39	J	1.0	0.38	mg/L	5		9056A	Total/NA
Sulfate	91		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	48		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	110		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	1200		100	76	ug/L	1		6020B	Total/NA
Calcium	110		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.30	J	0.50	0.17	ug/L	1		6020B	Total/NA
Iron	3000		100	36	ug/L	1		6020B	Total/NA
Lithium	19		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	13		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	550		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.7	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	701.55				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-6.7				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.40				mg/L	1		Field Sampling	Total/NA
Field pH	6.77				SU	1		Field Sampling	Total/NA
Field Conductivity	1026				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	7.08				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-304

Lab Sample ID: 310-269190-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11		5.0	2.3	mg/L	5		9056A	Total/NA
Fluoride	0.46	J	1.0	0.38	mg/L	5		9056A	Total/NA
Sulfate	230		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	21		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	110		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	1100		100	76	ug/L	1		6020B	Total/NA
Calcium	130		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.61		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	1300		100	36	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-304 (Continued)

Lab Sample ID: 310-269190-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	17		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	37		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	710		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.8	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	701.54				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	17.0				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.30				mg/L	1		Field Sampling	Total/NA
Field pH	6.83				SU	1		Field Sampling	Total/NA
Field Conductivity	1196				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.6				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.37				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-305

Lab Sample ID: 310-269190-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	330		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	11		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	160		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	1300		100	76	ug/L	1		6020B	Total/NA
Calcium	150		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.38	J	0.50	0.17	ug/L	1		6020B	Total/NA
Iron	74	J	100	36	ug/L	1		6020B	Total/NA
Lithium	22		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	60		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	890		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.8	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	701.38				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	64.5				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.41				mg/L	1		Field Sampling	Total/NA
Field pH	6.87				SU	1		Field Sampling	Total/NA
Field Conductivity	1408				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.21				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-306

Lab Sample ID: 310-269190-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	130		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.63	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	68		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	2200		100	76	ug/L	1		6020B	Total/NA
Calcium	74		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	2200		100	36	ug/L	1		6020B	Total/NA
Molybdenum	150		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	450		50	34	mg/L	1		SM 2540C	Total/NA
pH	8.0	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	701.68				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-58.2				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.49				mg/L	1		Field Sampling	Total/NA
Field pH	7.31				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-306 (Continued)

Lab Sample ID: 310-269190-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field Conductivity	803				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.2				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	7.16				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-306A

Lab Sample ID: 310-269190-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	5.8	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	20		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	701.92				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	29.7				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.24				mg/L	1		Field Sampling	Total/NA
Field pH	7.09				SU	1		Field Sampling	Total/NA
Field Conductivity	1285				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.6				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	8.30				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-307

Lab Sample ID: 310-269190-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.4	J	5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	50		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	7.7		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	41		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	1200		100	76	ug/L	1		6020B	Total/NA
Calcium	23		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	7.7	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	10		2.0	0.91	ug/L	1		6020B	Total/NA
Selenium	5.8		5.0	1.4	ug/L	1		6020B	Total/NA
Total Dissolved Solids	110		50	34	mg/L	1		SM 2540C	Total/NA
pH	8.9	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	704.67				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-164.6				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.18				mg/L	1		Field Sampling	Total/NA
Field pH	9.48				SU	1		Field Sampling	Total/NA
Field Conductivity	199.7				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	18.6				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	3.95				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-308

Lab Sample ID: 310-269190-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.0		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	170		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	42		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	50		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	5000		400	300	ug/L	4		6020B	Total/NA
Calcium	58		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	44		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	63		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	370		50	34	mg/L	1		SM 2540C	Total/NA
pH	8.8	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-308 (Continued)

Lab Sample ID: 310-269190-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Groundwater Elevation	702.18				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-219.3				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.11				mg/L	1		Field Sampling	Total/NA
Field pH	9.03				SU	1		Field Sampling	Total/NA
Field Conductivity	572				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.6				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.89				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-309

Lab Sample ID: 310-269190-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	46		2.0	0.53	ug/L	1		6020B	Total/NA
Lithium	16		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	20		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	701.59				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-142.7				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.22				mg/L	1		Field Sampling	Total/NA
Field pH	7.32				SU	1		Field Sampling	Total/NA
Field Conductivity	945				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	16.7				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.06				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-309A

Lab Sample ID: 310-269190-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.0	J	2.0	0.53	ug/L	1		6020B	Total/NA
Lithium	6.2	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	8.9		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	701.70				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-150.2				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.39				mg/L	1		Field Sampling	Total/NA
Field pH	7.16				SU	1		Field Sampling	Total/NA
Field Conductivity	917				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	3.70				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-310

Lab Sample ID: 310-269190-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	27		2.0	0.53	ug/L	1		6020B	Total/NA
Lithium	16		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	40		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	701.34				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-149.8				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.17				mg/L	1		Field Sampling	Total/NA
Field pH	7.19				SU	1		Field Sampling	Total/NA
Field Conductivity	1014				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	16.2				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	8.31				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-310A

Lab Sample ID: 310-269190-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	4.6	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	16		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	701.51				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-158.6				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.51				mg/L	1		Field Sampling	Total/NA
Field pH	7.30				SU	1		Field Sampling	Total/NA
Field Conductivity	1025				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.2				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	3.26				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-312

Lab Sample ID: 310-269190-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	74		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	15		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	3.2		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	130		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	250		100	76	ug/L	1		6020B	Total/NA
Calcium	85		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	4600		100	36	ug/L	1		6020B	Total/NA
Lithium	6.6	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	5.7		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	430		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	702.24				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-142.8				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.23				mg/L	1		Field Sampling	Total/NA
Field pH	6.83				SU	1		Field Sampling	Total/NA
Field Conductivity	825				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	23.5				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	4.21				NTU	1		Field Sampling	Total/NA

Client Sample ID: Field Blank

Lab Sample ID: 310-269190-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH	7.9	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-301

Lab Sample ID: 310-269190-1

Date Collected: 11/06/23 15:25

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	100		5.0	2.3	mg/L			11/21/23 14:10	5
Fluoride	<0.38		1.0	0.38	mg/L			11/21/23 14:10	5
Sulfate	98		5.0	2.1	mg/L			11/21/23 14:10	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.2	J	2.0	1.0	ug/L		11/10/23 09:15	11/13/23 13:12	1
Arsenic	1.5	J	2.0	0.53	ug/L		11/10/23 09:15	11/10/23 17:56	1
Barium	270		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 17:56	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 17:56	1
Boron	<76		100	76	ug/L		11/10/23 09:15	11/13/23 13:12	1
Cadmium	0.33		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 17:56	1
Calcium	180		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 17:56	1
Chromium	5.5		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 17:56	1
Cobalt	0.25	J	0.50	0.17	ug/L		11/10/23 09:15	11/10/23 17:56	1
Iron	<36		100	36	ug/L		11/10/23 09:15	11/10/23 17:56	1
Lead	0.52		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 17:56	1
Lithium	16		10	2.5	ug/L		11/10/23 09:15	11/10/23 17:56	1
Molybdenum	2.5		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 17:56	1
Selenium	3.1	J	5.0	1.4	ug/L		11/10/23 09:15	11/10/23 17:56	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/13/23 15:07	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 11:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	730		50	34	mg/L			11/09/23 19:17	1
pH (SM 4500 H+ B)	7.5	HF	1.0	1.0	SU			11/08/23 21:47	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.389		0.183	0.187	1.00	0.225	pCi/L	11/13/23 11:16	12/13/23 07:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	102		30 - 110					11/13/23 11:16	12/13/23 07:25	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.657		0.338	0.344	1.00	0.467	pCi/L	11/13/23 11:36	12/11/23 11:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	102		30 - 110					11/13/23 11:36	12/11/23 11:40	1
Y Carrier	77.4		30 - 110					11/13/23 11:36	12/11/23 11:40	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-301
 Date Collected: 11/06/23 15:25
 Date Received: 11/08/23 15:50

Lab Sample ID: 310-269190-1
 Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.05		0.384	0.392	5.00	0.467	pCi/L		12/15/23 14:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	712.29				ft			11/06/23 15:25	1
Oxidation Reduction Potential	118.3				mV			11/06/23 15:25	1
Oxygen, Dissolved	4.21				mg/L			11/06/23 15:25	1
Field pH	6.68				SU			11/06/23 15:25	1
Field Conductivity	1282				umhos/cm			11/06/23 15:25	1
Field Temperature	13.7				Degrees C			11/06/23 15:25	1
Field Turbidity	1.91				NTU			11/06/23 15:25	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-301A

Lab Sample ID: 310-269190-2

Date Collected: 11/07/23 13:30

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.7		5.0	2.3	mg/L			11/21/23 14:22	5
Fluoride	<0.38		1.0	0.38	mg/L			11/21/23 14:22	5
Sulfate	6.4		5.0	2.1	mg/L			11/21/23 14:22	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/13/23 13:15	1
Arsenic	4.7		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 17:58	1
Barium	140		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 17:58	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 17:58	1
Boron	85 J		100	76	ug/L		11/10/23 09:15	11/13/23 13:15	1
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 17:58	1
Calcium	74		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 17:58	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 17:58	1
Cobalt	0.75		0.50	0.17	ug/L		11/10/23 09:15	11/10/23 17:58	1
Iron	6700		100	36	ug/L		11/10/23 09:15	11/10/23 17:58	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 17:58	1
Lithium	<2.5		10	2.5	ug/L		11/10/23 09:15	11/10/23 17:58	1
Molybdenum	5.6		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 17:58	1
Selenium	<1.4		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 17:58	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/13/23 15:09	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 11:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	320		50	34	mg/L			11/09/23 19:23	1
pH (SM 4500 H+ B)	7.7	HF	1.0	1.0	SU			11/08/23 21:56	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	681.93				ft			11/07/23 13:30	1
Oxidation Reduction Potential	79.8				mV			11/07/23 13:30	1
Oxygen, Dissolved	2.95				mg/L			11/07/23 13:30	1
Field pH	6.67				SU			11/07/23 13:30	1
Field Conductivity	668				umhos/cm			11/07/23 13:30	1
Field Temperature	12.5				Degrees C			11/07/23 13:30	1
Field Turbidity	9.84				NTU			11/07/23 13:30	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-302

Lab Sample ID: 310-269190-3

Date Collected: 11/07/23 14:20

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150		5.0	2.3	mg/L			11/21/23 14:35	5
Fluoride	<0.38		1.0	0.38	mg/L			11/21/23 14:35	5
Sulfate	85		5.0	2.1	mg/L			11/21/23 14:35	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/13/23 13:18	1
Arsenic	0.86	J	2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:00	1
Barium	230		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 18:00	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 18:00	1
Boron	<76		100	76	ug/L		11/10/23 09:15	11/13/23 13:18	1
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 18:00	1
Calcium	170		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 18:00	1
Chromium	1.9	J	5.0	1.1	ug/L		11/10/23 09:15	11/10/23 18:00	1
Cobalt	<0.17		0.50	0.17	ug/L		11/10/23 09:15	11/10/23 18:00	1
Iron	96	J	100	36	ug/L		11/10/23 09:15	11/10/23 18:00	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 18:00	1
Lithium	9.5	J	10	2.5	ug/L		11/10/23 09:15	11/10/23 18:00	1
Molybdenum	1.1	J	2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:00	1
Selenium	<1.4		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 18:00	1
Thallium	0.26	J	1.0	0.26	ug/L		11/10/23 09:15	11/13/23 13:18	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 11:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	740		50	34	mg/L			11/09/23 19:17	1
pH (SM 4500 H+ B)	7.6	HF	1.0	1.0	SU			11/08/23 22:01	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.323		0.154	0.156	1.00	0.177	pCi/L	11/13/23 11:16	12/13/23 07:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	99.5		30 - 110					11/13/23 11:16	12/13/23 07:25	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.423	U	0.314	0.317	1.00	0.480	pCi/L	11/13/23 11:36	12/11/23 11:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	99.5		30 - 110					11/13/23 11:36	12/11/23 11:40	1
Y Carrier	83.0		30 - 110					11/13/23 11:36	12/11/23 11:40	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-302
 Date Collected: 11/07/23 14:20
 Date Received: 11/08/23 15:50

Lab Sample ID: 310-269190-3
 Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.746		0.350	0.353	5.00	0.480	pCi/L		12/15/23 14:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	711.86				ft			11/07/23 14:20	1
Oxidation Reduction Potential	83.5				mV			11/07/23 14:20	1
Oxygen, Dissolved	4.75				mg/L			11/07/23 14:20	1
Field pH	6.60				SU			11/07/23 14:20	1
Field Conductivity	1447				umhos/cm			11/07/23 14:20	1
Field Temperature	13.4				Degrees C			11/07/23 14:20	1
Field Turbidity	7.08				NTU			11/07/23 14:20	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-303

Lab Sample ID: 310-269190-4

Date Collected: 11/07/23 08:55

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		5.0	2.3	mg/L			11/21/23 14:47	5
Fluoride	0.39	J	1.0	0.38	mg/L			11/21/23 14:47	5
Sulfate	91		5.0	2.1	mg/L			11/21/23 14:47	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/13/23 13:22	1
Arsenic	48		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:02	1
Barium	110		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 18:02	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 18:02	1
Boron	1200		100	76	ug/L		11/10/23 09:15	11/13/23 13:22	1
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 18:02	1
Calcium	110		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 18:02	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 18:02	1
Cobalt	0.30	J	0.50	0.17	ug/L		11/10/23 09:15	11/10/23 18:02	1
Iron	3000		100	36	ug/L		11/10/23 09:15	11/10/23 18:02	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 18:02	1
Lithium	19		10	2.5	ug/L		11/10/23 09:15	11/10/23 18:02	1
Molybdenum	13		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:02	1
Selenium	<1.4		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 18:02	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/13/23 13:22	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 12:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	550		50	34	mg/L			11/09/23 19:17	1
pH (SM 4500 H+ B)	7.7	HF	1.0	1.0	SU			11/08/23 22:05	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Total Uncert. (2σ+/-)						
Radium 226	0.186	U	0.185	0.185	1.00	0.292	pCi/L	11/13/23 11:16	12/13/23 07:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	97.9		30 - 110					11/13/23 11:16	12/13/23 07:25	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert. (2σ+/-)	Total Uncert. (2σ+/-)						
Radium 228	0.438	U	0.448	0.450	1.00	0.725	pCi/L	11/13/23 11:36	12/11/23 11:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	97.9		30 - 110					11/13/23 11:36	12/11/23 11:40	1
Y Carrier	85.2		30 - 110					11/13/23 11:36	12/11/23 11:40	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-303
 Date Collected: 11/07/23 08:55
 Date Received: 11/08/23 15:50

Lab Sample ID: 310-269190-4
 Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.624	U	0.485	0.487	5.00	0.725	pCi/L		12/15/23 14:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.55				ft			11/07/23 08:55	1
Oxidation Reduction Potential	-6.7				mV			11/07/23 08:55	1
Oxygen, Dissolved	0.40				mg/L			11/07/23 08:55	1
Field pH	6.77				SU			11/07/23 08:55	1
Field Conductivity	1026				umhos/cm			11/07/23 08:55	1
Field Temperature	15.4				Degrees C			11/07/23 08:55	1
Field Turbidity	7.08				NTU			11/07/23 08:55	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-304

Lab Sample ID: 310-269190-5

Date Collected: 11/07/23 09:50

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11		5.0	2.3	mg/L			11/21/23 15:00	5
Fluoride	0.46	J	1.0	0.38	mg/L			11/21/23 15:00	5
Sulfate	230		5.0	2.1	mg/L			11/21/23 15:00	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/17/23 14:39	1
Arsenic	21		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:17	1
Barium	110		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 18:17	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 18:17	1
Boron	1100		100	76	ug/L		11/10/23 09:15	11/10/23 18:17	1
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 18:17	1
Calcium	130		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 18:17	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 18:17	1
Cobalt	0.61		0.50	0.17	ug/L		11/10/23 09:15	11/10/23 18:17	1
Iron	1300		100	36	ug/L		11/10/23 09:15	11/10/23 18:17	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 18:17	1
Lithium	17		10	2.5	ug/L		11/10/23 09:15	11/10/23 18:17	1
Molybdenum	37		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:17	1
Selenium	<1.4		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 18:17	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/10/23 18:17	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 12:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	710		50	34	mg/L			11/09/23 19:17	1
pH (SM 4500 H+ B)	7.8	HF	1.0	1.0	SU			11/08/23 22:10	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.282		0.179	0.181	1.00	0.256	pCi/L	11/13/23 11:16	12/13/23 07:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	97.2		30 - 110					11/13/23 11:16	12/13/23 07:25	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.446	U	0.311	0.314	1.00	0.465	pCi/L	11/13/23 11:36	12/11/23 11:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	97.2		30 - 110					11/13/23 11:36	12/11/23 11:40	1
Y Carrier	81.5		30 - 110					11/13/23 11:36	12/11/23 11:40	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-304

Lab Sample ID: 310-269190-5

Date Collected: 11/07/23 09:50

Matrix: Water

Date Received: 11/08/23 15:50

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.728		0.359	0.362	5.00	0.465	pCi/L		12/15/23 14:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.54				ft			11/07/23 09:50	1
Oxidation Reduction Potential	17.0				mV			11/07/23 09:50	1
Oxygen, Dissolved	0.30				mg/L			11/07/23 09:50	1
Field pH	6.83				SU			11/07/23 09:50	1
Field Conductivity	1196				umhos/cm			11/07/23 09:50	1
Field Temperature	14.6				Degrees C			11/07/23 09:50	1
Field Turbidity	6.37				NTU			11/07/23 09:50	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-305

Lab Sample ID: 310-269190-6

Date Collected: 11/07/23 10:30

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		5.0	2.3	mg/L			11/21/23 15:13	5
Fluoride	<0.38		1.0	0.38	mg/L			11/21/23 15:13	5
Sulfate	330		5.0	2.1	mg/L			11/21/23 15:13	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/17/23 14:42	1
Arsenic	11		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:19	1
Barium	160		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 18:19	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 18:19	1
Boron	1300		100	76	ug/L		11/10/23 09:15	11/10/23 18:19	1
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 18:19	1
Calcium	150		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 18:19	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 18:19	1
Cobalt	0.38 J		0.50	0.17	ug/L		11/10/23 09:15	11/10/23 18:19	1
Iron	74 J		100	36	ug/L		11/10/23 09:15	11/10/23 18:19	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 18:19	1
Lithium	22		10	2.5	ug/L		11/10/23 09:15	11/10/23 18:19	1
Molybdenum	60		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:19	1
Selenium	<1.4		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 18:19	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/10/23 18:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 12:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	890		50	34	mg/L			11/09/23 19:17	1
pH (SM 4500 H+ B)	7.8 HF		1.0	1.0	SU			11/08/23 22:15	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0930	U	0.133	0.133	1.00	0.225	pCi/L	11/13/23 11:16	12/13/23 07:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	103		30 - 110					11/13/23 11:16	12/13/23 07:19	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.353	U	0.264	0.266	1.00	0.397	pCi/L	11/13/23 11:36	12/11/23 11:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	103		30 - 110					11/13/23 11:36	12/11/23 11:41	1
Y Carrier	84.9		30 - 110					11/13/23 11:36	12/11/23 11:41	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-305

Lab Sample ID: 310-269190-6

Date Collected: 11/07/23 10:30

Matrix: Water

Date Received: 11/08/23 15:50

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.446		0.296	0.297	5.00	0.397	pCi/L		12/15/23 14:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.38				ft			11/07/23 10:30	1
Oxidation Reduction Potential	64.5				mV			11/07/23 10:30	1
Oxygen, Dissolved	0.41				mg/L			11/07/23 10:30	1
Field pH	6.87				SU			11/07/23 10:30	1
Field Conductivity	1408				umhos/cm			11/07/23 10:30	1
Field Temperature	14.4				Degrees C			11/07/23 10:30	1
Field Turbidity	6.21				NTU			11/07/23 10:30	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-306

Lab Sample ID: 310-269190-7

Date Collected: 11/07/23 11:50

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		5.0	2.3	mg/L			11/21/23 15:25	5
Fluoride	<0.38		1.0	0.38	mg/L			11/21/23 15:25	5
Sulfate	130		5.0	2.1	mg/L			11/21/23 15:25	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/17/23 14:46	1
Arsenic	0.63	J	2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:22	1
Barium	68		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 18:22	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 18:22	1
Boron	2200		100	76	ug/L		11/10/23 09:15	11/10/23 18:22	1
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 18:22	1
Calcium	74		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 18:22	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 18:22	1
Cobalt	<0.17		0.50	0.17	ug/L		11/10/23 09:15	11/10/23 18:22	1
Iron	2200		100	36	ug/L		11/10/23 09:15	11/10/23 18:22	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 18:22	1
Lithium	<2.5		10	2.5	ug/L		11/10/23 09:15	11/10/23 18:22	1
Molybdenum	150		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:22	1
Selenium	<1.4		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 18:22	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/10/23 18:22	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 12:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	450		50	34	mg/L			11/09/23 19:17	1
pH (SM 4500 H+ B)	8.0	HF	1.0	1.0	SU			11/08/23 22:19	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.235		0.149	0.151	1.00	0.206	pCi/L	11/13/23 11:16	12/13/23 07:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	100		30 - 110					11/13/23 11:16	12/13/23 07:19	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.384	U	0.330	0.332	1.00	0.515	pCi/L	11/13/23 11:36	12/11/23 11:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	100		30 - 110					11/13/23 11:36	12/11/23 11:41	1
Y Carrier	73.6		30 - 110					11/13/23 11:36	12/11/23 11:41	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-306

Lab Sample ID: 310-269190-7

Date Collected: 11/07/23 11:50

Matrix: Water

Date Received: 11/08/23 15:50

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.620		0.362	0.365	5.00	0.515	pCi/L		12/15/23 14:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.68				ft			11/07/23 11:50	1
Oxidation Reduction Potential	-58.2				mV			11/07/23 11:50	1
Oxygen, Dissolved	0.49				mg/L			11/07/23 11:50	1
Field pH	7.31				SU			11/07/23 11:50	1
Field Conductivity	803				umhos/cm			11/07/23 11:50	1
Field Temperature	12.2				Degrees C			11/07/23 11:50	1
Field Turbidity	7.16				NTU			11/07/23 11:50	1



Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-306A

Lab Sample ID: 310-269190-8

Date Collected: 11/07/23 12:35

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:24	1
Lithium	5.8	J	10	2.5	ug/L		11/10/23 09:15	11/10/23 18:24	1
Molybdenum	20		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:24	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.92				ft			11/07/23 12:35	1
Oxidation Reduction Potential	29.7				mV			11/07/23 12:35	1
Oxygen, Dissolved	0.24				mg/L			11/07/23 12:35	1
Field pH	7.09				SU			11/07/23 12:35	1
Field Conductivity	1285				umhos/cm			11/07/23 12:35	1
Field Temperature	12.6				Degrees C			11/07/23 12:35	1
Field Turbidity	8.30				NTU			11/07/23 12:35	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-307

Lab Sample ID: 310-269190-9

Date Collected: 11/07/23 13:55

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.4	J	5.0	2.3	mg/L			11/21/23 16:03	5
Fluoride	<0.38		1.0	0.38	mg/L			11/21/23 16:03	5
Sulfate	50		5.0	2.1	mg/L			11/21/23 16:03	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/17/23 14:49	1
Arsenic	7.7		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:26	1
Barium	41		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 18:26	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 18:26	1
Boron	1200		100	76	ug/L		11/10/23 09:15	11/10/23 18:26	1
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 18:26	1
Calcium	23		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 18:26	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 18:26	1
Cobalt	<0.17		0.50	0.17	ug/L		11/10/23 09:15	11/10/23 18:26	1
Iron	<36		100	36	ug/L		11/10/23 09:15	11/10/23 18:26	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 18:26	1
Lithium	7.7	J	10	2.5	ug/L		11/10/23 09:15	11/10/23 18:26	1
Molybdenum	10		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:26	1
Selenium	5.8		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 18:26	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/10/23 18:26	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 12:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	110		50	34	mg/L			11/09/23 19:17	1
pH (SM 4500 H+ B)	8.9	HF	1.0	1.0	SU			11/08/23 22:24	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.109	U	0.0964	0.0969	1.00	0.139	pCi/L	11/13/23 11:16	12/13/23 07:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	98.2		30 - 110					11/13/23 11:16	12/13/23 07:19	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.121	U	0.264	0.265	1.00	0.463	pCi/L	11/13/23 11:36	12/11/23 11:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	98.2		30 - 110					11/13/23 11:36	12/11/23 11:41	1
Y Carrier	83.4		30 - 110					11/13/23 11:36	12/11/23 11:41	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-307
 Date Collected: 11/07/23 13:55
 Date Received: 11/08/23 15:50

Lab Sample ID: 310-269190-9
 Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.230	U	0.281	0.282	5.00	0.463	pCi/L		12/15/23 14:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	704.67				ft			11/07/23 13:55	1
Oxidation Reduction Potential	-164.6				mV			11/07/23 13:55	1
Oxygen, Dissolved	0.18				mg/L			11/07/23 13:55	1
Field pH	9.48				SU			11/07/23 13:55	1
Field Conductivity	199.7				umhos/cm			11/07/23 13:55	1
Field Temperature	18.6				Degrees C			11/07/23 13:55	1
Field Turbidity	3.95				NTU			11/07/23 13:55	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-308

Lab Sample ID: 310-269190-10

Date Collected: 11/07/23 15:00

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.0		5.0	2.3	mg/L			11/21/23 16:16	5
Fluoride	<0.38		1.0	0.38	mg/L			11/21/23 16:16	5
Sulfate	170		5.0	2.1	mg/L			11/21/23 16:16	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/13/23 13:39	1
Arsenic	42		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:28	1
Barium	50		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 18:28	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 18:28	1
Boron	5000		400	300	ug/L		11/10/23 09:15	11/13/23 15:17	4
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 18:28	1
Calcium	58		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 18:28	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 18:28	1
Cobalt	<0.17		0.50	0.17	ug/L		11/10/23 09:15	11/10/23 18:28	1
Iron	<36		100	36	ug/L		11/10/23 09:15	11/10/23 18:28	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 18:28	1
Lithium	44		10	2.5	ug/L		11/10/23 09:15	11/10/23 18:28	1
Molybdenum	63		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:28	1
Selenium	<1.4		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 18:28	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/13/23 13:39	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 12:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	370		50	34	mg/L			11/09/23 19:17	1
pH (SM 4500 H+ B)	8.8	HF	1.0	1.0	SU			11/08/23 22:28	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.186	U	0.180	0.181	1.00	0.281	pCi/L	11/13/23 11:16	12/13/23 07:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	91.3		30 - 110					11/13/23 11:16	12/13/23 07:19	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.0810	U	0.349	0.349	1.00	0.641	pCi/L	11/13/23 11:36	12/11/23 11:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	91.3		30 - 110					11/13/23 11:36	12/11/23 11:41	1
Y Carrier	78.9		30 - 110					11/13/23 11:36	12/11/23 11:41	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-308
Date Collected: 11/07/23 15:00
Date Received: 11/08/23 15:50

Lab Sample ID: 310-269190-10
Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.267	U	0.393	0.393	5.00	0.641	pCi/L		12/15/23 14:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	702.18				ft			11/07/23 15:00	1
Oxidation Reduction Potential	-219.3				mV			11/07/23 15:00	1
Oxygen, Dissolved	0.11				mg/L			11/07/23 15:00	1
Field pH	9.03				SU			11/07/23 15:00	1
Field Conductivity	572				umhos/cm			11/07/23 15:00	1
Field Temperature	14.6				Degrees C			11/07/23 15:00	1
Field Turbidity	6.89				NTU			11/07/23 15:00	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-309
 Date Collected: 11/07/23 10:30
 Date Received: 11/08/23 15:50

Lab Sample ID: 310-269190-11
 Matrix: Water

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	46		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:32	1
Lithium	16		10	2.5	ug/L		11/10/23 09:15	11/10/23 18:32	1
Molybdenum	20		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:32	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.59				ft			11/07/23 10:30	1
Oxidation Reduction Potential	-142.7				mV			11/07/23 10:30	1
Oxygen, Dissolved	0.22				mg/L			11/07/23 10:30	1
Field pH	7.32				SU			11/07/23 10:30	1
Field Conductivity	945				umhos/cm			11/07/23 10:30	1
Field Temperature	16.7				Degrees C			11/07/23 10:30	1
Field Turbidity	6.06				NTU			11/07/23 10:30	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-309A

Lab Sample ID: 310-269190-12

Date Collected: 11/07/23 09:30

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.0	J	2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:34	1
Lithium	6.2	J	10	2.5	ug/L		11/10/23 09:15	11/10/23 18:34	1
Molybdenum	8.9		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:34	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.70				ft			11/07/23 09:30	1
Oxidation Reduction Potential	-150.2				mV			11/07/23 09:30	1
Oxygen, Dissolved	0.39				mg/L			11/07/23 09:30	1
Field pH	7.16				SU			11/07/23 09:30	1
Field Conductivity	917				umhos/cm			11/07/23 09:30	1
Field Temperature	15.4				Degrees C			11/07/23 09:30	1
Field Turbidity	3.70				NTU			11/07/23 09:30	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-310

Lab Sample ID: 310-269190-13

Date Collected: 11/07/23 12:45

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	27		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:36	1
Lithium	16		10	2.5	ug/L		11/10/23 09:15	11/10/23 18:36	1
Molybdenum	40		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:36	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.34				ft			11/07/23 12:45	1
Oxidation Reduction Potential	-149.8				mV			11/07/23 12:45	1
Oxygen, Dissolved	0.17				mg/L			11/07/23 12:45	1
Field pH	7.19				SU			11/07/23 12:45	1
Field Conductivity	1014				umhos/cm			11/07/23 12:45	1
Field Temperature	16.2				Degrees C			11/07/23 12:45	1
Field Turbidity	8.31				NTU			11/07/23 12:45	1



Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-310A

Lab Sample ID: 310-269190-14

Date Collected: 11/07/23 11:55

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:51	1
Lithium	4.6	J	10	2.5	ug/L		11/10/23 09:15	11/10/23 18:51	1
Molybdenum	16		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:51	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.51				ft			11/07/23 11:55	1
Oxidation Reduction Potential	-158.6				mV			11/07/23 11:55	1
Oxygen, Dissolved	0.51				mg/L			11/07/23 11:55	1
Field pH	7.30				SU			11/07/23 11:55	1
Field Conductivity	1025				umhos/cm			11/07/23 11:55	1
Field Temperature	15.2				Degrees C			11/07/23 11:55	1
Field Turbidity	3.26				NTU			11/07/23 11:55	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-312

Lab Sample ID: 310-269190-15

Date Collected: 11/07/23 08:15

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	74		5.0	2.3	mg/L			11/21/23 16:28	5
Fluoride	<0.38		1.0	0.38	mg/L			11/21/23 16:28	5
Sulfate	15		5.0	2.1	mg/L			11/21/23 16:28	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/17/23 14:52	1
Arsenic	3.2		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:54	1
Barium	130		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 18:54	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 18:54	1
Boron	250		100	76	ug/L		11/10/23 09:15	11/10/23 18:54	1
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 18:54	1
Calcium	85		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 18:54	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 18:54	1
Cobalt	<0.17		0.50	0.17	ug/L		11/10/23 09:15	11/10/23 18:54	1
Iron	4600		100	36	ug/L		11/10/23 09:15	11/10/23 18:54	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 18:54	1
Lithium	6.6 J		10	2.5	ug/L		11/10/23 09:15	11/10/23 18:54	1
Molybdenum	5.7		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:54	1
Selenium	<1.4		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 18:54	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/10/23 18:54	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 12:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	430		50	34	mg/L			11/09/23 19:17	1
pH (SM 4500 H+ B)	7.3	HF	1.0	1.0	SU			11/08/23 22:42	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 226	0.448		0.172	0.176	1.00	0.176	pCi/L	11/13/23 11:16	12/13/23 07:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	98.7		30 - 110					11/13/23 11:16	12/13/23 07:18	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium 228	0.931		0.422	0.430	1.00	0.580	pCi/L	11/13/23 11:36	12/11/23 11:50	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	98.7		30 - 110					11/13/23 11:36	12/11/23 11:50	1
Y Carrier	79.3		30 - 110					11/13/23 11:36	12/11/23 11:50	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-312

Lab Sample ID: 310-269190-15

Date Collected: 11/07/23 08:15

Matrix: Water

Date Received: 11/08/23 15:50

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.38		0.456	0.465	5.00	0.580	pCi/L		12/15/23 14:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	702.24				ft			11/07/23 08:15	1
Oxidation Reduction Potential	-142.8				mV			11/07/23 08:15	1
Oxygen, Dissolved	0.23				mg/L			11/07/23 08:15	1
Field pH	6.83				SU			11/07/23 08:15	1
Field Conductivity	825				umhos/cm			11/07/23 08:15	1
Field Temperature	23.5				Degrees C			11/07/23 08:15	1
Field Turbidity	4.21				NTU			11/07/23 08:15	1

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Client Sample Results

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: Field Blank

Lab Sample ID: 310-269190-16

Date Collected: 11/07/23 12:50

Matrix: Water

Date Received: 11/08/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.45		1.0	0.45	mg/L			11/21/23 16:41	1
Fluoride	<0.075		0.20	0.075	mg/L			11/21/23 16:41	1
Sulfate	<0.42		1.0	0.42	mg/L			11/21/23 16:41	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/17/23 14:55	1
Arsenic	<0.53		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 18:56	1
Barium	<0.64		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 18:56	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 18:56	1
Boron	<76		100	76	ug/L		11/10/23 09:15	11/10/23 18:56	1
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 18:56	1
Calcium	<0.19		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 18:56	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 18:56	1
Cobalt	<0.17		0.50	0.17	ug/L		11/10/23 09:15	11/10/23 18:56	1
Iron	<36		100	36	ug/L		11/10/23 09:15	11/10/23 18:56	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 18:56	1
Lithium	<2.5		10	2.5	ug/L		11/10/23 09:15	11/10/23 18:56	1
Molybdenum	<0.91		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 18:56	1
Selenium	<1.4		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 18:56	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/10/23 18:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 12:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	<34		50	34	mg/L			11/09/23 19:17	1
pH (SM 4500 H+ B)	7.9	HF	1.0	1.0	SU			11/08/23 22:47	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Total						
			(2σ+/-)	(2σ+/-)						
Radium 226	-0.0242	U	0.0768	0.0769	1.00	0.175	pCi/L	11/13/23 11:16	12/13/23 09:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	104		30 - 110					11/13/23 11:16	12/13/23 09:16	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Total						
			(2σ+/-)	(2σ+/-)						
Radium 228	0.469	U	0.324	0.327	1.00	0.488	pCi/L	11/13/23 11:36	12/11/23 11:39	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	104		30 - 110					11/13/23 11:36	12/11/23 11:39	1
Y Carrier	80.0		30 - 110					11/13/23 11:36	12/11/23 11:39	1

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Client Sample Results

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: Field Blank

Lab Sample ID: 310-269190-16

Date Collected: 11/07/23 12:50

Matrix: Water

Date Received: 11/08/23 15:50

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.469	U	0.333	0.336	5.00	0.488	pCi/L		12/15/23 14:33	1

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Definitions/Glossary

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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QC Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-406752/3
Matrix: Water
Analysis Batch: 406752

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.45		1.0	0.45	mg/L			11/21/23 11:01	1
Fluoride	<0.075		0.20	0.075	mg/L			11/21/23 11:01	1
Sulfate	<0.42		1.0	0.42	mg/L			11/21/23 11:01	1

Lab Sample ID: LCS 310-406752/4
Matrix: Water
Analysis Batch: 406752

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.30		mg/L		93	90 - 110
Fluoride	2.00	2.04		mg/L		102	90 - 110
Sulfate	10.0	9.98		mg/L		100	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-405520/1-A
Matrix: Water
Analysis Batch: 405719

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 405520

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		11/10/23 09:15	11/10/23 17:44	1
Barium	<0.64		2.0	0.64	ug/L		11/10/23 09:15	11/10/23 17:44	1
Beryllium	<0.33		1.0	0.33	ug/L		11/10/23 09:15	11/10/23 17:44	1
Cadmium	<0.10		0.20	0.10	ug/L		11/10/23 09:15	11/10/23 17:44	1
Calcium	<0.19		0.50	0.19	mg/L		11/10/23 09:15	11/10/23 17:44	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/23 09:15	11/10/23 17:44	1
Cobalt	<0.17		0.50	0.17	ug/L		11/10/23 09:15	11/10/23 17:44	1
Iron	<36		100	36	ug/L		11/10/23 09:15	11/10/23 17:44	1
Lead	<0.24		0.50	0.24	ug/L		11/10/23 09:15	11/10/23 17:44	1
Lithium	<2.5		10	2.5	ug/L		11/10/23 09:15	11/10/23 17:44	1
Molybdenum	<0.91		2.0	0.91	ug/L		11/10/23 09:15	11/10/23 17:44	1
Selenium	<1.4		5.0	1.4	ug/L		11/10/23 09:15	11/10/23 17:44	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/23 09:15	11/10/23 17:44	1

Lab Sample ID: MB 310-405520/1-A
Matrix: Water
Analysis Batch: 405833

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 405520

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		11/10/23 09:15	11/13/23 12:55	1
Boron	<76		100	76	ug/L		11/10/23 09:15	11/13/23 12:55	1

Lab Sample ID: LCS 310-405520/2-A
Matrix: Water
Analysis Batch: 405719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405520

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	200	205		ug/L		102	80 - 120
Barium	100	98.8		ug/L		99	80 - 120
Beryllium	100	99.1		ug/L		99	80 - 120

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QC Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 310-405520/2-A
Matrix: Water
Analysis Batch: 405719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405520

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	100	105		ug/L		105	80 - 120
Calcium	2.00	1.83		mg/L		91	80 - 120
Chromium	100	93.7		ug/L		94	80 - 120
Cobalt	100	111		ug/L		111	80 - 120
Iron	200	208		ug/L		104	80 - 120
Lead	200	209		ug/L		105	80 - 120
Lithium	200	193		ug/L		96	80 - 120
Molybdenum	200	190		ug/L		95	80 - 120
Selenium	400	398		ug/L		100	80 - 120

Lab Sample ID: LCS 310-405520/2-A
Matrix: Water
Analysis Batch: 405833

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405520

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	200	225		ug/L		113	80 - 120
Boron	200	214		ug/L		107	80 - 120
Thallium	200	172		ug/L		86	80 - 120

Lab Sample ID: 310-269190-10 DU
Matrix: Water
Analysis Batch: 405719

Client Sample ID: MW-308
Prep Type: Total/NA
Prep Batch: 405520

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	42		41.2		ug/L		2	20
Barium	50		48.1		ug/L		4	20
Beryllium	<0.33		<0.33		ug/L		NC	20
Cadmium	<0.10		<0.10		ug/L		NC	20
Calcium	58		56.3		mg/L		2	20
Chromium	<1.1		<1.1		ug/L		NC	20
Cobalt	<0.17		<0.17		ug/L		NC	20
Iron	<36		<36		ug/L		NC	20
Lead	<0.24		<0.24		ug/L		NC	20
Lithium	44		43.1		ug/L		2	20
Molybdenum	63		63.2		ug/L		0.5	20
Selenium	<1.4		<1.4		ug/L		NC	20
Thallium	<0.26		<0.26		ug/L		NC	20

Lab Sample ID: 310-269190-10 DU
Matrix: Water
Analysis Batch: 405833

Client Sample ID: MW-308
Prep Type: Total/NA
Prep Batch: 405520

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<1.0		<1.0		ug/L		NC	20
Thallium	<0.26		<0.26		ug/L		NC	20

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QC Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 310-269190-10 DU
 Matrix: Water
 Analysis Batch: 405849

Client Sample ID: MW-308
 Prep Type: Total/NA
 Prep Batch: 405520

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Boron	5000		5110		ug/L		2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-406601/1-A
 Matrix: Water
 Analysis Batch: 406827

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 406601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/20/23 11:14	11/21/23 11:43	1

Lab Sample ID: LCS 310-406601/2-A
 Matrix: Water
 Analysis Batch: 406827

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 406601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.67	1.65		ug/L		99	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 310-405533/1
 Matrix: Water
 Analysis Batch: 405533

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<34		50	34	mg/L			11/09/23 19:17	1

Lab Sample ID: LCS 310-405533/2
 Matrix: Water
 Analysis Batch: 405533

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	978		mg/L		98	90 - 110

Lab Sample ID: 310-269190-1 DU
 Matrix: Water
 Analysis Batch: 405533

Client Sample ID: MW-301
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	730		738		mg/L		1	20

Lab Sample ID: MB 310-405534/1
 Matrix: Water
 Analysis Batch: 405534

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<34		50	34	mg/L			11/09/23 19:23	1

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QC Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 310-405534/2
 Matrix: Water
 Analysis Batch: 405534

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	962		mg/L		96	90 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-405399/58
 Matrix: Water
 Analysis Batch: 405399

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	98 - 102

Lab Sample ID: 310-269190-1 DU
 Matrix: Water
 Analysis Batch: 405399

Client Sample ID: MW-301
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.5	HF	7.6		SU		1	20

Lab Sample ID: 310-269190-16 DU
 Matrix: Water
 Analysis Batch: 405399

Client Sample ID: Field Blank
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.9	HF	7.4		SU		6	20

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-636603/1-A
 Matrix: Water
 Analysis Batch: 640618

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 636603

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.02878	U	0.125	0.125	1.00	0.235	pCi/L	11/13/23 11:16	12/13/23 07:25	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	101		30 - 110					11/13/23 11:16	12/13/23 07:25	1

Lab Sample ID: LCS 160-636603/2-A
 Matrix: Water
 Analysis Batch: 640737

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 636603

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium 226	11.3	10.31		1.13	1.00	0.183	pCi/L	91	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Barium	103		30 - 110						

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 310-269190-5 DU
Matrix: Water
Analysis Batch: 640618

Client Sample ID: MW-304
Prep Type: Total/NA
Prep Batch: 636603

Analyte	Sample	Sample	DU		Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual						
Radium 226	0.282		0.2385	U	0.178	1.00	0.263	pCi/L	0.12	1
DU DU										
Carrier	%Yield	Qualifier	Limits							
Barium	99.0		30 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-636606/1-A
Matrix: Water
Analysis Batch: 640231

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 636606

Analyte	MB	MB	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium 228	0.3317	U	0.263	0.265	1.00	0.403	pCi/L	11/13/23 11:36	12/11/23 11:40	1
MB MB										
Carrier	%Yield	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
Barium	101		30 - 110				11/13/23 11:36	12/11/23 11:40	1	
Y Carrier	84.5		30 - 110				11/13/23 11:36	12/11/23 11:40	1	

Lab Sample ID: LCS 160-636606/2-A
Matrix: Water
Analysis Batch: 640231

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 636606

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
LCS LCS									
Carrier	%Yield	Qualifier	Limits						
Barium	102		30 - 110						
Y Carrier	80.7		30 - 110						

Lab Sample ID: 310-269190-5 DU
Matrix: Water
Analysis Batch: 640231

Client Sample ID: MW-304
Prep Type: Total/NA
Prep Batch: 636606

Analyte	Sample	Sample	DU		Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual						
Radium 228	0.446	U	0.3640	U	0.284	1.00	0.430	pCi/L	0.14	1
DU DU										
Carrier	%Yield	Qualifier	Limits							
Barium	99.0		30 - 110							
Y Carrier	81.1		30 - 110							

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

HPLC/IC

Analysis Batch: 406752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	9056A	
310-269190-2	MW-301A	Total/NA	Water	9056A	
310-269190-3	MW-302	Total/NA	Water	9056A	
310-269190-4	MW-303	Total/NA	Water	9056A	
310-269190-5	MW-304	Total/NA	Water	9056A	
310-269190-6	MW-305	Total/NA	Water	9056A	
310-269190-7	MW-306	Total/NA	Water	9056A	
310-269190-9	MW-307	Total/NA	Water	9056A	
310-269190-10	MW-308	Total/NA	Water	9056A	
310-269190-15	MW-312	Total/NA	Water	9056A	
310-269190-16	Field Blank	Total/NA	Water	9056A	
MB 310-406752/3	Method Blank	Total/NA	Water	9056A	
LCS 310-406752/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 405520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	3005A	
310-269190-2	MW-301A	Total/NA	Water	3005A	
310-269190-3	MW-302	Total/NA	Water	3005A	
310-269190-4	MW-303	Total/NA	Water	3005A	
310-269190-5	MW-304	Total/NA	Water	3005A	
310-269190-6	MW-305	Total/NA	Water	3005A	
310-269190-7	MW-306	Total/NA	Water	3005A	
310-269190-8	MW-306A	Total/NA	Water	3005A	
310-269190-9	MW-307	Total/NA	Water	3005A	
310-269190-10	MW-308	Total/NA	Water	3005A	
310-269190-11	MW-309	Total/NA	Water	3005A	
310-269190-12	MW-309A	Total/NA	Water	3005A	
310-269190-13	MW-310	Total/NA	Water	3005A	
310-269190-14	MW-310A	Total/NA	Water	3005A	
310-269190-15	MW-312	Total/NA	Water	3005A	
310-269190-16	Field Blank	Total/NA	Water	3005A	
MB 310-405520/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-405520/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-269190-10 DU	MW-308	Total/NA	Water	3005A	

Analysis Batch: 405719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	6020B	405520
310-269190-2	MW-301A	Total/NA	Water	6020B	405520
310-269190-3	MW-302	Total/NA	Water	6020B	405520
310-269190-4	MW-303	Total/NA	Water	6020B	405520
310-269190-5	MW-304	Total/NA	Water	6020B	405520
310-269190-6	MW-305	Total/NA	Water	6020B	405520
310-269190-7	MW-306	Total/NA	Water	6020B	405520
310-269190-8	MW-306A	Total/NA	Water	6020B	405520
310-269190-9	MW-307	Total/NA	Water	6020B	405520
310-269190-10	MW-308	Total/NA	Water	6020B	405520
310-269190-11	MW-309	Total/NA	Water	6020B	405520

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Metals (Continued)

Analysis Batch: 405719 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-12	MW-309A	Total/NA	Water	6020B	405520
310-269190-13	MW-310	Total/NA	Water	6020B	405520
310-269190-14	MW-310A	Total/NA	Water	6020B	405520
310-269190-15	MW-312	Total/NA	Water	6020B	405520
310-269190-16	Field Blank	Total/NA	Water	6020B	405520
MB 310-405520/1-A	Method Blank	Total/NA	Water	6020B	405520
LCS 310-405520/2-A	Lab Control Sample	Total/NA	Water	6020B	405520
310-269190-10 DU	MW-308	Total/NA	Water	6020B	405520

Analysis Batch: 405833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	6020B	405520
310-269190-2	MW-301A	Total/NA	Water	6020B	405520
310-269190-3	MW-302	Total/NA	Water	6020B	405520
310-269190-4	MW-303	Total/NA	Water	6020B	405520
310-269190-10	MW-308	Total/NA	Water	6020B	405520
MB 310-405520/1-A	Method Blank	Total/NA	Water	6020B	405520
LCS 310-405520/2-A	Lab Control Sample	Total/NA	Water	6020B	405520
310-269190-10 DU	MW-308	Total/NA	Water	6020B	405520

Analysis Batch: 405849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	6020B	405520
310-269190-2	MW-301A	Total/NA	Water	6020B	405520
310-269190-10	MW-308	Total/NA	Water	6020B	405520
310-269190-10 DU	MW-308	Total/NA	Water	6020B	405520

Analysis Batch: 406469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-5	MW-304	Total/NA	Water	6020B	405520
310-269190-6	MW-305	Total/NA	Water	6020B	405520
310-269190-7	MW-306	Total/NA	Water	6020B	405520
310-269190-9	MW-307	Total/NA	Water	6020B	405520
310-269190-15	MW-312	Total/NA	Water	6020B	405520
310-269190-16	Field Blank	Total/NA	Water	6020B	405520

Prep Batch: 406601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	7470A	
310-269190-2	MW-301A	Total/NA	Water	7470A	
310-269190-3	MW-302	Total/NA	Water	7470A	
310-269190-4	MW-303	Total/NA	Water	7470A	
310-269190-5	MW-304	Total/NA	Water	7470A	
310-269190-6	MW-305	Total/NA	Water	7470A	
310-269190-7	MW-306	Total/NA	Water	7470A	
310-269190-9	MW-307	Total/NA	Water	7470A	
310-269190-10	MW-308	Total/NA	Water	7470A	
310-269190-15	MW-312	Total/NA	Water	7470A	
310-269190-16	Field Blank	Total/NA	Water	7470A	
MB 310-406601/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-406601/2-A	Lab Control Sample	Total/NA	Water	7470A	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Metals

Analysis Batch: 406827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	7470A	406601
310-269190-2	MW-301A	Total/NA	Water	7470A	406601
310-269190-3	MW-302	Total/NA	Water	7470A	406601
310-269190-4	MW-303	Total/NA	Water	7470A	406601
310-269190-5	MW-304	Total/NA	Water	7470A	406601
310-269190-6	MW-305	Total/NA	Water	7470A	406601
310-269190-7	MW-306	Total/NA	Water	7470A	406601
310-269190-9	MW-307	Total/NA	Water	7470A	406601
310-269190-10	MW-308	Total/NA	Water	7470A	406601
310-269190-15	MW-312	Total/NA	Water	7470A	406601
310-269190-16	Field Blank	Total/NA	Water	7470A	406601
MB 310-406601/1-A	Method Blank	Total/NA	Water	7470A	406601
LCS 310-406601/2-A	Lab Control Sample	Total/NA	Water	7470A	406601

General Chemistry

Analysis Batch: 405399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	SM 4500 H+ B	
310-269190-2	MW-301A	Total/NA	Water	SM 4500 H+ B	
310-269190-3	MW-302	Total/NA	Water	SM 4500 H+ B	
310-269190-4	MW-303	Total/NA	Water	SM 4500 H+ B	
310-269190-5	MW-304	Total/NA	Water	SM 4500 H+ B	
310-269190-6	MW-305	Total/NA	Water	SM 4500 H+ B	
310-269190-7	MW-306	Total/NA	Water	SM 4500 H+ B	
310-269190-9	MW-307	Total/NA	Water	SM 4500 H+ B	
310-269190-10	MW-308	Total/NA	Water	SM 4500 H+ B	
310-269190-15	MW-312	Total/NA	Water	SM 4500 H+ B	
310-269190-16	Field Blank	Total/NA	Water	SM 4500 H+ B	
LCS 310-405399/58	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-269190-1 DU	MW-301	Total/NA	Water	SM 4500 H+ B	
310-269190-16 DU	Field Blank	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 405533

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	SM 2540C	
310-269190-3	MW-302	Total/NA	Water	SM 2540C	
310-269190-4	MW-303	Total/NA	Water	SM 2540C	
310-269190-5	MW-304	Total/NA	Water	SM 2540C	
310-269190-6	MW-305	Total/NA	Water	SM 2540C	
310-269190-7	MW-306	Total/NA	Water	SM 2540C	
310-269190-9	MW-307	Total/NA	Water	SM 2540C	
310-269190-10	MW-308	Total/NA	Water	SM 2540C	
310-269190-15	MW-312	Total/NA	Water	SM 2540C	
310-269190-16	Field Blank	Total/NA	Water	SM 2540C	
MB 310-405533/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-405533/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-269190-1 DU	MW-301	Total/NA	Water	SM 2540C	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

General Chemistry

Analysis Batch: 405534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-2	MW-301A	Total/NA	Water	SM 2540C	
MB 310-405534/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-405534/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 636603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	PrecSep-21	
310-269190-3	MW-302	Total/NA	Water	PrecSep-21	
310-269190-4	MW-303	Total/NA	Water	PrecSep-21	
310-269190-5	MW-304	Total/NA	Water	PrecSep-21	
310-269190-6	MW-305	Total/NA	Water	PrecSep-21	
310-269190-7	MW-306	Total/NA	Water	PrecSep-21	
310-269190-9	MW-307	Total/NA	Water	PrecSep-21	
310-269190-10	MW-308	Total/NA	Water	PrecSep-21	
310-269190-15	MW-312	Total/NA	Water	PrecSep-21	
310-269190-16	Field Blank	Total/NA	Water	PrecSep-21	
MB 160-636603/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-636603/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-269190-5 DU	MW-304	Total/NA	Water	PrecSep-21	

Prep Batch: 636606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	PrecSep_0	
310-269190-3	MW-302	Total/NA	Water	PrecSep_0	
310-269190-4	MW-303	Total/NA	Water	PrecSep_0	
310-269190-5	MW-304	Total/NA	Water	PrecSep_0	
310-269190-6	MW-305	Total/NA	Water	PrecSep_0	
310-269190-7	MW-306	Total/NA	Water	PrecSep_0	
310-269190-9	MW-307	Total/NA	Water	PrecSep_0	
310-269190-10	MW-308	Total/NA	Water	PrecSep_0	
310-269190-15	MW-312	Total/NA	Water	PrecSep_0	
310-269190-16	Field Blank	Total/NA	Water	PrecSep_0	
MB 160-636606/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-636606/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-269190-5 DU	MW-304	Total/NA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 406777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-1	MW-301	Total/NA	Water	Field Sampling	
310-269190-2	MW-301A	Total/NA	Water	Field Sampling	
310-269190-3	MW-302	Total/NA	Water	Field Sampling	
310-269190-4	MW-303	Total/NA	Water	Field Sampling	
310-269190-5	MW-304	Total/NA	Water	Field Sampling	
310-269190-6	MW-305	Total/NA	Water	Field Sampling	
310-269190-7	MW-306	Total/NA	Water	Field Sampling	
310-269190-8	MW-306A	Total/NA	Water	Field Sampling	
310-269190-9	MW-307	Total/NA	Water	Field Sampling	
310-269190-10	MW-308	Total/NA	Water	Field Sampling	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Field Service / Mobile Lab (Continued)

Analysis Batch: 406777 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269190-11	MW-309	Total/NA	Water	Field Sampling	
310-269190-12	MW-309A	Total/NA	Water	Field Sampling	
310-269190-13	MW-310	Total/NA	Water	Field Sampling	
310-269190-14	MW-310A	Total/NA	Water	Field Sampling	
310-269190-15	MW-312	Total/NA	Water	Field Sampling	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Lab Chronicle

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-301

Lab Sample ID: 310-269190-1

Date Collected: 11/06/23 15:25

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	406752	QTZ5	EET CF	11/21/23 14:10
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405833	A6US	EET CF	11/13/23 13:12
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 17:56
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405849	A6US	EET CF	11/13/23 15:07
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 11:54
Total/NA	Analysis	SM 2540C		1	405533	D7CP	EET CF	11/09/23 19:17
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 21:47
Total/NA	Prep	PrecSep-21			636603	KAC	EET SL	11/13/23 11:16
Total/NA	Analysis	903.0		1	640618	FLC	EET SL	12/13/23 07:25
Total/NA	Prep	PrecSep_0			636606	KAC	EET SL	11/13/23 11:36
Total/NA	Analysis	904.0		1	640231	FLC	EET SL	12/11/23 11:40
Total/NA	Analysis	Ra226_Ra228 Pos		1	640895	EMH	EET SL	12/15/23 14:33
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/06/23 15:25

Client Sample ID: MW-301A

Lab Sample ID: 310-269190-2

Date Collected: 11/07/23 13:30

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	406752	QTZ5	EET CF	11/21/23 14:22
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405833	A6US	EET CF	11/13/23 13:15
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 17:58
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405849	A6US	EET CF	11/13/23 15:09
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 11:56
Total/NA	Analysis	SM 2540C		1	405534	D7CP	EET CF	11/09/23 19:23
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 21:56
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 13:30

Client Sample ID: MW-302

Lab Sample ID: 310-269190-3

Date Collected: 11/07/23 14:20

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	406752	QTZ5	EET CF	11/21/23 14:35
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405833	A6US	EET CF	11/13/23 13:18

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-302
Date Collected: 11/07/23 14:20
Date Received: 11/08/23 15:50

Lab Sample ID: 310-269190-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:00
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 11:58
Total/NA	Analysis	SM 2540C		1	405533	D7CP	EET CF	11/09/23 19:17
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 22:01
Total/NA	Prep	PrecSep-21			636603	KAC	EET SL	11/13/23 11:16
Total/NA	Analysis	903.0		1	640618	FLC	EET SL	12/13/23 07:25
Total/NA	Prep	PrecSep_0			636606	KAC	EET SL	11/13/23 11:36
Total/NA	Analysis	904.0		1	640231	FLC	EET SL	12/11/23 11:40
Total/NA	Analysis	Ra226_Ra228 Pos		1	640895	EMH	EET SL	12/15/23 14:33
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 14:20

Client Sample ID: MW-303
Date Collected: 11/07/23 08:55
Date Received: 11/08/23 15:50

Lab Sample ID: 310-269190-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	406752	QTZ5	EET CF	11/21/23 14:47
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405833	A6US	EET CF	11/13/23 13:22
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:02
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 12:00
Total/NA	Analysis	SM 2540C		1	405533	D7CP	EET CF	11/09/23 19:17
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 22:05
Total/NA	Prep	PrecSep-21			636603	KAC	EET SL	11/13/23 11:16
Total/NA	Analysis	903.0		1	640618	FLC	EET SL	12/13/23 07:25
Total/NA	Prep	PrecSep_0			636606	KAC	EET SL	11/13/23 11:36
Total/NA	Analysis	904.0		1	640231	FLC	EET SL	12/11/23 11:40
Total/NA	Analysis	Ra226_Ra228 Pos		1	640895	EMH	EET SL	12/15/23 14:33
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 08:55

Client Sample ID: MW-304
Date Collected: 11/07/23 09:50
Date Received: 11/08/23 15:50

Lab Sample ID: 310-269190-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	406752	QTZ5	EET CF	11/21/23 15:00
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	406469	A6US	EET CF	11/17/23 14:39
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:17

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-304

Lab Sample ID: 310-269190-5

Date Collected: 11/07/23 09:50

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 12:02
Total/NA	Analysis	SM 2540C		1	405533	D7CP	EET CF	11/09/23 19:17
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 22:10
Total/NA	Prep	PrecSep-21			636603	KAC	EET SL	11/13/23 11:16
Total/NA	Analysis	903.0		1	640618	FLC	EET SL	12/13/23 07:25
Total/NA	Prep	PrecSep_0			636606	KAC	EET SL	11/13/23 11:36
Total/NA	Analysis	904.0		1	640231	FLC	EET SL	12/11/23 11:40
Total/NA	Analysis	Ra226_Ra228 Pos		1	640895	EMH	EET SL	12/15/23 14:33
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 09:50

Client Sample ID: MW-305

Lab Sample ID: 310-269190-6

Date Collected: 11/07/23 10:30

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	406752	QTZ5	EET CF	11/21/23 15:13
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	406469	A6US	EET CF	11/17/23 14:42
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:19
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 12:04
Total/NA	Analysis	SM 2540C		1	405533	D7CP	EET CF	11/09/23 19:17
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 22:15
Total/NA	Prep	PrecSep-21			636603	KAC	EET SL	11/13/23 11:16
Total/NA	Analysis	903.0		1	640620	FLC	EET SL	12/13/23 07:19
Total/NA	Prep	PrecSep_0			636606	KAC	EET SL	11/13/23 11:36
Total/NA	Analysis	904.0		1	640231	FLC	EET SL	12/11/23 11:41
Total/NA	Analysis	Ra226_Ra228 Pos		1	640895	EMH	EET SL	12/15/23 14:33
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 10:30

Client Sample ID: MW-306

Lab Sample ID: 310-269190-7

Date Collected: 11/07/23 11:50

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	406752	QTZ5	EET CF	11/21/23 15:25
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	406469	A6US	EET CF	11/17/23 14:46
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:22
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 12:06

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-306

Lab Sample ID: 310-269190-7

Date Collected: 11/07/23 11:50

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	405533	D7CP	EET CF	11/09/23 19:17
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 22:19
Total/NA	Prep	PrecSep-21			636603	KAC	EET SL	11/13/23 11:16
Total/NA	Analysis	903.0		1	640620	FLC	EET SL	12/13/23 07:19
Total/NA	Prep	PrecSep_0			636606	KAC	EET SL	11/13/23 11:36
Total/NA	Analysis	904.0		1	640231	FLC	EET SL	12/11/23 11:41
Total/NA	Analysis	Ra226_Ra228 Pos		1	640895	EMH	EET SL	12/15/23 14:33
Total/NA	Analysis	Field Sampling		1	406777	BJOR	EET CF	11/07/23 11:50

Client Sample ID: MW-306A

Lab Sample ID: 310-269190-8

Date Collected: 11/07/23 12:35

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:24
Total/NA	Analysis	Field Sampling		1	406777	BJOR	EET CF	11/07/23 12:35

Client Sample ID: MW-307

Lab Sample ID: 310-269190-9

Date Collected: 11/07/23 13:55

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	406752	QTZ5	EET CF	11/21/23 16:03
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	406469	A6US	EET CF	11/17/23 14:49
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:26
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 12:09
Total/NA	Analysis	SM 2540C		1	405533	D7CP	EET CF	11/09/23 19:17
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 22:24
Total/NA	Prep	PrecSep-21			636603	KAC	EET SL	11/13/23 11:16
Total/NA	Analysis	903.0		1	640620	FLC	EET SL	12/13/23 07:19
Total/NA	Prep	PrecSep_0			636606	KAC	EET SL	11/13/23 11:36
Total/NA	Analysis	904.0		1	640231	FLC	EET SL	12/11/23 11:41
Total/NA	Analysis	Ra226_Ra228 Pos		1	640895	EMH	EET SL	12/15/23 14:33
Total/NA	Analysis	Field Sampling		1	406777	BJOR	EET CF	11/07/23 13:55

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-308

Lab Sample ID: 310-269190-10

Date Collected: 11/07/23 15:00

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	406752	QTZ5	EET CF	11/21/23 16:16
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405833	A6US	EET CF	11/13/23 13:39
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:28
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		4	405849	A6US	EET CF	11/13/23 15:17
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 12:11
Total/NA	Analysis	SM 2540C		1	405533	D7CP	EET CF	11/09/23 19:17
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 22:28
Total/NA	Prep	PrecSep-21			636603	KAC	EET SL	11/13/23 11:16
Total/NA	Analysis	903.0		1	640620	FLC	EET SL	12/13/23 07:19
Total/NA	Prep	PrecSep_0			636606	KAC	EET SL	11/13/23 11:36
Total/NA	Analysis	904.0		1	640231	FLC	EET SL	12/11/23 11:41
Total/NA	Analysis	Ra226_Ra228 Pos		1	640895	EMH	EET SL	12/15/23 14:33
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 15:00

Client Sample ID: MW-309

Lab Sample ID: 310-269190-11

Date Collected: 11/07/23 10:30

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:32
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 10:30

Client Sample ID: MW-309A

Lab Sample ID: 310-269190-12

Date Collected: 11/07/23 09:30

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:34
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 09:30

Client Sample ID: MW-310

Lab Sample ID: 310-269190-13

Date Collected: 11/07/23 12:45

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:36
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 12:45

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Client Sample ID: MW-310A

Lab Sample ID: 310-269190-14

Date Collected: 11/07/23 11:55

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:51
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 11:55

Client Sample ID: MW-312

Lab Sample ID: 310-269190-15

Date Collected: 11/07/23 08:15

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	406752	QTZ5	EET CF	11/21/23 16:28
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	406469	A6US	EET CF	11/17/23 14:52
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:54
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 12:13
Total/NA	Analysis	SM 2540C		1	405533	D7CP	EET CF	11/09/23 19:17
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 22:42
Total/NA	Prep	PrecSep-21			636603	KAC	EET SL	11/13/23 11:16
Total/NA	Analysis	903.0		1	640620	FLC	EET SL	12/13/23 07:18
Total/NA	Prep	PrecSep_0			636606	KAC	EET SL	11/13/23 11:36
Total/NA	Analysis	904.0		1	640225	FLC	EET SL	12/11/23 11:50
Total/NA	Analysis	Ra226_Ra228 Pos		1	640895	EMH	EET SL	12/15/23 14:33
Total/NA	Analysis	Field Sampling		1	406777	BJ0R	EET CF	11/07/23 08:15

Client Sample ID: Field Blank

Lab Sample ID: 310-269190-16

Date Collected: 11/07/23 12:50

Matrix: Water

Date Received: 11/08/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	406752	QTZ5	EET CF	11/21/23 16:41
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	406469	A6US	EET CF	11/17/23 14:55
Total/NA	Prep	3005A			405520	KCK5	EET CF	11/10/23 09:15
Total/NA	Analysis	6020B		1	405719	A6US	EET CF	11/10/23 18:56
Total/NA	Prep	7470A			406601	NFT2	EET CF	11/20/23 11:14
Total/NA	Analysis	7470A		1	406827	NFT2	EET CF	11/21/23 12:19
Total/NA	Analysis	SM 2540C		1	405533	D7CP	EET CF	11/09/23 19:17
Total/NA	Analysis	SM 4500 H+ B		1	405399	WZC8	EET CF	11/08/23 22:47
Total/NA	Prep	PrecSep-21			636603	KAC	EET SL	11/13/23 11:16
Total/NA	Analysis	903.0		1	640618	FLC	EET SL	12/13/23 09:16
Total/NA	Prep	PrecSep_0			636606	KAC	EET SL	11/13/23 11:36
Total/NA	Analysis	904.0		1	640229	FLC	EET SL	12/11/23 11:39
Total/NA	Analysis	Ra226_Ra228 Pos		1	640895	EMH	EET SL	12/15/23 14:33

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers

Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

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Accreditation/Certification Summary

Client: SCS Engineers
 Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	11-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-24
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	01-25-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-24
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	02-01-24
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-24
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-24
Virginia	NELAP	10310	06-15-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	12-20-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
Pos			
Field Sampling	Field Sampling	EPA	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
		<u>WI</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>11/8/23</u>	<u>1550</u>	<u>SC</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>3</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID:	<u>8</u>	Correction Factor (°C):	<u>0</u>
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>1.3</u>	Corrected Temp (°C):	<u>1.3</u>
Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SSS</u>			
City/State:	CITY	STATE <u>WF</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>11/8/23</u>	TIME <u>1550</u>	Received By: <u>SL</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2</u> of <u>3</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID:	<u>P</u>	Correction Factor (°C):	<u>0</u>
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>1.5</u>	Corrected Temp (°C):	<u>1.5</u>
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>Received at empty 16 Nitric for MW-301A</u>			

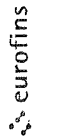
Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
		<u>WI</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>11/8/23</u>	<u>1550</u>	<u>SC</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>3</u> of <u>3</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>P</u>		Correction Factor (°C): <u>0</u>	
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>N/A</u>		Corrected Temp (°C): <u>3.0</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
	<u>1L plastic NT</u>	_____	
Uncorrected Temp (°C):	<u>1.1</u>	<u>0.9</u>	
Corrected Temp (°C):	<u>1.1</u>	<u>0.9</u>	
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>* Found Temp Blank ;)</u>			

Chain of Custody Record

TestAmerica Des Moines SC
 214



Client Information		Sampler		Lab PMI		Carrier Tracking No(s)		COC No	
Client Contact: Meghan Blodgett		Sean Marczewski		Sandie Fredrick		State of Origin		Page 1 of 2	
Company: SCS Engineers		Phone: 712-661-9682		E-Mail: Sandra.Fredrick@eurofins.com		Job #:			
Address: 2830 Dairy Drive		Due Date Requested		Analysis Requested		Total Number of Containers		Preservation Codes	
City: Madison		TAT Requested (days)		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)		A - HCL M Hexane N None B NaOH O AsNaO2 C - Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K - EDTA L EDA Other:	
State: WI		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		6020 Metals (15) total (Sb As Ba Be B Ca Cd Cr Co Fe)		6020 Metals (3) total (As Li Mo)		M None N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
Zip: WI 53718		PC #: 608-224-2830		7470 Mercury total		Chloride Fluoride Sulfate		A - HCL B NaOH C - Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K - EDTA L EDA Other:	
Phone: 608-224-2830		WO #:		6020 Metals (15) total (Sb As Ba Be B Ca Cd Cr Co Fe)		EPA 903/904 Radium 226 + 228		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
Email: mblodgett@scsengineers.com		Project #:		6020 Metals (3) total (As Li Mo)				M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
Project Name: Prairie Creek Generating Station 25223074		SSOW#:		TDS and pH				M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
Site: Cedar Rapids IA		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-301		11-6-23		15:25		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-301A		11-7-23		13:30		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-302		11-7-23		14:20		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-303		11-7-23		8:55		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-304		11-7-23		9:50		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-305		11-7-23		10:30		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-306		11-7-23		11:50		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-306A		11-7-23		12:35		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-307		11-7-23		13:55		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-308		11-7-23		15:00		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
MW-309		11-7-23		16:30		G		M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2S2O3 S - H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 X other (specify)	
Possible Hazard Identification		Date		Time		Special Instructions/QC Requirements		Special Instructions/Note	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		11-8-23 12:00		12:00		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		ONLY 300mL RADIUM COLLECTED WELL DRY	
Deliverable Requested I II III IV Other (specify)		Date		Time		Method of Shipment		Special Instructions/Note	
Empty Kit Relinquished by: Sean Mayes		11-8-23		12:00		Company: SCS		ONLY 300mL RADIUM COLLECTED WELL DRY	
Relinquished by: Sean Mayes		11-8-23		12:00		Company: SCS		ONLY 300mL RADIUM COLLECTED WELL DRY	
Relinquished by: Sean Mayes		11-8-23		15:50		Company: SCS		ONLY 300mL RADIUM COLLECTED WELL DRY	
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Custody Seal No						ONLY 300mL RADIUM COLLECTED WELL DRY	



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Lab PM Fredrick, Sandie	Carmer Tracking No(s):	COC No: 310-67289-1
Shipping/Receiving		E-Mail: Fredrick, Sandie	State of Origin: Iowa	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Sandra.Fredrick@et.eurofins.com		Job #: 310-269190-1
Address: 13715 Rider Trail North,		Accreditations Required (See note): State Program - Iowa		
City: Earth City	State, Zip: MO, 63045	Analysis Requested:		
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:	903.0/PrecSep_21 Radium-226 (GFPC)		
Email:	WO #:	904.0/PrecSep_0 Radium-226 (GFPC)		
Project Name: Prairie Creek Generating Station 25223074	Project #: 31011020	Radium-226		
Site:	SSOW#:	Radium-228		
Sample Identification - Client ID (Lab ID)		Total Number of Containers		
MW-301 (310-269190-1)	Sample Date: 11/6/23	Sample Time: 15:25 Central	Sample Type (C=Comp, G=grab): Water	Matrix (W=Water, S=solid, O=water, BT=Tissue, A=Air): Water
MW-302 (310-269190-3)	Sample Date: 11/7/23	Sample Time: 14:20 Central	Sample Type (C=Comp, G=grab): Water	Matrix (W=Water, S=solid, O=water, BT=Tissue, A=Air): Water
MW-303 (310-269190-4)	Sample Date: 11/7/23	Sample Time: 08:55 Central	Sample Type (C=Comp, G=grab): Water	Matrix (W=Water, S=solid, O=water, BT=Tissue, A=Air): Water
MW-304 (310-269190-5)	Sample Date: 11/7/23	Sample Time: 09:50 Central	Sample Type (C=Comp, G=grab): Water	Matrix (W=Water, S=solid, O=water, BT=Tissue, A=Air): Water
MW-305 (310-269190-6)	Sample Date: 11/7/23	Sample Time: 10:30 Central	Sample Type (C=Comp, G=grab): Water	Matrix (W=Water, S=solid, O=water, BT=Tissue, A=Air): Water
MW-306 (310-269190-7)	Sample Date: 11/7/23	Sample Time: 11:50 Central	Sample Type (C=Comp, G=grab): Water	Matrix (W=Water, S=solid, O=water, BT=Tissue, A=Air): Water
MW-307 (310-269190-9)	Sample Date: 11/7/23	Sample Time: 13:55 Central	Sample Type (C=Comp, G=grab): Water	Matrix (W=Water, S=solid, O=water, BT=Tissue, A=Air): Water
MW-308 (310-269190-10)	Sample Date: 11/7/23	Sample Time: 15:00 Central	Sample Type (C=Comp, G=grab): Water	Matrix (W=Water, S=solid, O=water, BT=Tissue, A=Air): Water
MW-312 (310-269190-15)	Sample Date: 11/7/23	Sample Time: 08:15 Central	Sample Type (C=Comp, G=grab): Water	Matrix (W=Water, S=solid, O=water, BT=Tissue, A=Air): Water
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>				
Possible Hazard Identification				
Unconfirmed				
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2				
Empty Kit Relinquished by: _____ Date: _____ Time: _____				
Relinquished by: _____ Date/Time: _____ Method of Shipment: _____				
Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____				
Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____				
Custody Seals Intact: _____ Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: _____				
<p>Special Instructions/Note:</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p> <p>DO NOT SHIP ON ICE TO ST. LOUIS</p>				
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Special Instructions/QC Requirements:</p>				



Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:						
Client Contact: Shipping/Receiving		Phone:	Fredrick, Sandie		310-67289.2						
Company: TestAmerica Laboratories, Inc.		E-Mail: Sandra.Fredrick@eurofins.com		State of Origin: Iowa	Page: Page 2 of 2						
Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email:		Accreditations Required (See note): State Program - Iowa		Job #: 310-269190-1							
Due Date Requested: 11/21/2023 TAT Requested (days):		Analysis Requested									
PO # WO # Project # 31011020 Site: Prairie Creek Generating Station 25223074											
Sample Date		Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Solid, O=Wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	904.0/PrecSep_0 Radium-226 and Radium-228 (GFP)	93.0/PrecSep_21 Radium-226 (GFP)	Ra226_228GFP_C/P Combined Radium-226 and Radium-228	Total Number of Containers	Special Instructions/Note:
11/7/23		12:50 Central		Water	X	X	X	X		2	DO NOT SHIP ON ICE TO ST. LOUIS
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC</p>											
Possible Hazard Identification											
Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:											
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____											
Relinquished by: <i>TA</i> Date/Time: 11/9/23 1440 Company: _____ Received by: <i>Fedex</i> Date/Time: NOV 10 2023 0840 Company: _____											
Relinquished by: <i>Fedex</i> Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____											
Custody Seals Intact: _____ Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks:											

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-269190-1

Login Number: 269190

List Number: 1

Creator: Lage, Sydney

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-269190-1

Login Number: 269190

List Number: 2

Creator: Pinette, Meadow L

List Source: Eurofins St. Louis

List Creation: 11/10/23 02:28 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Tracer/Carrier Summary

Client: SCS Engineers
Project/Site: Prairie Creek Generating Station 25223074

Job ID: 310-269190-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (30-110)
310-269190-1	MW-301	102
310-269190-3	MW-302	99.5
310-269190-4	MW-303	97.9
310-269190-5	MW-304	97.2
310-269190-5 DU	MW-304	99.0
310-269190-6	MW-305	103
310-269190-7	MW-306	100
310-269190-9	MW-307	98.2
310-269190-10	MW-308	91.3
310-269190-15	MW-312	98.7
310-269190-16	Field Blank	104
LCS 160-636603/2-A	Lab Control Sample	103
MB 160-636603/1-A	Method Blank	101

Tracer/Carrier Legend

Ba = Barium

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
310-269190-1	MW-301	102	77.4
310-269190-3	MW-302	99.5	83.0
310-269190-4	MW-303	97.9	85.2
310-269190-5	MW-304	97.2	81.5
310-269190-5 DU	MW-304	99.0	81.1
310-269190-6	MW-305	103	84.9
310-269190-7	MW-306	100	73.6
310-269190-9	MW-307	98.2	83.4
310-269190-10	MW-308	91.3	78.9
310-269190-15	MW-312	98.7	79.3
310-269190-16	Field Blank	104	80.0
LCS 160-636606/2-A	Lab Control Sample	102	80.7
MB 160-636606/1-A	Method Blank	101	84.5

Tracer/Carrier Legend

Ba = Barium

Y = Y Carrier

Eurofins Cedar Falls

Groundwater Monitoring Results - Field Parameters
Prairie Creek Generating Station / SCS Engineers Project #25223074.00
November 2023

Sample	Sample Date	GW Elevation (ft amsl)	Temperature (Deg. C)	pH (Std. Units)	Dissolved Oxygen (mg/L)	Specific Conductivity (µmhos/cm)	ORP (mV)	Turbidity
MW-301	11/6/2023	712.29	13.7	6.68	4.21	1282	118.3	1.91
MW-301A	11/7/2023	681.93	12.5	6.67	2.94	668	79.8	9.84
MW-302	11/7/2023	711.86	13.4	6.60	4.75	1447	83.5	7.08
MW-303	11/7/2023	701.55	15.4	6.77	0.40	1026	-6.7	7.08
MW-304	11/7/2023	701.54	14.6	6.83	0.30	1196	17.0	6.37
MW-305	11/7/2023	701.38	14.4	6.87	0.41	1408	64.5	6.21
MW-306	11/7/2023	701.68	12.2	7.31	0.49	803	-58.2	7.16
MW-306A	11/7/2023	701.92	12.6	7.09	0.24	1285	29.7	8.30
MW-307	11/7/2023	704.67	18.6	9.48	0.18	199.7	-164.6	3.95
MW-308	11/7/2023	702.18	14.6	9.03	0.11	572	-219.3	6.89
MW-309	11/7/2023	701.59	16.7	7.32	0.22	945	-142.7	6.06
MW-309A	11/7/2023	701.70	15.4	7.16	0.39	917	-150.2	3.70
MW-310	11/7/2023	701.34	16.2	7.19	0.17	1014	-149.8	8.31
MW-310A	11/7/2023	701.51	15.2	7.30	0.51	1,025	-158.6	3.26
MW-312	11/7/2023	702.24	23.5	6.83	0.23	825	-142.8	4.21

Abbreviations:

mg/L = milligrams per liter
 NA = Not Analyzed

mV = millivolts
 NM = Not measured

amsl = above mean sea level

Notes:

Created by: RM
 Last revision by: BLR
 Checked by: RM

Date: 11/20/2023
 Date: 11/20/2023
 Date: 11/20/2023

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NOTE: Please don't type in to the Checked By cells above, enter your info. on the Revision History tab instead. The cells above will automatically fill in. REMEMBER TO UPDATE THE REVISION HISTORY TAB!!

C2 April 2024 Assessment Monitoring



ANALYTICAL REPORT

PREPARED FOR

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Generated 5/21/2024 9:25:33 AM

JOB DESCRIPTION

Praire Creek Generating Station 25224074

JOB NUMBER

310-279471-1

Eurofins Cedar Falls

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
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Case Narrative

Client: SCS Engineers
Project: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Job ID: 310-279471-1

Eurofins Cedar Falls

Job Narrative 310-279471-1

Receipt

The samples were received on 4/19/2024 3:55 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.1° C, 3.3° C and 5.4° C.

HPLC/IC

Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-301 (310-279471-1), MW-301A (310-279471-2), MW-302 (310-279471-3), MW-303 (310-279471-4), MW-304 (310-279471-5), MW-305 (310-279471-6), MW-306 (310-279471-7), MW-307 (310-279471-9), MW-308 (310-279471-10) and MW-312 (310-279471-15). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

RAD

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Sample Summary

Client: SCS Engineers
Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-279471-1	MW-301	Water	04/18/24 09:50	04/19/24 15:55
310-279471-2	MW-301A	Water	04/17/24 14:45	04/19/24 15:55
310-279471-3	MW-302	Water	04/17/24 16:05	04/19/24 15:55
310-279471-4	MW-303	Water	04/15/24 15:05	04/19/24 15:55
310-279471-5	MW-304	Water	04/15/24 17:20	04/19/24 15:55
310-279471-6	MW-305	Water	04/16/24 09:05	04/19/24 15:55
310-279471-7	MW-306	Water	04/15/24 08:40	04/19/24 15:55
310-279471-8	MW-306A	Water	04/15/24 08:20	04/19/24 15:55
310-279471-9	MW-307	Water	04/18/24 11:15	04/19/24 15:55
310-279471-10	MW-308	Water	04/18/24 12:30	04/19/24 15:55
310-279471-11	MW-309	Water	04/15/24 16:40	04/19/24 15:55
310-279471-12	MW-309A	Water	04/15/24 16:25	04/19/24 15:55
310-279471-13	MW-310	Water	04/15/24 10:30	04/19/24 15:55
310-279471-14	MW-310A	Water	04/16/24 09:50	04/19/24 15:55
310-279471-15	MW-312	Water	04/15/24 13:40	04/19/24 15:55
310-279471-16	Field Blank	Water	04/18/24 12:45	04/19/24 15:55

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Detection Summary

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-301

Lab Sample ID: 310-279471-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	100		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	99		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.87	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	270		2.0	0.66	ug/L	1		6020B	Total/NA
Calcium	180		0.50	0.19	mg/L	1		6020B	Total/NA
Chromium	5.2		5.0	1.2	ug/L	1		6020B	Total/NA
Lithium	15		10	2.5	ug/L	1		6020B	Total/NA
Selenium	1.6	J	5.0	1.4	ug/L	1		6020B	Total/NA
Thallium	0.57	J	1.0	0.57	ug/L	1		6020B	Total/NA
Total Dissolved Solids	760		50	42	mg/L	1		SM 2540C	Total/NA
pH	7.0	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	712.62				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	159.3				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	4.92				mg/L	1		Field Sampling	Total/NA
Field pH	6.69				SU	1		Field Sampling	Total/NA
Field Conductivity	1296				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	10.9				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	7.15				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-301A

Lab Sample ID: 310-279471-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.4	J	5.0	2.3	mg/L	5		9056A	Total/NA
Arsenic	2.1		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	120		2.0	0.66	ug/L	1		6020B	Total/NA
Calcium	78		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.59		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	3100		100	36	ug/L	1		6020B	Total/NA
Molybdenum	2.8		2.0	1.3	ug/L	1		6020B	Total/NA
Total Dissolved Solids	290		50	42	mg/L	1		SM 2540C	Total/NA
pH	7.0	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	706.69				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	7.9				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	4.21				mg/L	1		Field Sampling	Total/NA
Field pH	6.96				SU	1		Field Sampling	Total/NA
Field Conductivity	594				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.1				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	19.63				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-302

Lab Sample ID: 310-279471-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	180		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	91		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	1.1	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	250		2.0	0.66	ug/L	1		6020B	Total/NA
Calcium	190		0.50	0.19	mg/L	1		6020B	Total/NA
Chromium	1.3	J	5.0	1.2	ug/L	1		6020B	Total/NA
Cobalt	0.38	J	0.50	0.17	ug/L	1		6020B	Total/NA
Iron	430		100	36	ug/L	1		6020B	Total/NA
Lithium	9.3	J	10	2.5	ug/L	1		6020B	Total/NA
Selenium	1.9	J	5.0	1.4	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-302 (Continued)

Lab Sample ID: 310-279471-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	830		50	42	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	712.69				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	101.3				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	2.07				mg/L	1		Field Sampling	Total/NA
Field pH	6.64				SU	1		Field Sampling	Total/NA
Field Conductivity	1493				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	9.3				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	13.89				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-303

Lab Sample ID: 310-279471-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	22		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	140		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	32		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	120		2.0	0.66	ug/L	1		6020B	Total/NA
Boron	1000		100	76	ug/L	1		6020B	Total/NA
Calcium	130		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.30	J	0.50	0.17	ug/L	1		6020B	Total/NA
Iron	3200		100	36	ug/L	1		6020B	Total/NA
Lithium	18		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	10		2.0	1.3	ug/L	1		6020B	Total/NA
Total Dissolved Solids	620		50	42	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	702.14				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-92.7				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.15				mg/L	1		Field Sampling	Total/NA
Field pH	6.90				SU	1		Field Sampling	Total/NA
Field Conductivity	1067				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	10.8				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	13.35				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-304

Lab Sample ID: 310-279471-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		5.0	2.3	mg/L	5		9056A	Total/NA
Fluoride	0.41	J	1.0	0.38	mg/L	5		9056A	Total/NA
Sulfate	270		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	17		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	120		2.0	0.66	ug/L	1		6020B	Total/NA
Boron	1200		100	76	ug/L	1		6020B	Total/NA
Calcium	150		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.53		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	3700		100	36	ug/L	1		6020B	Total/NA
Lithium	16		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	36		2.0	1.3	ug/L	1		6020B	Total/NA
Total Dissolved Solids	760		50	42	mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	702.08				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-68.1				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	2.33				mg/L	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-304 (Continued)

Lab Sample ID: 310-279471-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field pH	6.87				SU	1		Field Sampling	Total/NA
Field Conductivity	1204				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	10.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	14.46				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-305

Lab Sample ID: 310-279471-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	370		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	10		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	150		2.0	0.66	ug/L	1		6020B	Total/NA
Boron	1300		100	76	ug/L	1		6020B	Total/NA
Calcium	170		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.29	J	0.50	0.17	ug/L	1		6020B	Total/NA
Iron	48	J	100	36	ug/L	1		6020B	Total/NA
Lithium	21		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	42		2.0	1.3	ug/L	1		6020B	Total/NA
Selenium	1.8	J	5.0	1.4	ug/L	1		6020B	Total/NA
Total Dissolved Solids	900		50	42	mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	701.96				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	77.7				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.89				mg/L	1		Field Sampling	Total/NA
Field pH	6.89				SU	1		Field Sampling	Total/NA
Field Conductivity	1308				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	9.1				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.05				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-306

Lab Sample ID: 310-279471-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	160		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.64	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	78		2.0	0.66	ug/L	1		6020B	Total/NA
Boron	2300		100	76	ug/L	1		6020B	Total/NA
Calcium	86		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	2700		100	36	ug/L	1		6020B	Total/NA
Lithium	2.7	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	160		2.0	1.3	ug/L	1		6020B	Total/NA
Total Dissolved Solids	480		50	42	mg/L	1		SM 2540C	Total/NA
pH	7.6	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	702.25				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-113.0				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.97				mg/L	1		Field Sampling	Total/NA
Field pH	7.40				SU	1		Field Sampling	Total/NA
Field Conductivity	767				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.8				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.34				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-306A

Lab Sample ID: 310-279471-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	6.3	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	20		2.0	1.3	ug/L	1		6020B	Total/NA
Groundwater Elevation	702.48				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-66.9				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.15				mg/L	1		Field Sampling	Total/NA
Field pH	7.11				SU	1		Field Sampling	Total/NA
Field Conductivity	1215				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.8				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	9.15				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-307

Lab Sample ID: 310-279471-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.9		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	70		5.0	2.1	mg/L	5		9056A	Total/NA
Antimony	1.2	J	2.0	1.0	ug/L	1		6020B	Total/NA
Arsenic	6.1		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	52		2.0	0.66	ug/L	1		6020B	Total/NA
Boron	1300		100	76	ug/L	1		6020B	Total/NA
Calcium	31		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	9.3	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	15		2.0	1.3	ug/L	1		6020B	Total/NA
Selenium	8.5		5.0	1.4	ug/L	1		6020B	Total/NA
Total Dissolved Solids	140		50	42	mg/L	1		SM 2540C	Total/NA
pH	9.5	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	706.22				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	54.8				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.26				mg/L	1		Field Sampling	Total/NA
Field pH	9.38				SU	1		Field Sampling	Total/NA
Field Conductivity	244.1				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	11.6				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	7.35				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-308

Lab Sample ID: 310-279471-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.7		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	260		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	34		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	83		2.0	0.66	ug/L	1		6020B	Total/NA
Boron	5300		400	300	ug/L	4		6020B	Total/NA
Calcium	120		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	62		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	93		2.0	1.3	ug/L	1		6020B	Total/NA
Total Dissolved Solids	520		50	42	mg/L	1		SM 2540C	Total/NA
pH	9.1	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	703.51				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-112.9				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.29				mg/L	1		Field Sampling	Total/NA
Field pH	8.88				SU	1		Field Sampling	Total/NA
Field Conductivity	788				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.1				Degrees C	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-308 (Continued)

Lab Sample ID: 310-279471-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field Turbidity	6.45				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-309

Lab Sample ID: 310-279471-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	34		2.0	0.53	ug/L	1		6020B	Total/NA
Lithium	15		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	17		2.0	1.3	ug/L	1		6020B	Total/NA
Groundwater Elevation	702.06				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-93.9				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.00				mg/L	1		Field Sampling	Total/NA
Field pH	7.10				SU	1		Field Sampling	Total/NA
Field Conductivity	1036				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	7.26				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-309A

Lab Sample ID: 310-279471-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.84	J	2.0	0.53	ug/L	1		6020B	Total/NA
Lithium	7.2	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	11		2.0	1.3	ug/L	1		6020B	Total/NA
Groundwater Elevation	702.27				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-115.7				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.45				mg/L	1		Field Sampling	Total/NA
Field pH	7.02				SU	1		Field Sampling	Total/NA
Field Conductivity	907				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.0				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	4.00				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-310

Lab Sample ID: 310-279471-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	22		2.0	0.53	ug/L	1		6020B	Total/NA
Lithium	17		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	32		2.0	1.3	ug/L	1		6020B	Total/NA
Groundwater Elevation	701.73				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-119.7				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.17				mg/L	1		Field Sampling	Total/NA
Field pH	7.13				SU	1		Field Sampling	Total/NA
Field Conductivity	1097				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.7				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.56				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-310A

Lab Sample ID: 310-279471-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	4.8	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	17		2.0	1.3	ug/L	1		6020B	Total/NA
Groundwater Elevation	702.05				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-122.9				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.35				mg/L	1		Field Sampling	Total/NA
Field pH	7.17				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-310A (Continued)

Lab Sample ID: 310-279471-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field Conductivity	1075				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.7				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.11				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-312

Lab Sample ID: 310-279471-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	80		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	44		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	7.3		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	150		2.0	0.66	ug/L	1		6020B	Total/NA
Boron	250		100	76	ug/L	1		6020B	Total/NA
Calcium	100		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	7100		100	36	ug/L	1		6020B	Total/NA
Lithium	5.7	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	5.0		2.0	1.3	ug/L	1		6020B	Total/NA
Total Dissolved Solids	450		50	42	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	702.65				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-77.3				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	2.90				mg/L	1		Field Sampling	Total/NA
Field pH	6.72				SU	1		Field Sampling	Total/NA
Field Conductivity	874				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	20.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	21.32				NTU	1		Field Sampling	Total/NA

Client Sample ID: Field Blank

Lab Sample ID: 310-279471-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH	6.6	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-301
 Date Collected: 04/18/24 09:50
 Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-1
 Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	100		5.0	2.3	mg/L			04/25/24 15:47	5
Fluoride	<0.38		1.0	0.38	mg/L			04/25/24 15:47	5
Sulfate	99		5.0	2.1	mg/L			04/25/24 15:47	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 14:35	1
Arsenic	0.87	J	2.0	0.53	ug/L		04/23/24 09:00	04/26/24 14:35	1
Barium	270		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 14:35	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 14:35	1
Boron	<76		100	76	ug/L		04/23/24 09:00	04/26/24 14:35	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 14:35	1
Calcium	180		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 14:35	1
Chromium	5.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 14:35	1
Cobalt	<0.17		0.50	0.17	ug/L		04/23/24 09:00	04/26/24 14:35	1
Iron	<36		100	36	ug/L		04/23/24 09:00	04/26/24 14:35	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 14:35	1
Lithium	15		10	2.5	ug/L		04/23/24 09:00	04/26/24 14:35	1
Molybdenum	<1.3		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 14:35	1
Selenium	1.6	J	5.0	1.4	ug/L		04/23/24 09:00	04/26/24 14:35	1
Thallium	0.57	J	1.0	0.57	ug/L		04/23/24 09:00	04/26/24 14:35	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 13:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	760		50	42	mg/L			04/23/24 17:09	1
pH (SM 4500 H+ B)	7.0	HF	1.0	1.0	SU			04/19/24 17:06	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.357		0.136	0.139	1.00	0.131	pCi/L	04/24/24 08:48	05/18/24 16:31	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Barium	99.7		30 - 110					04/24/24 08:48	05/18/24 16:31	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.710		0.324	0.331	1.00	0.423	pCi/L	04/24/24 08:52	05/15/24 12:02	1
<i>Carrier</i>	<i>%Yield</i>	<i>Qualifier</i>	<i>Limits</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Barium	99.7		30 - 110					04/24/24 08:52	05/15/24 12:02	1
Y Carrier	84.9		30 - 110					04/24/24 08:52	05/15/24 12:02	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-301
 Date Collected: 04/18/24 09:50
 Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-1
 Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.07		0.351	0.359	5.00	0.423	pCi/L		05/21/24 08:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	712.62				ft			04/18/24 09:50	1
Oxidation Reduction Potential	159.3				mV			04/18/24 09:50	1
Oxygen, Dissolved	4.92				mg/L			04/18/24 09:50	1
Field pH	6.69				SU			04/18/24 09:50	1
Field Conductivity	1296				umhos/cm			04/18/24 09:50	1
Field Temperature	10.9				Degrees C			04/18/24 09:50	1
Field Turbidity	7.15				NTU			04/18/24 09:50	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-301A

Lab Sample ID: 310-279471-2

Date Collected: 04/17/24 14:45

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4	J	5.0	2.3	mg/L			04/25/24 16:23	5
Fluoride	<0.38		1.0	0.38	mg/L			04/25/24 16:23	5
Sulfate	<2.1		5.0	2.1	mg/L			04/25/24 16:23	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 14:46	1
Arsenic	2.1		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 14:46	1
Barium	120		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 14:46	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 14:46	1
Boron	<76		100	76	ug/L		04/23/24 09:00	04/29/24 14:32	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 14:46	1
Calcium	78		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 14:46	1
Chromium	<1.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 14:46	1
Cobalt	0.59		0.50	0.17	ug/L		04/23/24 09:00	04/26/24 14:46	1
Iron	3100		100	36	ug/L		04/23/24 09:00	04/26/24 14:46	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 14:46	1
Lithium	<2.5		10	2.5	ug/L		04/23/24 09:00	04/26/24 14:46	1
Molybdenum	2.8		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 14:46	1
Selenium	<1.4		5.0	1.4	ug/L		04/23/24 09:00	04/26/24 14:46	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 14:46	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	290		50	42	mg/L			04/23/24 17:09	1
pH (SM 4500 H+ B)	7.0	HF	1.0	1.0	SU			04/19/24 17:07	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.294		0.167	0.169	1.00	0.224	pCi/L	04/24/24 08:48	05/18/24 16:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	80.7		30 - 110					04/24/24 08:48	05/18/24 16:31	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	1.22		0.461	0.475	1.00	0.572	pCi/L	04/24/24 08:52	05/15/24 12:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	80.7		30 - 110					04/24/24 08:52	05/15/24 12:02	1
Y Carrier	85.2		30 - 110					04/24/24 08:52	05/15/24 12:02	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-301A

Lab Sample ID: 310-279471-2

Date Collected: 04/17/24 14:45

Matrix: Water

Date Received: 04/19/24 15:55

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.52		0.490	0.504	5.00	0.572	pCi/L		05/21/24 08:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	706.69				ft			04/17/24 14:45	1
Oxidation Reduction Potential	7.9				mV			04/17/24 14:45	1
Oxygen, Dissolved	4.21				mg/L			04/17/24 14:45	1
Field pH	6.96				SU			04/17/24 14:45	1
Field Conductivity	594				umhos/cm			04/17/24 14:45	1
Field Temperature	13.1				Degrees C			04/17/24 14:45	1
Field Turbidity	19.63				NTU			04/17/24 14:45	1



Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-302

Lab Sample ID: 310-279471-3

Date Collected: 04/17/24 16:05

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	180		5.0	2.3	mg/L			04/25/24 16:35	5
Fluoride	<0.38		1.0	0.38	mg/L			04/25/24 16:35	5
Sulfate	91		5.0	2.1	mg/L			04/25/24 16:35	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 14:49	1
Arsenic	1.1	J	2.0	0.53	ug/L		04/23/24 09:00	04/26/24 14:49	1
Barium	250		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 14:49	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 14:49	1
Boron	<76		100	76	ug/L		04/23/24 09:00	04/29/24 14:34	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 14:49	1
Calcium	190		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 14:49	1
Chromium	1.3	J	5.0	1.2	ug/L		04/23/24 09:00	04/26/24 14:49	1
Cobalt	0.38	J	0.50	0.17	ug/L		04/23/24 09:00	04/26/24 14:49	1
Iron	430		100	36	ug/L		04/23/24 09:00	04/26/24 14:49	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 14:49	1
Lithium	9.3	J	10	2.5	ug/L		04/23/24 09:00	04/26/24 14:49	1
Molybdenum	<1.3		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 14:49	1
Selenium	1.9	J	5.0	1.4	ug/L		04/23/24 09:00	04/26/24 14:49	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 14:49	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 13:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	830		50	42	mg/L			04/23/24 17:09	1
pH (SM 4500 H+ B)	7.2	HF	1.0	1.0	SU			04/19/24 17:09	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.259		0.139	0.141	1.00	0.177	pCi/L	04/24/24 08:48	05/18/24 16:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	96.4		30 - 110					04/24/24 08:48	05/18/24 16:31	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.745		0.351	0.358	1.00	0.473	pCi/L	04/24/24 08:52	05/15/24 12:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	96.4		30 - 110					04/24/24 08:52	05/15/24 12:02	1
Y Carrier	84.5		30 - 110					04/24/24 08:52	05/15/24 12:02	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-302
 Date Collected: 04/17/24 16:05
 Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-3
 Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.00		0.378	0.385	5.00	0.473	pCi/L		05/21/24 08:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	712.69				ft			04/17/24 16:05	1
Oxidation Reduction Potential	101.3				mV			04/17/24 16:05	1
Oxygen, Dissolved	2.07				mg/L			04/17/24 16:05	1
Field pH	6.64				SU			04/17/24 16:05	1
Field Conductivity	1493				umhos/cm			04/17/24 16:05	1
Field Temperature	9.3				Degrees C			04/17/24 16:05	1
Field Turbidity	13.89				NTU			04/17/24 16:05	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-303

Lab Sample ID: 310-279471-4

Date Collected: 04/15/24 15:05

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		5.0	2.3	mg/L			04/25/24 16:47	5
Fluoride	<0.38		1.0	0.38	mg/L			04/25/24 16:47	5
Sulfate	140		5.0	2.1	mg/L			04/25/24 16:47	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 14:51	1
Arsenic	32		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 14:51	1
Barium	120		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 14:51	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 14:51	1
Boron	1000		100	76	ug/L		04/23/24 09:00	04/29/24 14:36	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 14:51	1
Calcium	130		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 14:51	1
Chromium	<1.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 14:51	1
Cobalt	0.30	J	0.50	0.17	ug/L		04/23/24 09:00	04/26/24 14:51	1
Iron	3200		100	36	ug/L		04/23/24 09:00	04/26/24 14:51	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 14:51	1
Lithium	18		10	2.5	ug/L		04/23/24 09:00	04/26/24 14:51	1
Molybdenum	10		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 14:51	1
Selenium	<1.4		5.0	1.4	ug/L		04/23/24 09:00	04/26/24 14:51	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 14:51	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 13:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	620		50	42	mg/L			04/22/24 16:59	1
pH (SM 4500 H+ B)	7.2	HF	1.0	1.0	SU			04/19/24 17:10	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.342		0.141	0.145	1.00	0.148	pCi/L	04/24/24 08:48	05/18/24 16:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	89.3		30 - 110					04/24/24 08:48	05/18/24 16:31	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	1.23		0.445	0.459	1.00	0.550	pCi/L	04/24/24 08:52	05/15/24 12:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	89.3		30 - 110					04/24/24 08:52	05/15/24 12:02	1
Y Carrier	83.4		30 - 110					04/24/24 08:52	05/15/24 12:02	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-303
 Date Collected: 04/15/24 15:05
 Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-4
 Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.57		0.467	0.481	5.00	0.550	pCi/L		05/21/24 08:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	702.14				ft			04/15/24 15:05	1
Oxidation Reduction Potential	-92.7				mV			04/15/24 15:05	1
Oxygen, Dissolved	0.15				mg/L			04/15/24 15:05	1
Field pH	6.90				SU			04/15/24 15:05	1
Field Conductivity	1067				umhos/cm			04/15/24 15:05	1
Field Temperature	10.8				Degrees C			04/15/24 15:05	1
Field Turbidity	13.35				NTU			04/15/24 15:05	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-304

Lab Sample ID: 310-279471-5

Date Collected: 04/15/24 17:20

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		5.0	2.3	mg/L			04/25/24 16:59	5
Fluoride	0.41	J	1.0	0.38	mg/L			04/25/24 16:59	5
Sulfate	270		5.0	2.1	mg/L			04/25/24 16:59	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 14:53	1
Arsenic	17		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 14:53	1
Barium	120		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 14:53	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 14:53	1
Boron	1200		100	76	ug/L		04/23/24 09:00	04/29/24 14:38	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 14:53	1
Calcium	150		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 14:53	1
Chromium	<1.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 14:53	1
Cobalt	0.53		0.50	0.17	ug/L		04/23/24 09:00	04/26/24 14:53	1
Iron	3700		100	36	ug/L		04/23/24 09:00	04/26/24 14:53	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 14:53	1
Lithium	16		10	2.5	ug/L		04/23/24 09:00	04/26/24 14:53	1
Molybdenum	36		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 14:53	1
Selenium	<1.4		5.0	1.4	ug/L		04/23/24 09:00	04/26/24 14:53	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 14:53	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 13:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	760		50	42	mg/L			04/22/24 16:59	1
pH (SM 4500 H+ B)	7.3	HF	1.0	1.0	SU			04/19/24 17:11	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Total						
			(2σ+/-)	(2σ+/-)						
Radium 226	0.137	U	0.225	0.226	1.00	0.380	pCi/L	04/24/24 08:48	05/18/24 16:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	98.5		30 - 110					04/24/24 08:48	05/18/24 16:31	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Total						
			(2σ+/-)	(2σ+/-)						
Radium 228	0.378	U	0.298	0.300	1.00	0.457	pCi/L	04/24/24 08:52	05/15/24 12:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	98.5		30 - 110					04/24/24 08:52	05/15/24 12:02	1
Y Carrier	84.9		30 - 110					04/24/24 08:52	05/15/24 12:02	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-304

Lab Sample ID: 310-279471-5

Date Collected: 04/15/24 17:20

Matrix: Water

Date Received: 04/19/24 15:55

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.515		0.373	0.376	5.00	0.457	pCi/L		05/21/24 08:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	702.08				ft			04/15/24 17:20	1
Oxidation Reduction Potential	-68.1				mV			04/15/24 17:20	1
Oxygen, Dissolved	2.33				mg/L			04/15/24 17:20	1
Field pH	6.87				SU			04/15/24 17:20	1
Field Conductivity	1204				umhos/cm			04/15/24 17:20	1
Field Temperature	10.4				Degrees C			04/15/24 17:20	1
Field Turbidity	14.46				NTU			04/15/24 17:20	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-305

Lab Sample ID: 310-279471-6

Date Collected: 04/16/24 09:05

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		5.0	2.3	mg/L			04/25/24 17:11	5
Fluoride	<0.38		1.0	0.38	mg/L			04/25/24 17:11	5
Sulfate	370		5.0	2.1	mg/L			04/25/24 17:11	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 14:55	1
Arsenic	10		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 14:55	1
Barium	150		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 14:55	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 14:55	1
Boron	1300		100	76	ug/L		04/23/24 09:00	04/29/24 14:40	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 14:55	1
Calcium	170		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 14:55	1
Chromium	<1.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 14:55	1
Cobalt	0.29 J		0.50	0.17	ug/L		04/23/24 09:00	04/26/24 14:55	1
Iron	48 J		100	36	ug/L		04/23/24 09:00	04/26/24 14:55	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 14:55	1
Lithium	21		10	2.5	ug/L		04/23/24 09:00	04/26/24 14:55	1
Molybdenum	42		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 14:55	1
Selenium	1.8 J		5.0	1.4	ug/L		04/23/24 09:00	04/26/24 14:55	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 14:55	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:13	05/02/24 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	900		50	42	mg/L			04/22/24 16:59	1
pH (SM 4500 H+ B)	7.3 HF		1.0	1.0	SU			04/19/24 17:12	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Total						
Radium 226	0.0906	U	0.126	0.127	1.00	0.213	pCi/L	04/24/24 08:48	05/18/24 16:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	94.2		30 - 110					04/24/24 08:48	05/18/24 16:32	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count		RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Total						
Radium 228	0.519		0.328	0.331	1.00	0.477	pCi/L	04/24/24 08:52	05/15/24 12:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	94.2		30 - 110					04/24/24 08:52	05/15/24 12:02	1
Y Carrier	83.4		30 - 110					04/24/24 08:52	05/15/24 12:02	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-305
 Date Collected: 04/16/24 09:05
 Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-6
 Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.609		0.351	0.355	5.00	0.477	pCi/L		05/21/24 08:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.96				ft			04/16/24 09:05	1
Oxidation Reduction Potential	77.7				mV			04/16/24 09:05	1
Oxygen, Dissolved	0.89				mg/L			04/16/24 09:05	1
Field pH	6.89				SU			04/16/24 09:05	1
Field Conductivity	1308				umhos/cm			04/16/24 09:05	1
Field Temperature	9.1				Degrees C			04/16/24 09:05	1
Field Turbidity	6.05				NTU			04/16/24 09:05	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-306

Lab Sample ID: 310-279471-7

Date Collected: 04/15/24 08:40

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		5.0	2.3	mg/L			04/25/24 17:23	5
Fluoride	<0.38		1.0	0.38	mg/L			04/25/24 17:23	5
Sulfate	160		5.0	2.1	mg/L			04/25/24 17:23	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 14:57	1
Arsenic	0.64	J	2.0	0.53	ug/L		04/23/24 09:00	04/26/24 14:57	1
Barium	78		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 14:57	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 14:57	1
Boron	2300		100	76	ug/L		04/23/24 09:00	04/29/24 14:42	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 14:57	1
Calcium	86		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 14:57	1
Chromium	<1.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 14:57	1
Cobalt	<0.17		0.50	0.17	ug/L		04/23/24 09:00	04/26/24 14:57	1
Iron	2700		100	36	ug/L		04/23/24 09:00	04/26/24 14:57	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 14:57	1
Lithium	2.7	J	10	2.5	ug/L		04/23/24 09:00	04/26/24 14:57	1
Molybdenum	160		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 14:57	1
Selenium	<1.4		5.0	1.4	ug/L		04/23/24 09:00	04/26/24 14:57	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 14:57	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 13:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	480		50	42	mg/L			04/22/24 16:59	1
pH (SM 4500 H+ B)	7.6	HF	1.0	1.0	SU			04/19/24 17:13	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0785	U	0.115	0.116	1.00	0.196	pCi/L	04/24/24 08:48	05/18/24 16:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	94.2		30 - 110					04/24/24 08:48	05/18/24 16:32	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.249	U	0.295	0.296	1.00	0.487	pCi/L	04/24/24 08:52	05/15/24 12:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	94.2		30 - 110					04/24/24 08:52	05/15/24 12:02	1
Y Carrier	84.5		30 - 110					04/24/24 08:52	05/15/24 12:02	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-306

Lab Sample ID: 310-279471-7

Date Collected: 04/15/24 08:40

Matrix: Water

Date Received: 04/19/24 15:55

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.328	U	0.317	0.318	5.00	0.487	pCi/L		05/21/24 08:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	702.25				ft			04/15/24 08:40	1
Oxidation Reduction Potential	-113.0				mV			04/15/24 08:40	1
Oxygen, Dissolved	0.97				mg/L			04/15/24 08:40	1
Field pH	7.40				SU			04/15/24 08:40	1
Field Conductivity	767				umhos/cm			04/15/24 08:40	1
Field Temperature	12.8				Degrees C			04/15/24 08:40	1
Field Turbidity	6.34				NTU			04/15/24 08:40	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-306A
 Date Collected: 04/15/24 08:20
 Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-8
 Matrix: Water

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 14:59	1
Lithium	6.3	J	10	2.5	ug/L		04/23/24 09:00	04/26/24 14:59	1
Molybdenum	20		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 14:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	702.48				ft			04/15/24 08:20	1
Oxidation Reduction Potential	-66.9				mV			04/15/24 08:20	1
Oxygen, Dissolved	0.15				mg/L			04/15/24 08:20	1
Field pH	7.11				SU			04/15/24 08:20	1
Field Conductivity	1215				umhos/cm			04/15/24 08:20	1
Field Temperature	12.8				Degrees C			04/15/24 08:20	1
Field Turbidity	9.15				NTU			04/15/24 08:20	1



Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-307

Lab Sample ID: 310-279471-9

Date Collected: 04/18/24 11:15

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.9		5.0	2.3	mg/L			04/25/24 17:35	5
Fluoride	<0.38		1.0	0.38	mg/L			04/25/24 17:35	5
Sulfate	70		5.0	2.1	mg/L			04/25/24 17:35	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.2	J	2.0	1.0	ug/L		04/23/24 09:00	04/26/24 15:02	1
Arsenic	6.1		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 15:02	1
Barium	52		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 15:02	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 15:02	1
Boron	1300		100	76	ug/L		04/23/24 09:00	04/29/24 14:53	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 15:02	1
Calcium	31		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 15:02	1
Chromium	<1.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 15:02	1
Cobalt	<0.17		0.50	0.17	ug/L		04/23/24 09:00	04/26/24 15:02	1
Iron	<36		100	36	ug/L		04/23/24 09:00	04/26/24 15:02	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 15:02	1
Lithium	9.3	J	10	2.5	ug/L		04/23/24 09:00	04/26/24 15:02	1
Molybdenum	15		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 15:02	1
Selenium	8.5		5.0	1.4	ug/L		04/23/24 09:00	04/26/24 15:02	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 15:02	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 13:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	140		50	42	mg/L			04/23/24 17:09	1
pH (SM 4500 H+ B)	9.5	HF	1.0	1.0	SU			04/19/24 17:14	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0805	U	0.101	0.101	1.00	0.167	pCi/L	04/24/24 08:48	05/18/24 16:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	94.2		30 - 110					04/24/24 08:48	05/18/24 16:22	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.306	U	0.325	0.326	1.00	0.527	pCi/L	04/24/24 08:52	05/15/24 12:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	94.2		30 - 110					04/24/24 08:52	05/15/24 12:15	1
Y Carrier	81.9		30 - 110					04/24/24 08:52	05/15/24 12:15	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-307
Date Collected: 04/18/24 11:15
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-9
Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.386	U	0.340	0.341	5.00	0.527	pCi/L		05/21/24 08:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	706.22				ft			04/18/24 11:15	1
Oxidation Reduction Potential	54.8				mV			04/18/24 11:15	1
Oxygen, Dissolved	0.26				mg/L			04/18/24 11:15	1
Field pH	9.38				SU			04/18/24 11:15	1
Field Conductivity	244.1				umhos/cm			04/18/24 11:15	1
Field Temperature	11.6				Degrees C			04/18/24 11:15	1
Field Turbidity	7.35				NTU			04/18/24 11:15	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-308

Lab Sample ID: 310-279471-10

Date Collected: 04/18/24 12:30

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.7		5.0	2.3	mg/L			04/25/24 18:12	5
Fluoride	<0.38		1.0	0.38	mg/L			04/25/24 18:12	5
Sulfate	260		5.0	2.1	mg/L			04/25/24 18:12	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 15:04	1
Arsenic	34		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 15:04	1
Barium	83		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 15:04	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 15:04	1
Boron	5300		400	300	ug/L		04/23/24 09:00	04/29/24 14:56	4
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 15:04	1
Calcium	120		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 15:04	1
Chromium	<1.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 15:04	1
Cobalt	<0.17		0.50	0.17	ug/L		04/23/24 09:00	04/26/24 15:04	1
Iron	<36		100	36	ug/L		04/23/24 09:00	04/26/24 15:04	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 15:04	1
Lithium	62		10	2.5	ug/L		04/23/24 09:00	04/26/24 15:04	1
Molybdenum	93		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 15:04	1
Selenium	<1.4		5.0	1.4	ug/L		04/23/24 09:00	04/26/24 15:04	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 15:04	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	520		50	42	mg/L			04/23/24 17:09	1
pH (SM 4500 H+ B)	9.1	HF	1.0	1.0	SU			04/19/24 17:15	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0318	U	0.0955	0.0955	1.00	0.176	pCi/L	04/24/24 08:48	05/18/24 16:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	94.2		30 - 110					04/24/24 08:48	05/18/24 16:22	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.430	U	0.365	0.367	1.00	0.574	pCi/L	04/24/24 08:52	05/15/24 12:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	94.2		30 - 110					04/24/24 08:52	05/15/24 12:15	1
Y Carrier	84.1		30 - 110					04/24/24 08:52	05/15/24 12:15	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-308
 Date Collected: 04/18/24 12:30
 Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-10
 Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.462	U	0.377	0.379	5.00	0.574	pCi/L		05/21/24 08:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	703.51				ft			04/18/24 12:30	1
Oxidation Reduction Potential	-112.9				mV			04/18/24 12:30	1
Oxygen, Dissolved	0.29				mg/L			04/18/24 12:30	1
Field pH	8.88				SU			04/18/24 12:30	1
Field Conductivity	788				umhos/cm			04/18/24 12:30	1
Field Temperature	12.1				Degrees C			04/18/24 12:30	1
Field Turbidity	6.45				NTU			04/18/24 12:30	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-309

Lab Sample ID: 310-279471-11

Date Collected: 04/15/24 16:40

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	34		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 15:17	1
Lithium	15		10	2.5	ug/L		04/23/24 09:00	04/26/24 15:17	1
Molybdenum	17		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 15:17	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	702.06				ft			04/15/24 16:40	1
Oxidation Reduction Potential	-93.9				mV			04/15/24 16:40	1
Oxygen, Dissolved	1.00				mg/L			04/15/24 16:40	1
Field pH	7.10				SU			04/15/24 16:40	1
Field Conductivity	1036				umhos/cm			04/15/24 16:40	1
Field Temperature	14.4				Degrees C			04/15/24 16:40	1
Field Turbidity	7.26				NTU			04/15/24 16:40	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-309A

Lab Sample ID: 310-279471-12

Date Collected: 04/15/24 16:25

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.84	J	2.0	0.53	ug/L		04/23/24 09:00	04/26/24 15:19	1
Lithium	7.2	J	10	2.5	ug/L		04/23/24 09:00	04/26/24 15:19	1
Molybdenum	11		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 15:19	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	702.27				ft			04/15/24 16:25	1
Oxidation Reduction Potential	-115.7				mV			04/15/24 16:25	1
Oxygen, Dissolved	0.45				mg/L			04/15/24 16:25	1
Field pH	7.02				SU			04/15/24 16:25	1
Field Conductivity	907				umhos/cm			04/15/24 16:25	1
Field Temperature	15.0				Degrees C			04/15/24 16:25	1
Field Turbidity	4.00				NTU			04/15/24 16:25	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-310
 Date Collected: 04/15/24 10:30
 Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-13
 Matrix: Water

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	22		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 15:21	1
Lithium	17		10	2.5	ug/L		04/23/24 09:00	04/26/24 15:21	1
Molybdenum	32		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 15:21	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	701.73				ft			04/15/24 10:30	1
Oxidation Reduction Potential	-119.7				mV			04/15/24 10:30	1
Oxygen, Dissolved	0.17				mg/L			04/15/24 10:30	1
Field pH	7.13				SU			04/15/24 10:30	1
Field Conductivity	1097				umhos/cm			04/15/24 10:30	1
Field Temperature	13.7				Degrees C			04/15/24 10:30	1
Field Turbidity	6.56				NTU			04/15/24 10:30	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-310A

Lab Sample ID: 310-279471-14

Date Collected: 04/16/24 09:50

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 15:23	1
Lithium	4.8	J	10	2.5	ug/L		04/23/24 09:00	04/26/24 15:23	1
Molybdenum	17		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 15:23	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	702.05				ft			04/16/24 09:50	1
Oxidation Reduction Potential	-122.9				mV			04/16/24 09:50	1
Oxygen, Dissolved	0.35				mg/L			04/16/24 09:50	1
Field pH	7.17				SU			04/16/24 09:50	1
Field Conductivity	1075				umhos/cm			04/16/24 09:50	1
Field Temperature	14.7				Degrees C			04/16/24 09:50	1
Field Turbidity	6.11				NTU			04/16/24 09:50	1



Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-312

Lab Sample ID: 310-279471-15

Date Collected: 04/15/24 13:40

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	80		5.0	2.3	mg/L			04/25/24 18:24	5
Fluoride	<0.38		1.0	0.38	mg/L			04/25/24 18:24	5
Sulfate	44		5.0	2.1	mg/L			04/25/24 18:24	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 15:25	1
Arsenic	7.3		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 15:25	1
Barium	150		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 15:25	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 15:25	1
Boron	250		100	76	ug/L		04/23/24 09:00	04/29/24 15:00	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 15:25	1
Calcium	100		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 15:25	1
Chromium	<1.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 15:25	1
Cobalt	<0.17		0.50	0.17	ug/L		04/23/24 09:00	04/26/24 15:25	1
Iron	7100		100	36	ug/L		04/23/24 09:00	04/26/24 15:25	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 15:25	1
Lithium	5.7 J		10	2.5	ug/L		04/23/24 09:00	04/26/24 15:25	1
Molybdenum	5.0		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 15:25	1
Selenium	<1.4		5.0	1.4	ug/L		04/23/24 09:00	04/26/24 15:25	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 15:25	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 13:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	450		50	42	mg/L			04/22/24 16:59	1
pH (SM 4500 H+ B)	7.2	HF	1.0	1.0	SU			04/19/24 17:17	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.424		0.181	0.185	1.00	0.205	pCi/L	04/24/24 08:48	05/18/24 16:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	68.5		30 - 110					04/24/24 08:48	05/18/24 16:23	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	1.25		0.579	0.590	1.00	0.799	pCi/L	04/24/24 08:52	05/15/24 12:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	68.5		30 - 110					04/24/24 08:52	05/15/24 12:15	1
Y Carrier	82.6		30 - 110					04/24/24 08:52	05/15/24 12:15	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-312
 Date Collected: 04/15/24 13:40
 Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-15
 Matrix: Water

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.67		0.607	0.618	5.00	0.799	pCi/L		05/21/24 08:59	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	702.65				ft			04/15/24 13:40	1
Oxidation Reduction Potential	-77.3				mV			04/15/24 13:40	1
Oxygen, Dissolved	2.90				mg/L			04/15/24 13:40	1
Field pH	6.72				SU			04/15/24 13:40	1
Field Conductivity	874				umhos/cm			04/15/24 13:40	1
Field Temperature	20.4				Degrees C			04/15/24 13:40	1
Field Turbidity	21.32				NTU			04/15/24 13:40	1

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Client Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: Field Blank

Lab Sample ID: 310-279471-16

Date Collected: 04/18/24 12:45

Matrix: Water

Date Received: 04/19/24 15:55

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.45		1.0	0.45	mg/L			04/25/24 18:36	1
Fluoride	<0.075		0.20	0.075	mg/L			04/25/24 18:36	1
Sulfate	<0.42		1.0	0.42	mg/L			04/25/24 18:36	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 15:27	1
Arsenic	<0.53		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 15:27	1
Barium	<0.66		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 15:27	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 15:27	1
Boron	<76		100	76	ug/L		04/23/24 09:00	04/29/24 15:02	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 15:27	1
Calcium	<0.19		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 15:27	1
Chromium	<1.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 15:27	1
Cobalt	<0.17		0.50	0.17	ug/L		04/23/24 09:00	04/26/24 15:27	1
Iron	<36		100	36	ug/L		04/23/24 09:00	04/26/24 15:27	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 15:27	1
Lithium	<2.5		10	2.5	ug/L		04/23/24 09:00	04/26/24 15:27	1
Molybdenum	<1.3		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 15:27	1
Selenium	<1.4		5.0	1.4	ug/L		04/23/24 09:00	04/26/24 15:27	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 15:27	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 13:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	<42		50	42	mg/L			04/23/24 17:09	1
pH (SM 4500 H+ B)	6.6	HF	1.0	1.0	SU			04/19/24 17:18	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.00511	U	0.0709	0.0709	1.00	0.145	pCi/L	04/24/24 08:48	05/18/24 16:23	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	96.2		30 - 110					04/24/24 08:48	05/18/24 16:23	1

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	-0.0477	U	0.258	0.258	1.00	0.503	pCi/L	04/24/24 08:52	05/15/24 12:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	96.2		30 - 110					04/24/24 08:52	05/15/24 12:16	1
Y Carrier	84.5		30 - 110					04/24/24 08:52	05/15/24 12:16	1

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Client Sample Results

Client: SCS Engineers
Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: Field Blank

Lab Sample ID: 310-279471-16

Date Collected: 04/18/24 12:45

Matrix: Water

Date Received: 04/19/24 15:55

Method: TAL-STL Ra226_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.00511	U	0.268	0.268	5.00	0.503	pCi/L		05/21/24 08:59	1

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Definitions/Glossary

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-420009/40
Matrix: Water
Analysis Batch: 420009

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.45		1.0	0.45	mg/L			04/26/24 13:40	1
Fluoride	<0.075		0.20	0.075	mg/L			04/26/24 13:40	1
Sulfate	<0.42		1.0	0.42	mg/L			04/26/24 13:40	1

Lab Sample ID: LCS 310-420009/3
Matrix: Water
Analysis Batch: 420009

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.85		mg/L		98	90 - 110
Fluoride	2.00	2.20		mg/L		110	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: 310-279471-1 MS
Matrix: Water
Analysis Batch: 420009

Client Sample ID: MW-301
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	100		25.0	129	4	mg/L		99	80 - 120
Fluoride	<0.38		5.00	5.65		mg/L		113	80 - 120
Sulfate	99		25.0	123		mg/L		97	80 - 120

Lab Sample ID: 310-279471-1 MSD
Matrix: Water
Analysis Batch: 420009

Client Sample ID: MW-301
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	100		25.0	129	4	mg/L		99	80 - 120	0	15
Fluoride	<0.38		5.00	5.67		mg/L		113	80 - 120	0	15
Sulfate	99		25.0	123		mg/L		98	80 - 120	0	15

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-419476/1-A
Matrix: Water
Analysis Batch: 420080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 419476

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		04/23/24 09:00	04/26/24 14:21	1
Arsenic	<0.53		2.0	0.53	ug/L		04/23/24 09:00	04/26/24 14:21	1
Barium	<0.66		2.0	0.66	ug/L		04/23/24 09:00	04/26/24 14:21	1
Beryllium	<0.33		1.0	0.33	ug/L		04/23/24 09:00	04/26/24 14:21	1
Boron	<76		100	76	ug/L		04/23/24 09:00	04/26/24 14:21	1
Cadmium	<0.10		0.20	0.10	ug/L		04/23/24 09:00	04/26/24 14:21	1
Calcium	<0.19		0.50	0.19	mg/L		04/23/24 09:00	04/26/24 14:21	1
Chromium	<1.2		5.0	1.2	ug/L		04/23/24 09:00	04/26/24 14:21	1
Cobalt	<0.17		0.50	0.17	ug/L		04/23/24 09:00	04/26/24 14:21	1
Iron	<36		100	36	ug/L		04/23/24 09:00	04/26/24 14:21	1
Lead	<0.26		0.50	0.26	ug/L		04/23/24 09:00	04/26/24 14:21	1
Lithium	<2.5		10	2.5	ug/L		04/23/24 09:00	04/26/24 14:21	1

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QC Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 310-419476/1-A
Matrix: Water
Analysis Batch: 420080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 419476

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Molybdenum	<1.3		2.0	1.3	ug/L		04/23/24 09:00	04/26/24 14:21	1
Selenium	<1.4		5.0	1.4	ug/L		04/23/24 09:00	04/26/24 14:21	1
Thallium	<0.57		1.0	0.57	ug/L		04/23/24 09:00	04/26/24 14:21	1

Lab Sample ID: LCS 310-419476/2-A
Matrix: Water
Analysis Batch: 420080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 419476

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	200	211		ug/L		105	80 - 120
Barium	100	110		ug/L		110	80 - 120
Beryllium	100	103		ug/L		103	80 - 120
Boron	200	211		ug/L		106	80 - 120
Cadmium	100	101		ug/L		101	80 - 120
Calcium	2.00	1.88		mg/L		94	80 - 120
Chromium	100	97.6		ug/L		98	80 - 120
Cobalt	100	110		ug/L		110	80 - 120
Iron	200	220		ug/L		110	80 - 120
Lead	200	217		ug/L		108	80 - 120
Lithium	200	217		ug/L		109	80 - 120
Molybdenum	200	200		ug/L		100	80 - 120
Selenium	400	401		ug/L		100	80 - 120
Thallium	100	114		ug/L		114	80 - 120

Lab Sample ID: 310-279471-10 DU
Matrix: Water
Analysis Batch: 420080

Client Sample ID: MW-308
Prep Type: Total/NA
Prep Batch: 419476

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	RPD Limit
			Result	Qualifier				
Antimony	<1.0		<1.0		ug/L		NC	20
Arsenic	34		33.0		ug/L		4	20
Barium	83		78.3		ug/L		6	20
Beryllium	<0.33		<0.33		ug/L		NC	20
Cadmium	<0.10		<0.10		ug/L		NC	20
Calcium	120		109		mg/L		5	20
Chromium	<1.2		<1.2		ug/L		NC	20
Cobalt	<0.17		<0.17		ug/L		NC	20
Iron	<36		<36		ug/L		NC	20
Lead	<0.26		<0.26		ug/L		NC	20
Lithium	62		58.1		ug/L		7	20
Molybdenum	93		87.3		ug/L		6	20
Selenium	<1.4		<1.4		ug/L		NC	20
Thallium	<0.57		<0.57		ug/L		NC	20

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QC Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 310-279471-10 DU
 Matrix: Water
 Analysis Batch: 420191

Client Sample ID: MW-308
 Prep Type: Total/NA
 Prep Batch: 419476

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Boron	5300		5280		ug/L		1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-419716/1-A
 Matrix: Water
 Analysis Batch: 420548

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 419716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		04/24/24 11:12	05/02/24 12:57	1

Lab Sample ID: LCS 310-419716/2-A
 Matrix: Water
 Analysis Batch: 420548

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 419716

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	1.67	1.85		ug/L		111	80 - 120

Lab Sample ID: 310-279471-1 MS
 Matrix: Water
 Analysis Batch: 420548

Client Sample ID: MW-301
 Prep Type: Total/NA
 Prep Batch: 419716

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.11		1.67	1.88		ug/L		113	80 - 120

Lab Sample ID: 310-279471-1 MSD
 Matrix: Water
 Analysis Batch: 420548

Client Sample ID: MW-301
 Prep Type: Total/NA
 Prep Batch: 419716

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.11		1.67	1.84		ug/L		111	80 - 120	2	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 310-419493/1
 Matrix: Water
 Analysis Batch: 419493

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<42		50	42	mg/L			04/22/24 16:59	1

Lab Sample ID: LCS 310-419493/2
 Matrix: Water
 Analysis Batch: 419493

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	1000	982		mg/L		98	90 - 110

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QC Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 310-419629/1
 Matrix: Water
 Analysis Batch: 419629

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<42		50	42	mg/L			04/23/24 17:09	1

Lab Sample ID: LCS 310-419629/2
 Matrix: Water
 Analysis Batch: 419629

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	940		mg/L		94	90 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-419352/1
 Matrix: Water
 Analysis Batch: 419352

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	98 - 102

Lab Sample ID: 310-279471-2 DU
 Matrix: Water
 Analysis Batch: 419352

Client Sample ID: MW-301A
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.0	HF	7.0		SU		0	20

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-658455/1-A
 Matrix: Water
 Analysis Batch: 662382

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 658455

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.06944	U	0.0837	0.0840	1.00	0.137	pCi/L	04/24/24 08:48	05/18/24 16:31	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Barium	98.2		30 - 110					04/24/24 08:48	05/18/24 16:31	1

Lab Sample ID: LCS 160-658455/2-A
 Matrix: Water
 Analysis Batch: 662382

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 658455

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium 226	11.3	9.820		1.09	1.00	0.125	pCi/L	87	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Barium	99.2		30 - 110						

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QC Sample Results

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 310-279471-16 DU
Matrix: Water
Analysis Batch: 662384

Client Sample ID: Field Blank
Prep Type: Total/NA
Prep Batch: 658455

Analyte	Sample	Sample	DU		Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual						
Radium 226	0.00511	U	0.02793	U	0.0857	1.00	0.160	pCi/L	0.15	1
DU DU										
Carrier	%Yield	Qualifier	Limits							
Barium	99.7		30 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-658457/1-A
Matrix: Water
Analysis Batch: 661646

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 658457

Analyte	MB	MB	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium 228	0.4433	U	0.313	0.316	1.00	0.472	pCi/L	04/24/24 08:52	05/15/24 12:02	1
MB MB										
Carrier	%Yield	Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Barium	98.2		30 - 110		04/24/24 08:52	05/15/24 12:02	1			
Y Carrier	86.0		30 - 110		04/24/24 08:52	05/15/24 12:02	1			

Lab Sample ID: LCS 160-658457/2-A
Matrix: Water
Analysis Batch: 661646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 658457

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	
									%Rec	Limits
Radium 228	8.94	9.334		1.25	1.00	0.487	pCi/L	104	75 - 125	
LCS LCS										
Carrier	%Yield	Qualifier	Limits							
Barium	99.2		30 - 110							
Y Carrier	84.1		30 - 110							

Lab Sample ID: 310-279471-16 DU
Matrix: Water
Analysis Batch: 661817

Client Sample ID: Field Blank
Prep Type: Total/NA
Prep Batch: 658457

Analyte	Sample	Sample	DU		Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual						
Radium 228	-0.0477	U	0.1809	U	0.303	1.00	0.517	pCi/L	0.41	1
DU DU										
Carrier	%Yield	Qualifier	Limits							
Barium	99.7		30 - 110							
Y Carrier	83.7		30 - 110							

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

HPLC/IC

Analysis Batch: 420009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-1	MW-301	Total/NA	Water	9056A	
310-279471-2	MW-301A	Total/NA	Water	9056A	
310-279471-3	MW-302	Total/NA	Water	9056A	
310-279471-4	MW-303	Total/NA	Water	9056A	
310-279471-5	MW-304	Total/NA	Water	9056A	
310-279471-6	MW-305	Total/NA	Water	9056A	
310-279471-7	MW-306	Total/NA	Water	9056A	
310-279471-9	MW-307	Total/NA	Water	9056A	
310-279471-10	MW-308	Total/NA	Water	9056A	
310-279471-15	MW-312	Total/NA	Water	9056A	
310-279471-16	Field Blank	Total/NA	Water	9056A	
MB 310-420009/40	Method Blank	Total/NA	Water	9056A	
LCS 310-420009/3	Lab Control Sample	Total/NA	Water	9056A	
310-279471-1 MS	MW-301	Total/NA	Water	9056A	
310-279471-1 MSD	MW-301	Total/NA	Water	9056A	

Metals

Prep Batch: 419476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-1	MW-301	Total/NA	Water	3005A	
310-279471-2	MW-301A	Total/NA	Water	3005A	
310-279471-3	MW-302	Total/NA	Water	3005A	
310-279471-4	MW-303	Total/NA	Water	3005A	
310-279471-5	MW-304	Total/NA	Water	3005A	
310-279471-6	MW-305	Total/NA	Water	3005A	
310-279471-7	MW-306	Total/NA	Water	3005A	
310-279471-8	MW-306A	Total/NA	Water	3005A	
310-279471-9	MW-307	Total/NA	Water	3005A	
310-279471-10	MW-308	Total/NA	Water	3005A	
310-279471-11	MW-309	Total/NA	Water	3005A	
310-279471-12	MW-309A	Total/NA	Water	3005A	
310-279471-13	MW-310	Total/NA	Water	3005A	
310-279471-14	MW-310A	Total/NA	Water	3005A	
310-279471-15	MW-312	Total/NA	Water	3005A	
310-279471-16	Field Blank	Total/NA	Water	3005A	
MB 310-419476/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-419476/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-279471-10 DU	MW-308	Total/NA	Water	3005A	

Prep Batch: 419716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-1	MW-301	Total/NA	Water	7470A	
310-279471-2	MW-301A	Total/NA	Water	7470A	
310-279471-3	MW-302	Total/NA	Water	7470A	
310-279471-4	MW-303	Total/NA	Water	7470A	
310-279471-5	MW-304	Total/NA	Water	7470A	
310-279471-6	MW-305	Total/NA	Water	7470A	
310-279471-7	MW-306	Total/NA	Water	7470A	
310-279471-9	MW-307	Total/NA	Water	7470A	
310-279471-10	MW-308	Total/NA	Water	7470A	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Metals (Continued)

Prep Batch: 419716 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-15	MW-312	Total/NA	Water	7470A	
310-279471-16	Field Blank	Total/NA	Water	7470A	
MB 310-419716/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-419716/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-279471-1 MS	MW-301	Total/NA	Water	7470A	
310-279471-1 MSD	MW-301	Total/NA	Water	7470A	

Analysis Batch: 420080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-1	MW-301	Total/NA	Water	6020B	419476
310-279471-2	MW-301A	Total/NA	Water	6020B	419476
310-279471-3	MW-302	Total/NA	Water	6020B	419476
310-279471-4	MW-303	Total/NA	Water	6020B	419476
310-279471-5	MW-304	Total/NA	Water	6020B	419476
310-279471-6	MW-305	Total/NA	Water	6020B	419476
310-279471-7	MW-306	Total/NA	Water	6020B	419476
310-279471-8	MW-306A	Total/NA	Water	6020B	419476
310-279471-9	MW-307	Total/NA	Water	6020B	419476
310-279471-10	MW-308	Total/NA	Water	6020B	419476
310-279471-11	MW-309	Total/NA	Water	6020B	419476
310-279471-12	MW-309A	Total/NA	Water	6020B	419476
310-279471-13	MW-310	Total/NA	Water	6020B	419476
310-279471-14	MW-310A	Total/NA	Water	6020B	419476
310-279471-15	MW-312	Total/NA	Water	6020B	419476
310-279471-16	Field Blank	Total/NA	Water	6020B	419476
MB 310-419476/1-A	Method Blank	Total/NA	Water	6020B	419476
LCS 310-419476/2-A	Lab Control Sample	Total/NA	Water	6020B	419476
310-279471-10 DU	MW-308	Total/NA	Water	6020B	419476

Analysis Batch: 420191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-2	MW-301A	Total/NA	Water	6020B	419476
310-279471-3	MW-302	Total/NA	Water	6020B	419476
310-279471-4	MW-303	Total/NA	Water	6020B	419476
310-279471-5	MW-304	Total/NA	Water	6020B	419476
310-279471-6	MW-305	Total/NA	Water	6020B	419476
310-279471-7	MW-306	Total/NA	Water	6020B	419476
310-279471-9	MW-307	Total/NA	Water	6020B	419476
310-279471-10	MW-308	Total/NA	Water	6020B	419476
310-279471-15	MW-312	Total/NA	Water	6020B	419476
310-279471-16	Field Blank	Total/NA	Water	6020B	419476
310-279471-10 DU	MW-308	Total/NA	Water	6020B	419476

Analysis Batch: 420548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-1	MW-301	Total/NA	Water	7470A	419716
310-279471-2	MW-301A	Total/NA	Water	7470A	419716
310-279471-3	MW-302	Total/NA	Water	7470A	419716
310-279471-4	MW-303	Total/NA	Water	7470A	419716
310-279471-5	MW-304	Total/NA	Water	7470A	419716
310-279471-6	MW-305	Total/NA	Water	7470A	419716

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Metals (Continued)

Analysis Batch: 420548 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-7	MW-306	Total/NA	Water	7470A	419716
310-279471-9	MW-307	Total/NA	Water	7470A	419716
310-279471-10	MW-308	Total/NA	Water	7470A	419716
310-279471-15	MW-312	Total/NA	Water	7470A	419716
310-279471-16	Field Blank	Total/NA	Water	7470A	419716
MB 310-419716/1-A	Method Blank	Total/NA	Water	7470A	419716
LCS 310-419716/2-A	Lab Control Sample	Total/NA	Water	7470A	419716
310-279471-1 MS	MW-301	Total/NA	Water	7470A	419716
310-279471-1 MSD	MW-301	Total/NA	Water	7470A	419716

General Chemistry

Analysis Batch: 419352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-1	MW-301	Total/NA	Water	SM 4500 H+ B	
310-279471-2	MW-301A	Total/NA	Water	SM 4500 H+ B	
310-279471-3	MW-302	Total/NA	Water	SM 4500 H+ B	
310-279471-4	MW-303	Total/NA	Water	SM 4500 H+ B	
310-279471-5	MW-304	Total/NA	Water	SM 4500 H+ B	
310-279471-6	MW-305	Total/NA	Water	SM 4500 H+ B	
310-279471-7	MW-306	Total/NA	Water	SM 4500 H+ B	
310-279471-9	MW-307	Total/NA	Water	SM 4500 H+ B	
310-279471-10	MW-308	Total/NA	Water	SM 4500 H+ B	
310-279471-15	MW-312	Total/NA	Water	SM 4500 H+ B	
310-279471-16	Field Blank	Total/NA	Water	SM 4500 H+ B	
LCS 310-419352/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-279471-2 DU	MW-301A	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 419493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-4	MW-303	Total/NA	Water	SM 2540C	
310-279471-5	MW-304	Total/NA	Water	SM 2540C	
310-279471-6	MW-305	Total/NA	Water	SM 2540C	
310-279471-7	MW-306	Total/NA	Water	SM 2540C	
310-279471-15	MW-312	Total/NA	Water	SM 2540C	
MB 310-419493/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-419493/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 419629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-1	MW-301	Total/NA	Water	SM 2540C	
310-279471-2	MW-301A	Total/NA	Water	SM 2540C	
310-279471-3	MW-302	Total/NA	Water	SM 2540C	
310-279471-9	MW-307	Total/NA	Water	SM 2540C	
310-279471-10	MW-308	Total/NA	Water	SM 2540C	
310-279471-16	Field Blank	Total/NA	Water	SM 2540C	
MB 310-419629/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-419629/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Rad

Prep Batch: 658455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-1	MW-301	Total/NA	Water	PrecSep-21	
310-279471-2	MW-301A	Total/NA	Water	PrecSep-21	
310-279471-3	MW-302	Total/NA	Water	PrecSep-21	
310-279471-4	MW-303	Total/NA	Water	PrecSep-21	
310-279471-5	MW-304	Total/NA	Water	PrecSep-21	
310-279471-6	MW-305	Total/NA	Water	PrecSep-21	
310-279471-7	MW-306	Total/NA	Water	PrecSep-21	
310-279471-9	MW-307	Total/NA	Water	PrecSep-21	
310-279471-10	MW-308	Total/NA	Water	PrecSep-21	
310-279471-15	MW-312	Total/NA	Water	PrecSep-21	
310-279471-16	Field Blank	Total/NA	Water	PrecSep-21	
MB 160-658455/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-658455/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-279471-16 DU	Field Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 658457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-1	MW-301	Total/NA	Water	PrecSep_0	
310-279471-2	MW-301A	Total/NA	Water	PrecSep_0	
310-279471-3	MW-302	Total/NA	Water	PrecSep_0	
310-279471-4	MW-303	Total/NA	Water	PrecSep_0	
310-279471-5	MW-304	Total/NA	Water	PrecSep_0	
310-279471-6	MW-305	Total/NA	Water	PrecSep_0	
310-279471-7	MW-306	Total/NA	Water	PrecSep_0	
310-279471-9	MW-307	Total/NA	Water	PrecSep_0	
310-279471-10	MW-308	Total/NA	Water	PrecSep_0	
310-279471-15	MW-312	Total/NA	Water	PrecSep_0	
310-279471-16	Field Blank	Total/NA	Water	PrecSep_0	
MB 160-658457/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-658457/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-279471-16 DU	Field Blank	Total/NA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 420010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-279471-1	MW-301	Total/NA	Water	Field Sampling	
310-279471-2	MW-301A	Total/NA	Water	Field Sampling	
310-279471-3	MW-302	Total/NA	Water	Field Sampling	
310-279471-4	MW-303	Total/NA	Water	Field Sampling	
310-279471-5	MW-304	Total/NA	Water	Field Sampling	
310-279471-6	MW-305	Total/NA	Water	Field Sampling	
310-279471-7	MW-306	Total/NA	Water	Field Sampling	
310-279471-8	MW-306A	Total/NA	Water	Field Sampling	
310-279471-9	MW-307	Total/NA	Water	Field Sampling	
310-279471-10	MW-308	Total/NA	Water	Field Sampling	
310-279471-11	MW-309	Total/NA	Water	Field Sampling	
310-279471-12	MW-309A	Total/NA	Water	Field Sampling	
310-279471-13	MW-310	Total/NA	Water	Field Sampling	
310-279471-14	MW-310A	Total/NA	Water	Field Sampling	
310-279471-15	MW-312	Total/NA	Water	Field Sampling	

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-301

Lab Sample ID: 310-279471-1

Date Collected: 04/18/24 09:50

Matrix: Water

Date Received: 04/19/24 15:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	420009	QTZ5	EET CF	04/25/24 15:47
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 14:35
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:12
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:02
Total/NA	Analysis	SM 2540C		1	419629	WZC8	EET CF	04/23/24 17:09
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:06
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662382	SCB	EET SL	05/18/24 16:31
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661646	SWS	EET SL	05/15/24 12:02
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59
Total/NA	Analysis	Field Sampling		1	420010	BJ0R	EET CF	04/18/24 09:50

Client Sample ID: MW-301A

Lab Sample ID: 310-279471-2

Date Collected: 04/17/24 14:45

Matrix: Water

Date Received: 04/19/24 15:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	420009	QTZ5	EET CF	04/25/24 16:23
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 14:46
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420191	NFT2	EET CF	04/29/24 14:32
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:12
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:08
Total/NA	Analysis	SM 2540C		1	419629	WZC8	EET CF	04/23/24 17:09
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:07
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662382	SCB	EET SL	05/18/24 16:31
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661646	SWS	EET SL	05/15/24 12:02
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59
Total/NA	Analysis	Field Sampling		1	420010	BJ0R	EET CF	04/17/24 14:45

Client Sample ID: MW-302

Lab Sample ID: 310-279471-3

Date Collected: 04/17/24 16:05

Matrix: Water

Date Received: 04/19/24 15:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	420009	QTZ5	EET CF	04/25/24 16:35
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 14:49

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-302
Date Collected: 04/17/24 16:05
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420191	NFT2	EET CF	04/29/24 14:34
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:12
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:14
Total/NA	Analysis	SM 2540C		1	419629	WZC8	EET CF	04/23/24 17:09
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:09
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662382	SCB	EET SL	05/18/24 16:31
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661646	SWS	EET SL	05/15/24 12:02
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59
Total/NA	Analysis	Field Sampling		1	420010	BJ0R	EET CF	04/17/24 16:05

Client Sample ID: MW-303
Date Collected: 04/15/24 15:05
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	420009	QTZ5	EET CF	04/25/24 16:47
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 14:51
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420191	NFT2	EET CF	04/29/24 14:36
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:12
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:17
Total/NA	Analysis	SM 2540C		1	419493	D7CP	EET CF	04/22/24 16:59
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:10
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662382	SCB	EET SL	05/18/24 16:31
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661646	SWS	EET SL	05/15/24 12:02
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59
Total/NA	Analysis	Field Sampling		1	420010	BJ0R	EET CF	04/15/24 15:05

Client Sample ID: MW-304
Date Collected: 04/15/24 17:20
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	420009	QTZ5	EET CF	04/25/24 16:59
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 14:53
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420191	NFT2	EET CF	04/29/24 14:38

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-304
Date Collected: 04/15/24 17:20
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:12
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:19
Total/NA	Analysis	SM 2540C		1	419493	D7CP	EET CF	04/22/24 16:59
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:11
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662382	SCB	EET SL	05/18/24 16:31
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661646	SWS	EET SL	05/15/24 12:02
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59
Total/NA	Analysis	Field Sampling		1	420010	BJOR	EET CF	04/15/24 17:20

Client Sample ID: MW-305
Date Collected: 04/16/24 09:05
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	420009	QTZ5	EET CF	04/25/24 17:11
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 14:55
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420191	NFT2	EET CF	04/29/24 14:40
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:13
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:21
Total/NA	Analysis	SM 2540C		1	419493	D7CP	EET CF	04/22/24 16:59
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:12
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662382	SCB	EET SL	05/18/24 16:32
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661646	SWS	EET SL	05/15/24 12:02
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59
Total/NA	Analysis	Field Sampling		1	420010	BJOR	EET CF	04/16/24 09:05

Client Sample ID: MW-306
Date Collected: 04/15/24 08:40
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	420009	QTZ5	EET CF	04/25/24 17:23
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 14:57
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420191	NFT2	EET CF	04/29/24 14:42
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:12
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:23

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-306
Date Collected: 04/15/24 08:40
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	419493	D7CP	EET CF	04/22/24 16:59
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:13
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662382	SCB	EET SL	05/18/24 16:32
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661646	SWS	EET SL	05/15/24 12:02
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59
Total/NA	Analysis	Field Sampling		1	420010	BJOR	EET CF	04/15/24 08:40

Client Sample ID: MW-306A
Date Collected: 04/15/24 08:20
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 14:59
Total/NA	Analysis	Field Sampling		1	420010	BJOR	EET CF	04/15/24 08:20

Client Sample ID: MW-307
Date Collected: 04/18/24 11:15
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	420009	QTZ5	EET CF	04/25/24 17:35
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 15:02
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420191	NFT2	EET CF	04/29/24 14:53
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:12
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:25
Total/NA	Analysis	SM 2540C		1	419629	WZC8	EET CF	04/23/24 17:09
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:14
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662384	SCB	EET SL	05/18/24 16:22
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661817	SWS	EET SL	05/15/24 12:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59
Total/NA	Analysis	Field Sampling		1	420010	BJOR	EET CF	04/18/24 11:15

Lab Chronicle

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-308
Date Collected: 04/18/24 12:30
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	420009	QTZ5	EET CF	04/25/24 18:12
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 15:04
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		4	420191	NFT2	EET CF	04/29/24 14:56
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:12
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:27
Total/NA	Analysis	SM 2540C		1	419629	WZC8	EET CF	04/23/24 17:09
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:15
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662384	SCB	EET SL	05/18/24 16:22
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661817	SWS	EET SL	05/15/24 12:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59
Total/NA	Analysis	Field Sampling		1	420010	BJOR	EET CF	04/18/24 12:30

Client Sample ID: MW-309
Date Collected: 04/15/24 16:40
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 15:17
Total/NA	Analysis	Field Sampling		1	420010	BJOR	EET CF	04/15/24 16:40

Client Sample ID: MW-309A
Date Collected: 04/15/24 16:25
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 15:19
Total/NA	Analysis	Field Sampling		1	420010	BJOR	EET CF	04/15/24 16:25

Client Sample ID: MW-310
Date Collected: 04/15/24 10:30
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 15:21
Total/NA	Analysis	Field Sampling		1	420010	BJOR	EET CF	04/15/24 10:30

Lab Chronicle

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Client Sample ID: MW-310A
Date Collected: 04/16/24 09:50
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 15:23
Total/NA	Analysis	Field Sampling		1	420010	BJ0R	EET CF	04/16/24 09:50

Client Sample ID: MW-312
Date Collected: 04/15/24 13:40
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	420009	QTZ5	EET CF	04/25/24 18:24
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 15:25
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420191	NFT2	EET CF	04/29/24 15:00
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:12
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:29
Total/NA	Analysis	SM 2540C		1	419493	D7CP	EET CF	04/22/24 16:59
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:17
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662384	SCB	EET SL	05/18/24 16:23
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661817	SWS	EET SL	05/15/24 12:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59
Total/NA	Analysis	Field Sampling		1	420010	BJ0R	EET CF	04/15/24 13:40

Client Sample ID: Field Blank
Date Collected: 04/18/24 12:45
Date Received: 04/19/24 15:55

Lab Sample ID: 310-279471-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	420009	QTZ5	EET CF	04/25/24 18:36
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420080	NFT2	EET CF	04/26/24 15:27
Total/NA	Prep	3005A			419476	QTZ5	EET CF	04/23/24 09:00
Total/NA	Analysis	6020B		1	420191	NFT2	EET CF	04/29/24 15:02
Total/NA	Prep	7470A			419716	A6US	EET CF	04/24/24 11:12
Total/NA	Analysis	7470A		1	420548	A6US	EET CF	05/02/24 13:32
Total/NA	Analysis	SM 2540C		1	419629	WZC8	EET CF	04/23/24 17:09
Total/NA	Analysis	SM 4500 H+ B		1	419352	A3GU	EET CF	04/19/24 17:18
Total/NA	Prep	PrecSep-21			658455	MLT	EET SL	04/24/24 08:48
Total/NA	Analysis	903.0		1	662384	SCB	EET SL	05/18/24 16:23
Total/NA	Prep	PrecSep_0			658457	MLT	EET SL	04/24/24 08:52
Total/NA	Analysis	904.0		1	661817	SWS	EET SL	05/15/24 12:16
Total/NA	Analysis	Ra226_Ra228 Pos		1	662720	FLC	EET SL	05/21/24 08:59

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers

Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

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Accreditation/Certification Summary

Client: SCS Engineers
 Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-08-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-24
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-24
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	03-31-25
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-24
Virginia	NELAP	10310	06-15-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	10-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
Pos			
Field Sampling	Field Sampling	EPA	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

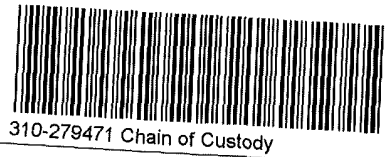
Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Environment Testing
America



Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>4-19-24</u>	<u>1955</u>	
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>3</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID:	<u>R</u>	Correction Factor (°C):	<u>0</u>
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>21</u>	Corrected Temp (°C):	<u>21</u>
Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>Received 1 IL with Nolic empty for 301A</u>			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>4-19-24</u>	TIME <u>1555</u>	Received By: <u>CC</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2 of 3</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>R</u>	Correction Factor (°C): <u>0</u>		
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>54</u>	Corrected Temp (°C): <u>54</u>		
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			





Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>4-19-24</u>	<u>1555</u>	<u>ce</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>3</u> of <u>3</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
*Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>3.3</u>		Corrected Temp (°C): <u>3.3</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Chain of Custody Record



Client Information		Sample #	Lab PM	State of Origin	COC No
Client Contact: Magnan Bloodett		Phone: 319-505-2200	E-Mail: Sandra.Fredrick@eurofins.com	State of Origin	Page 1 of 2
Company: SCS Engineers		PNV/SID	Analysis Requested		
Address: 2830 Dary Drive	Due Date Requested	TAT Requested (days)	<input type="checkbox"/> Field Filtered Sample (Yes or No) <input type="checkbox"/> Perform MS/MSD (Yes or No) 6020 Metals (17) total (Sb As Ba Be B Ca Cd C Co Fe Ph Li Mo Se Ti) 7470 Mercury total 6020 Metals (3) total (As L Mo) TDS and H Chloride Fluoride Sulfate EPA JD: 304 Residual Chloride		
City: Madison	Compliance Project: Yes	Yes No	Total Number of containers Preservation Codes: A: HCL, B: NSOH, C: Zn Acetic, D: Nitric Acid, E: NaHSO4, F: M OH, G: Ancho, H: Acetic Acid, I: Luc, J: Diwater, K: EDTA, L: EDA, M: Hexane, N: None, O: A. NaOH, P: NaOH, Q: Na2SO3, R: N2S2O3, S: H2SO4, T: TSP Dodecanytrate, U: Acetone, V: MCAA, W: DH 45, Z: other (sp copy)		
Phone: 508-224-2830	Project #	MO #	Special Instructions/Note Other:		
Email: scseng@scseng.com	Project Name: Prarie Creek Generating Station 25224074	SSOW #			
Address: Cedar Rapids IA	SSOW #				
Sample Identification	Sample Date	Sample Time	Sample Type (G=grab)	Matrix (W=water, S=solid, O=oil, A=air)	Field Filtered Sample (Yes or No)
MW-301	4/18/24	9:52	G	W	X
MW-301A	4/17/24	1:15	G	W	X
MW-302	4/17/24	16:05	G	W	X
MW-303	4/15/24	15:15	G	W	X
MW-304	4/15/24	7:20	G	W	X
MW-305	4/16/24	9:08	G	W	X
MW-306	4/15/24	8:40	G	W	X
MW-306A	4/15/24	15:20	G	W	X
MW-307	4/15/24	11:15	G	W	X
MW-308	4/15/24	12:30	G	W	X
MW-309	4/15/24	6:10	G	W	X
Possible Hazard Identification: <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> Other (specify)					
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Relinquished to: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Relinquished to: _____ Date: _____ Time: _____ Cooler Temperature () C and Other Remark: _____					
Custody Seal Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No: _____ Special Instructions OC Requirements: _____ Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client: <input type="checkbox"/> Disposal By Lab: <input type="checkbox"/> Archive For: _____ Months					

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Table 1. Sampling Points and Parameters CCR Rule Sampling Program, April 2024
Groundwater Monitoring Prairie Creek Generating Station / SCS Engineers Project #25224074

Parameter	CCR Rule Parameters All unfiltered																Field	TOTAL
	MW 301	MW 301A	MW 302	MW 303	MW 304	MW 305	MW 306	MW 306A	MW 307	MW 308	MW 309	MW 309A	MW 310	MW 310A	MW 311	MW 312		
Boron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Calcium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ammony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Turbidity (NTU)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Alkalinity - Carbonate																		
Alkalinity - Bicarbonate																		
Calcium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Manganese																		
Parasolium																		
Sodium																		

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-279471-1

Login Number: 279471

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Bennett, Samantha

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-279471-1

Login Number: 279471

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 04/23/24 11:37 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Tracer/Carrier Summary

Client: SCS Engineers
Project/Site: Praire Creek Generating Station 25224074

Job ID: 310-279471-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (30-110)
310-279471-1	MW-301	99.7
310-279471-2	MW-301A	80.7
310-279471-3	MW-302	96.4
310-279471-4	MW-303	89.3
310-279471-5	MW-304	98.5
310-279471-6	MW-305	94.2
310-279471-7	MW-306	94.2
310-279471-9	MW-307	94.2
310-279471-10	MW-308	94.2
310-279471-15	MW-312	68.5
310-279471-16	Field Blank	96.2
310-279471-16 DU	Field Blank	99.7
LCS 160-658455/2-A	Lab Control Sample	99.2
MB 160-658455/1-A	Method Blank	98.2

Tracer/Carrier Legend

Ba = Barium

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
310-279471-1	MW-301	99.7	84.9
310-279471-2	MW-301A	80.7	85.2
310-279471-3	MW-302	96.4	84.5
310-279471-4	MW-303	89.3	83.4
310-279471-5	MW-304	98.5	84.9
310-279471-6	MW-305	94.2	83.4
310-279471-7	MW-306	94.2	84.5
310-279471-9	MW-307	94.2	81.9
310-279471-10	MW-308	94.2	84.1
310-279471-15	MW-312	68.5	82.6
310-279471-16	Field Blank	96.2	84.5
310-279471-16 DU	Field Blank	99.7	83.7
LCS 160-658457/2-A	Lab Control Sample	99.2	84.1
MB 160-658457/1-A	Method Blank	98.2	86.0

Tracer/Carrier Legend

Ba = Barium

Y = Y Carrier

Eurofins Cedar Falls

Groundwater Monitoring Results - Field Parameters
Prairie Creek Generating Station / SCS Engineers Project #25224074.00
April 2024

Sample	Sample Date	GW Elevation (ft amsl)	Temperature (Deg. C)	pH (Std. Units)	Dissolved Oxygen (mg/L)	Specific Conductivity (µmhos/cm)	ORP (mV)	Turbidity
MW-301	4/18/2024	712.62	10.9	6.69	4.92	1296	159.3	7.15
MW-301A	4/17/2024	706.69	13.1	6.96	4.21	594	7.9	19.63
MW-302	4/17/2024	712.69	9.3	6.64	2.07	1493	101.3	13.89
MW-303	4/15/2024	702.14	10.8	6.90	0.15	1067	-92.7	13.35
MW-304	4/15/2024	702.08	10.4	6.87	2.33	1204	-68.1	14.46
MW-305	4/16/2024	701.96	9.1	6.89	0.89	1308	77.7	6.05
MW-306	4/15/2024	702.25	12.8	7.40	0.97	767	-113.0	6.34
MW-306A	4/15/2024	702.48	12.8	7.11	0.15	1215	-66.9	9.15
MW-307	4/18/2024	706.22	11.6	9.38	0.26	244.1	54.8	7.35
MW-308	4/18/2024	703.51	12.1	8.88	0.29	788	-112.9	6.45
MW-309	4/15/2024	702.06	14.4	7.10	1.00	1036	-93.9	7.26
MW-309A	4/15/2024	702.27	15.0	7.02	0.45	907	-115.7	4.00
MW-310	4/15/2024	701.73	13.7	7.13	0.17	1097	-119.7	6.56
MW-310A	4/16/2024	702.05	14.7	7.17	0.35	1075	-122.9	6.11
MW-312	4/15/2024	702.65	20.4	6.72	2.90	874	-77.3	21.32

Abbreviations:

mg/L = milligrams per liter

NA = Not Analyzed

mV = millivolts

amsl = above mean sea level

NM = Not measured

Created by: RM

Date: 11/20/2023

Last revision by: EMS

Date: 4/25/2024

Checked by: RM

Date: 4/26/2024

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Appendix D

Historical Results

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-301
 Number of Sampling Dates: 23

Parameter Name	Units	12/20/2016	1/23/2017	2/23/2017	3/28/2017	4/26/2017	5/25/2017	6/28/2017	8/17/2017	10/17/2017	5/8/2018	8/6/2018	10/9/2018	4/22/2019	10/28/2019	4/27/2020	10/19/2020	4/27/2021	10/21/2021
Boron	ug/L	<50	<50	25.2	23.8	37.3	40.8	24.6	28.9	26.8	22.8	30.9	30.6	<110	<110	<73	<80	<58	<58
Calcium	mg/L	137	140	148	144	112	106	136	142	139	155	154	163	130	160	140	150	130	160
Chloride	mg/L	19.5	24.1	24.4	23.3	19.2	19.1	26.2	30.4	33.6	51.4	57.4	62	43	46	40	67	58	98
Fluoride	mg/L	0.13	0.079	0.13	0.1	0.1	<0.1	0.15	0.21	0.17	0.2	0.16	0.22	<0.23	<0.23	<0.23	<0.23	<0.28	<0.28
Field pH	Std. Units	6.78	6.8	6.57	6.9	6.41	6.41	7	6.97	7.46	7.51	6.81	7.63	6.99	6.69	7.09	6.89	6.81	6.9
Sulfate	mg/L	108	101	99.2	107	82.5	74.7	108	101	95.5	117	113	131	100	110	110	98	93	100
Total Dissolved Solids	mg/L	556	587	611	615	495	479	642	640	621	784	747	743	610	680	640	660	550	690
Antimony	ug/L	0.28	0.2	0.057	0.06	0.034	0.065	0.088	0.18	--	0.041	<0.15	<0.078	<0.53	<0.53	<0.58	<0.51	<1.1	<1.1
Arsenic	ug/L	0.7	0.69	0.55	0.54	0.55	0.5	0.62	1.8	--	0.54	1.1	0.67	<0.75	<0.75	<0.88	<0.88	<0.75	0.88
Barium	ug/L	250	257	264	264	211	205	265	291	--	282	281	261	230	270	260	270	250	270
Beryllium	ug/L	<0.08	<0.08	0.075	0.012	0.023	0.016	<0.012	0.14	--	<0.012	--	<0.089	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	<0.029	0.059	0.066	0.072	0.063	0.061	0.073	0.12	--	0.069	0.096	0.075	<0.077	0.064	0.066	0.073	0.062	0.11
Chromium	ug/L	3.9	4.3	4.5	4.4	4.7	3.4	3.9	9.9	--	4.1	5.8	5.2	3.6	5.4	4.7	4.9	4.2	5.2
Cobalt	ug/L	<0.5	<0.5	0.25	0.11	0.28	0.18	0.057	2.1	--	0.028	0.52	0.084	0.12	0.12	0.23	<0.091	0.15	<0.19
Lead	ug/L	<0.19	0.23	0.16	0.086	0.4	0.25	0.058	1.9	--	<0.033	0.66	0.17	<0.27	<0.27	0.27	<0.11	<0.21	0.37
Lithium	ug/L	14.9	13.4	11.1	12.6	8.6	6.1	8.9	16.8	--	13.6	5.4	13.3	8.5	12	11	15	13	13
Mercury	ug/L	<0.039	<0.039	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	--	<0.09	--	<0.09	<0.1	<0.1	<0.1	--	<0.15	<0.15
Molybdenum	ug/L	0.61	0.34	0.38	0.45	0.23	0.26	0.33	0.44	--	0.35	0.44	<0.57	<1.1	<1.1	<1.1	<1.1	<1.3	<1.3
Selenium	ug/L	0.97	1.2	0.98	1	0.72	0.69	1.1	1.2	--	1.3	1.3	0.95	1.1	1.7	<1	--	<0.96	1.1
Thallium	ug/L	<0.5	<0.5	<0.036	<0.036	0.12	0.043	0.081	0.3	--	<0.036	--	<0.099	<0.27	<0.27	<0.26	--	<0.26	<0.26
Total Radium	pCi/L	1.06	0.957	1.42	1.42	1.14	0.877	2.53	1.52	--	1	1.07	1.09	--	0.708	0.477	0.975	0.844	0.606
Radium-226	pCi/L	0	0.404	0.438	0.665	0.479	0.379	0.793	0.576	--	0.484	0.429	0.478	--	0.259	0.283	0.656	0.287	0.256
Radium-228	pCi/L	1.06	0.553	0.981	0.75	0.662	0.498	1.74	0.946	--	0.516	0.643	0.612	--	<0.512	<0.311	0.319	0.557	0.35
pH at 25 Degrees C	Std. Units	7	8	7.2	6.8	6.8	7.1	7.3	7.2	7.4	7	7.1	7.1	6.9	6.9	6.9	7	6.9	7
Field Oxidation Potential	mV	91.3	54.7	175.5	120.8	141.5	155	143.1	90.3	191	32.7	237	60	38.2	-7.3	208.3	67.9	168.4	180.3
Field Specific Conductance	umhos/cm	1370	895	918	1350	1400	694	901	1326	949	1060	1105	1052	987	1036	954	983	931	1205
Field Temperature	deg C	11.7	11.2	10.7	10.2	9.9	10.45	11.1	12.2	12.6	10.5	12.3	14.9	10.53	11.34	11.1	11.8	10.4	12.3
Groundwater Elevation	feet	716.05	716.05	715.87	715.8	716.7	717.08	716.1	715.35	714.36	713.95	714.3	715.74	716.44	715.86	715.8	714.77	715.84	713.44
Oxygen, Dissolved	mg/L	2.54	2.75	2.42	3.22	3.88	4.19	2.46	3.21	2.4	38.3	3.6	4.03	6.68	4.63	3.5	3.69	3.76	4.67
Turbidity	NTU	3.57	6.66	4.57	11.36	1.61	0.78	0.61	95.83	124.2	0.72	17.05	9.97	6.92	2.8	6.52	6.01	2.04	9.7
Collected By		--	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	470	340	420
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<3.8	<2.3	<4.6
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	470	340	420
Calcium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	150000	--	--
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	73	82	52
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	44000	41000	48000
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<4	<4.4	<4.4
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<50	<36	<36
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<4	<4.4	<4.4
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	930	1300	930
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14000	14000	15000

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-301
 Number of Sampling Dates: 23

Parameter Name	Units	4/25/2022	10/12/2022	4/20/2023	11/6/2023	4/18/2024
Boron	ug/L	<58	<58	<380	<76	<76
Calcium	mg/L	180	170	200	180	180
Chloride	mg/L	85	110	100	100	100
Fluoride	mg/L	<0.22	<0.22	<0.38	<0.38	<0.38
Field pH	Std. Units	6.92	7.03	6.92	6.68	6.69
Sulfate	mg/L	89	100	100	98	99
Total Dissolved Solids	mg/L	680	730	700	730	760
Antimony	ug/L	<0.69	<0.69	<5	1.2	<1
Arsenic	ug/L	0.8	<0.75	<2.7	1.5	0.87
Barium	ug/L	280	290	270	270	270
Beryllium	ug/L	<0.27	<0.27	<1.7	<0.33	<0.33
Cadmium	ug/L	0.072	0.068	<0.5	0.33	<0.1
Chromium	ug/L	5.3	4.8	<5.5	5.5	5.2
Cobalt	ug/L	<0.19	<0.19	<0.85	0.25	<0.17
Lead	ug/L	<0.24	<0.24	<1.2	0.52	<0.26
Lithium	ug/L	17	14	16	16	15
Mercury	ug/L	<0.11	<0.11	<0.14	<0.14	<0.11
Molybdenum	ug/L	<1.2	<1.2	<4.6	2.5	<1.3
Selenium	ug/L	2.9	1.3	<7	3.1	1.6
Thallium	ug/L	0.27	<0.26	<1.3	<0.26	0.57
Total Radium	pCi/L	0.845	0.977	0.391	1.05	1.07
Radium-226	pCi/L	0.379	0.365	0.252	0.389	0.357
Radium-228	pCi/L	0.466	0.612	0.14	0.657	0.71
pH at 25 Degrees C	Std. Units	7.1	7	7	7.5	7
Field Oxidation Potential	mV	120	-41.3	110.7	118.3	159.3
Field Specific Conductance	umhos/cm	1155	1184	1231	1282	1296
Field Temperature	deg C	10.4	13	10.9	13.7	10.9
Groundwater Elevation	feet	714.5	722.08	714.1	712.29	712.62
Oxygen, Dissolved	mg/L	4.14	4.18	4.66	4.21	4.92
Turbidity	NTU	20.6	3.18	0.02	1.91	7.15
Collected By		--	--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	430	490	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	430	490	--	--	--
Calcium, total	ug/L	--	180000	--	--	--
Iron, total	ug/L	<36	<36	<180	<36	<36
Magnesium, total	ug/L	52000	54000	--	--	--
Manganese, total	ug/L	<3.6	<3.6	--	--	--
Iron, dissolved	ug/L	<36	<36	--	--	--
Manganese, dissolved	ug/L	<3.6	5.5	--	--	--
Potassium, total	ug/L	930	1100	--	--	--
Sodium, total	ug/L	17000	17000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-301A
 Number of Sampling Dates: 9

Parameter Name	Units	9/15/2020	10/21/2020	4/28/2021	10/22/2021	4/29/2022	10/13/2022	4/20/2023	11/7/2023	4/17/2024
Boron	ug/L	<80	<80	71	61	74	68	<380	85	<76
Calcium	mg/L	72	76	68	59	68	69	73	74	78
Chloride	mg/L	4.1	2.6	<2.2	<2.2	<2.3	2.7	4.1	6.7	4.4
Fluoride	mg/L	<0.23	<0.23	<0.28	<0.28	<0.22	<0.22	<0.38	<0.38	<0.38
Field pH	Std. Units	7.5	6.85	7.17	7.15	6.94	7	6.89	6.67	6.96
Sulfate	mg/L	6.4	7.8	5.3	7	4.8	4	3.6	6.4	<2.1
Total Dissolved Solids	mg/L	440	310	250	200	230	250	260	320	290
Antimony	ug/L	<0.51	<0.51	<1.1	<1.1	<0.69	<0.69	<5	<1	<1
Arsenic	ug/L	3.7	1.9	0.87	1.4	3.3	1.3	<2.7	4.7	2.1
Barium	ug/L	290	190	160	130	150	140	120	140	120
Beryllium	ug/L	0.98	<0.27	<0.27	<0.27	<0.27	<0.27	<1.7	<0.33	<0.33
Cadmium	ug/L	0.49	0.054	<0.051	0.075	<0.055	<0.055	<0.5	<0.1	<0.1
Chromium	ug/L	5.1	1.1	<1.1	<1.1	<1.1	<1.1	<5.5	<1.1	<1.2
Cobalt	ug/L	9.4	2	1.2	0.96	0.91	0.76	<0.85	0.75	0.59
Lead	ug/L	5.6	1	0.21	0.49	<0.24	0.41	<1.2	<0.24	<0.26
Lithium	ug/L	4.2	4.1	<2.5	<2.5	<2.5	<2.5	<13	<2.5	<2.5
Mercury	ug/L	<0.1	--	<0.15	<0.15	<0.11	<0.11	<0.14	<0.14	<0.11
Molybdenum	ug/L	2.1	3.1	3.1	3.1	2.5	3.4	<4.6	5.6	2.8
Selenium	ug/L	<1	--	<0.96	<0.96	<0.96	<0.96	<7	<1.4	<1.4
Thallium	ug/L	<0.26	--	<0.26	<0.26	<0.26	<0.26	<1.3	<0.26	<0.57
Total Radium	pCi/L	8.3	1.47	0.823	1.27	0.698	0.876	1.85	--	1.52
Radium-226	pCi/L	3.93	0.441	0.35	0.323	0.283	0.5	0.497	--	0.294
Radium-228	pCi/L	4.37	1.03	0.473	0.948	0.414	0.376	1.35	--	1.22
pH at 25 Degrees C	Std. Units	6.9	7	7.1	7.2	7	6.9	7.1	7.7	7
Field Oxidation Potential	mV	131.6	-92.6	11.7	37.5	116	41.8	177.2	79.8	7.9
Field Specific Conductance	umhos/cm	470.5	551.4	930	537.9	583.3	537.2	568.2	668	594
Field Temperature	deg C	16	11.6	9.7	13.3	12.9	12.7	10.1	12.5	13.1
Groundwater Elevation	feet	--	--	716.76	707.07	707.77	706.76	708.02	681.93	706.69
Oxygen, Dissolved	mg/L	7.77	1.77	1.68	2.39	--	2.19	3.84	2.95	4.21
Turbidity	NTU	284.7	--	2.04	32.2	20.3	4.27	--	9.84	19.63
Bicarbonate Alkalinity as CaCO3	mg/L	--	330	310	320	290	300	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	--	<3.8	<4.6	<4.6	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	--	330	310	320	290	300	--	--	--
Calcium, total	ug/L	--	75000	--	--	--	76000	--	--	--
Iron, total	ug/L	--	1000	200	790	2500	6700	1900	6700	3100
Magnesium, total	ug/L	--	23000	21000	16000	19000	23000	--	--	--
Manganese, total	ug/L	--	700	300	420	380	460	--	--	--
Iron, dissolved	ug/L	--	97	130	<36	2300	4600	--	--	--
Manganese, dissolved	ug/L	--	690	290	320	380	380	--	--	--
Potassium, total	ug/L	--	2100	1700	1300	1300	1600	--	--	--
Sodium, total	ug/L	--	14000	12000	9400	11000	12000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-302
Number of Sampling Dates: 23

Parameter Name	Units	12/20/2016	1/23/2017	2/23/2017	3/28/2017	4/26/2017	5/25/2017	6/28/2017	8/17/2017	10/17/2017	5/8/2018	8/6/2018	10/9/2018	4/22/2019	10/28/2019	4/27/2020	10/19/2020	4/27/2021	10/21/2021
Boron	ug/L	<50	<50	30.1	33.7	36.5	51.6	51.8	45.1	36.5	22.4	38.1	65	<110	<110	<73	<80	<58	<58
Calcium	mg/L	107	106	95	95	102	41.4	66.7	93.1	109	125	106	63.3	67	81	86	110	76	130
Chloride	mg/L	22.6	21.4	19.2	21.6	19.9	8.1	9.6	20.7	36.4	69.4	33.6	20.2	19	23	28	49	23	82
Fluoride	mg/L	0.16	0.079	0.1	<0.1	0.12	<0.1	0.15	0.2	0.19	0.23	0.17	0.21	<0.23	<0.23	<0.23	<0.23	<0.28	<0.28
Field pH	Std. Units	6.36	6.72	6.38	6.66	6.44	6.27	6.6	6.23	7.71	6.98	6.55	6.5	6.64	6.37	6.27	6.67	6.96	7.15
Sulfate	mg/L	77.7	75.6	69.7	72.9	66.4	28.9	49.5	70	82.9	69.6	72.2	55.1	56	72	66	78	57	89
Total Dissolved Solids	mg/L	465	463	416	432	445	203	341	432	505	718	503	314	320	420	400	480	330	500
Antimony	ug/L	0.32	0.14	0.049	0.067	0.028	0.077	0.067	0.11	--	0.048	0.17	0.092	<0.53	<0.53	<0.58	<0.51	<1.1	<1.1
Arsenic	ug/L	2.3	1.7	1.6	2.7	2.4	3.2	1.6	1.9	--	0.79	9	4.5	2.1	7	4.4	2	3.4	0.9
Barium	ug/L	200	194	166	187	176	109	133	175	--	213	254	141	130	220	210	200	160	220
Beryllium	ug/L	<0.08	<0.08	0.078	0.023	<0.012	0.019	<0.012	<0.012	--	<0.012	--	<0.089	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	<0.029	<0.029	0.04	0.036	0.042	0.021	0.035	0.03	--	0.041	0.084	<0.033	<0.077	0.053	0.098	0.062	0.065	0.08
Chromium	ug/L	3.3	2.1	1.7	1.4	1.5	0.8	0.91	1.5	--	1.2	4.4	0.78	<0.98	2.1	2.8	2.2	1.4	2
Cobalt	ug/L	2.7	2.2	3	4.7	2.1	2.1	1.2	1.4	--	3.2	1.6	3.2	2.1	1.2	0.56	0.33	0.37	<0.19
Lead	ug/L	0.55	<0.19	0.14	0.2	0.083	0.16	0.034	<0.033	--	0.035	1.2	0.13	<0.27	<0.27	<0.27	<0.11	<0.21	<0.21
Lithium	ug/L	8.7	7.7	3.4	5.3	4.9	<2.9	<2.9	11.9	--	5.4	<4.6	4.6	4.7	5.3	3.8	8.2	6.3	6.9
Mercury	ug/L	<0.039	<0.039	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	--	<0.09	--	<0.09	<0.1	<0.1	<0.1	--	<0.15	<0.15
Molybdenum	ug/L	0.76	0.43	0.45	0.38	0.52	0.28	0.38	0.38	--	0.99	0.78	0.67	<1.1	<1.1	<1.1	<1.1	<1.3	<1.3
Selenium	ug/L	0.55	0.36	0.37	0.43	0.44	0.28	0.44	0.46	--	0.54	1.4	0.37	<1	1.1	<1	--	0.96	<0.96
Thallium	ug/L	<0.5	<0.5	0.05	0.044	0.058	<0.036	<0.036	0.18	--	0.039	--	<0.099	<0.27	<0.27	<0.26	--	<0.26	<0.26
Total Radium	pCi/L	0.597	0.138	0.655	0.447	0.713	1.3	1.12	1.21	--	0.699	3.61	1.09	--	0.562	0.392	1.22	1.31	0.77
Radium-226	pCi/L	0	0.138	0.267	0.239	0.311	0.49	0.265	0.211	--	0.507	2.15	0.54	--	0.228	0.113	0.54	0.778	0.195
Radium-228	pCi/L	0.597	-0.321	0.388	0.208	0.402	0.809	0.852	0.997	--	0.192	1.46	0.554	--	<0.385	<0.307	0.684	0.533	0.575
pH at 25 Degrees C	Std. Units	6.8	7.2	6.6	6.4	6.8	6.9	7.3	6.6	6.8	6.9	6.9	7	6.8	6.6	6.7	6.8	6.8	6.7
Field Oxidation Potential	mV	-9.4	-12.1	40.7	-44.7	54.5	29.2	53.3	90.2	181	-10.9	61	-32	-0.2	-5.8	30	21.5	24.1	122.3
Field Specific Conductance	umhos/cm	1182	712.2	624.9	1053	1283	317	481.6	876	824	708.6	786	515	533	587	587.9	761	889	969
Field Temperature	deg C	10.6	7.8	6.5	6.4	8.1	10.59	12.8	15.3	15	7.5	16	16.7	7.86	13.74	8.1	13.6	9	14.1
Groundwater Elevation	feet	715.39	715.77	715.55	715.45	716.07	716.27	715.22	714.47	713.92	713.53	713.83	716.72	715.69	715.27	715.17	713.75	715.36	713.09
Oxygen, Dissolved	mg/L	2.57	2.78	1.73	2.22	2.43	0.9	1.23	1.69	1.4	3.1	1.7	0.5	3.34	1.8	1.39	2.22	0.12	3.47
Turbidity	NTU	19.02	0.95	0.8	4.89	0.82	1.52	0.5	0.61	4.75	1.75	8.95	10.52	90.3	6.92	27.5	8.15	2.7	15.3
Collected By		--	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	310	210	340
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<3.8	<2.3	<4.6
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	310	210	340
Calcium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	110000	--	--
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2200	3400	400
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	33000	24000	39000
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	89	82	5
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	430	500	<36
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	77	81	<4.4
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	640	480	690
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16000	12000	16000

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-302
 Number of Sampling Dates: 23

Parameter Name	Units	4/25/2022	10/12/2022	4/20/2023	11/7/2023	4/17/2024
Boron	ug/L	100	<58	<380	<76	<76
Calcium	mg/L	65	140	170	170	190
Chloride	mg/L	7.2	92	120	150	180
Fluoride	mg/L	<0.22	<0.22	<0.38	<0.38	<0.38
Field pH	Std. Units	5.35	6.63	6.8	6.6	6.64
Sulfate	mg/L	140	89	80	85	91
Total Dissolved Solids	mg/L	340	620	590	740	830
Antimony	ug/L	<0.69	<0.69	<5	<1	<1
Arsenic	ug/L	1.2	0.76	<2.7	0.86	1.1
Barium	ug/L	110	210	170	230	250
Beryllium	ug/L	<0.27	<0.27	<1.7	<0.33	<0.33
Cadmium	ug/L	0.38	0.072	<0.5	<0.1	<0.1
Chromium	ug/L	<1.1	2	<5.5	1.9	1.3
Cobalt	ug/L	31	0.21	1.5	<0.17	0.38
Lead	ug/L	0.26	<0.24	<1.2	<0.24	<0.26
Lithium	ug/L	5	7.8	<13	9.5	9.3
Mercury	ug/L	<0.11	<0.11	<0.14	<0.14	<0.11
Molybdenum	ug/L	<1.2	<1.2	<4.6	1.1	<1.3
Selenium	ug/L	3.7	1.2	<7	<1.4	1.9
Thallium	ug/L	0.37	<0.26	<1.3	0.26	<0.57
Total Radium	pCi/L	0.489	0.681	0.94	0.746	1
Radium-226	pCi/L	0.145	0.378	0.0892	0.323	0.259
Radium-228	pCi/L	0.344	0.302	0.85	0.423	0.745
pH at 25 Degrees C	Std. Units	5.5	6.9	7.1	7.6	7.2
Field Oxidation Potential	mV	160.1	48.3	113.3	83.5	101.3
Field Specific Conductance	umhos/cm	534.2	1051	1095	1447	1493
Field Temperature	deg C	6.8	14.7	7.2	13.4	9.3
Groundwater Elevation	feet	715.27	712.56	713.9	711.86	712.69
Oxygen, Dissolved	mg/L	0.25	2.53	2.49	4.75	2.07
Turbidity	NTU	24.2	4.35	0.02	7.08	13.89
Collected By		--	--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	88	360	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	88	360	--	--	--
Calcium, total	ug/L	--	150000	--	--	--
Iron, total	ug/L	810	170	1600	96	430
Magnesium, total	ug/L	13000	47000	--	--	--
Manganese, total	ug/L	4400	20	--	--	--
Iron, dissolved	ug/L	140	<36	--	--	--
Manganese, dissolved	ug/L	3800	18	--	--	--
Potassium, total	ug/L	3900	820	--	--	--
Sodium, total	ug/L	18000	21000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-303

Number of Sampling Dates: 23

Parameter Name	Units	12/20/2016	1/23/2017	2/23/2017	3/28/2017	4/26/2017	5/25/2017	6/28/2017	8/17/2017	10/17/2017	5/8/2018	8/6/2018	10/9/2018	4/22/2019	10/29/2019	4/27/2020	10/20/2020	4/27/2021	10/21/2021	4/26/2022
Boron	ug/L	767	773	851	852	705	644	603	650	598	772	753	932	800	940	790	1300	920	1100	850
Calcium	mg/L	68.7	71.4	85.4	82.7	71.5	67.8	63.5	66.2	59.9	102	85.4	99.9	130	120	110	110	89	110	110
Chloride	mg/L	17.6	18.7	19.6	18.9	20.2	21	19.7	19.4	19.9	26.1	20.2	23.9	33	20	18	13	12	13	11
Fluoride	mg/L	0.55	0.55	0.44	0.48	0.54	0.45	0.53	0.7	0.8	0.5	0.6	0.71	0.35	0.51	0.69	0.67	0.42	0.4	<0.22
Field pH	Std. Units	7.37	7.55	7.09	7.57	7.18	7.11	7.2	7.22	7.94	7.23	7.2	7.13	7.31	7.12	6.78	7.08	6.96	7.16	7.07
Sulfate	mg/L	72.6	72.7	82.4	80.4	65.1	56	76.2	83.5	60	146	83.3	74.7	88	95	120	130	110	130	100
Total Dissolved Solids	mg/L	346	375	413	414	372	367	365	397	329	580	475	515	650	580	630	580	440	480	490
Antimony	ug/L	2	1.7	1.2	1	1	0.86	0.84	1.6	--	0.61	1.1	0.72	<0.53	<0.53	<0.58	<0.51	<1.1	<1.1	<0.69
Arsenic	ug/L	20.8	23.1	23.4	25	22.9	23.6	24.2	30	--	26.9	35.1	44.5	26	52	48	56	39	46	36
Barium	ug/L	68.8	66	75.4	74.6	67.6	66.6	65.8	62.5	--	87.5	82.7	94.3	150	120	130	120	90	110	96
Beryllium	ug/L	<0.08	<0.08	0.072	0.013	<0.012	<0.012	<0.012	<0.012	--	<0.012	--	<0.089	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	<0.029	<0.029	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	--	<0.018	0.24	<0.033	<0.077	<0.039	0.066	<0.049	<0.051	<0.051	<0.055
Chromium	ug/L	1.1	0.6	0.28	<0.054	0.14	0.21	0.18	0.29	--	0.19	0.62	0.55	<0.98	<0.98	<1.1	<1.1	<1.1	<1.1	<1.1
Cobalt	ug/L	<0.5	<0.5	0.4	0.3	0.3	0.3	0.35	0.3	--	0.31	0.66	0.43	1.3	0.87	1.1	0.43	0.48	0.43	0.42
Lead	ug/L	0.36	<0.19	0.037	<0.033	0.095	0.12	0.12	0.057	--	0.078	0.48	0.31	0.3	0.43	1.7	0.18	<0.21	<0.21	<0.24
Lithium	ug/L	19	20.5	17.7	19.8	14.6	15.4	13.1	18.8	--	19	15.4	19.9	17	17	14	21	16	17	18
Mercury	ug/L	<0.039	<0.039	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	--	<0.09	--	<0.09	<0.1	<0.1	<0.1	--	<0.15	<0.15	<0.11
Molybdenum	ug/L	37.8	30.5	26.7	26.7	23.2	20.6	25.6	35.2	--	23.1	20.7	21.7	12	20	8.4	17	12	14	11
Selenium	ug/L	<0.18	<0.18	<0.086	0.14	0.15	0.11	0.11	0.33	--	0.24	0.46	0.21	<1	<1	<1	--	<0.96	<0.96	1.3
Thallium	ug/L	<0.5	<0.5	<0.036	<0.036	<0.036	0.089	<0.036	0.18	--	<0.036	--	<0.099	<0.27	<0.27	<0.26	--	<0.26	<0.26	<0.26
Total Radium	pCi/L	0.925	0.647	0.375	0.53	0.71	0.977	1.55	0.995	--	1.26	0.847	1.08	--	<0.522	1.41	0.56	0.519	0.963	0.276
Radium-226	pCi/L	0.545	0.535	0	0.192	0.0625	0.112	0.383	0.537	--	0.242	-0.126	0.62	--	0.164	<0.324	0.508	0.0943	0.231	0.16
Radium-228	pCi/L	0.38	0.112	0.375	0.338	0.647	0.865	1.17	0.458	--	1.02	0.847	0.457	--	<0.522	1.11	0.0517	0.425	0.732	0.115
pH at 25 Degrees C	Std. Units	7	8	7.4	7.2	7.3	7.4	7.8	7.5	7.5	7.4	7.4	7.5	7.4	7.2	7.2	7.2	7.3	7.2	7.3
Field Oxidation Potential	mV	-58.2	-58.1	4.1	-118.3	-6.4	-12.2	192.3	79.8	-85	-92.8	-126	-87	-110.3	-139.1	-143.2	-147.8	11.7	-89.8	-70.1
Field Specific Conductance	umhos/cm	916	602.3	663.2	1024	1107	549	941	834	564	836	764	881	1084	981	922	853	734	911	756
Field Temperature	deg C	13	11.7	10.9	11.3	11.7	13.26	13.9	15.1	16.4	9.5	16	17.4	9.59	14.47	9.3	15.1	9	16.2	8.7
Groundwater Elevation	feet	703.36	704.64	704.46	703.81	705.07	705.37	703.96	702.83	702.95	705.36	702.62	707.86	703.83	704.1	703.1	702.16	702.75	701.84	703.85
Oxygen, Dissolved	mg/L	0.18	0.17	0.13	0.12	0.13	0.26	0.27	0.05	0	1.7	0.1	0.2	1.14	0.35	0.14	0.08	0.19	0.24	0.1
Turbidity	NTU	9.52	0.5	0.3	0.01	0.19	0.34	2.72	0.11	3.58	1.08	4.99	17.2	18.4	3.02	25.9	0.8	2.1	10.4	9.97
Collected By		--	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	370	290	430	360
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<3.8	<2.3	<4.6	<4.6
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	370	290	430	360
Calcium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100000	--	--	--
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3400	3100	3600	3500
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35000	31000	35000	35000
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1400	1400	1500	1600
Arsenic, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	53	39	44	32
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3100	3100	2900	3000
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1400	1400	1400	1400
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4800	3900	4700	4100
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	34000	30000	34000	34000

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-303

Number of Sampling Dates: 23

Parameter Name	Units	10/12/2022	4/19/2023	11/7/2023	4/15/2024
Boron	ug/L	1100	1000	1200	1000
Calcium	mg/L	120	130	110	130
Chloride	mg/L	13	18	13	22
Fluoride	mg/L	0.3	0.49	0.39	<0.38
Field pH	Std. Units	7.08	7.2	6.77	6.9
Sulfate	mg/L	160	120	91	140
Total Dissolved Solids	mg/L	660	520	550	620
Antimony	ug/L	<0.69	<5	<1	<1
Arsenic	ug/L	42	34	48	32
Barium	ug/L	130	100	110	120
Beryllium	ug/L	<0.27	<1.7	<0.33	<0.33
Cadmium	ug/L	<0.055	<0.5	<0.1	<0.1
Chromium	ug/L	<1.1	<5.5	<1.1	<1.2
Cobalt	ug/L	0.43	<0.85	0.3	0.3
Lead	ug/L	0.58	<1.2	<0.24	<0.26
Lithium	ug/L	18	16	19	18
Mercury	ug/L	<0.11	<0.14	<0.14	<0.11
Molybdenum	ug/L	15	12	13	10
Selenium	ug/L	<0.96	<7	<1.4	<1.4
Thallium	ug/L	<0.26	<1.3	<0.26	<0.57
Total Radium	pCi/L	0.783	0.375	0.624	1.57
Radium-226	pCi/L	0.514	0.0477	0.186	0.342
Radium-228	pCi/L	0.269	0.327	0.438	1.23
pH at 25 Degrees C	Std. Units	7.2	7.3	7.7	7.2
Field Oxidation Potential	mV	-32	-76.1	-6.7	-92.7
Field Specific Conductance	umhos/cm	1047	940	1026	1067
Field Temperature	deg C	15.6	8.1	15.4	10.8
Groundwater Elevation	feet	701.93	702.37	701.55	702.14
Oxygen, Dissolved	mg/L	0.06	0.13	0.4	0.15
Turbidity	NTU	1.15	0.99	7.08	13.35
Collected By		--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	410	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	410	--	--	--
Calcium, total	ug/L	140000	--	--	--
Iron, total	ug/L	3200	2400	3000	3200
Magnesium, total	ug/L	44000	--	--	--
Manganese, total	ug/L	1700	--	--	--
Arsenic, dissolved	ug/L	48	--	--	--
Iron, dissolved	ug/L	2800	--	--	--
Manganese, dissolved	ug/L	1700	--	--	--
Potassium, total	ug/L	5500	--	--	--
Sodium, total	ug/L	40000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-304

Number of Sampling Dates: 24

Parameter Name	Units	12/21/2016	1/24/2017	2/23/2017	3/28/2017	4/26/2017	5/25/2017	6/28/2017	8/17/2017	10/17/2017	5/8/2018	8/6/2018	10/9/2018	3/11/2019	4/22/2019	10/29/2019	4/27/2020	10/20/2020	4/27/2021	10/21/2021
Boron	ug/L	372	323	277	224	218	212	310	412	386	384	841	661	--	770	610	770	860	790	810
Calcium	mg/L	71	68.2	73.6	63.6	66.6	63.5	62.9	55.4	49.3	73.5	93	89	--	130	96	110	98	120	130
Chloride	mg/L	20.2	20.6	21.4	23.7	21.7	22.1	20.1	22.9	23.4	24.6	36.6	33.6	--	27	20	15	12	12	15
Fluoride	mg/L	0.84	0.8	0.72	0.78	0.87	0.79	0.86	0.84	0.78	0.58	0.55	0.61	--	0.41	0.51	0.67	0.56	0.41	0.53
Field pH	Std. Units	7.09	7.25	7.01	7.58	7.23	7.23	7.4	7.34	8.16	7.31	6.92	7.5	5.82	7.08	6.9	6.84	6.84	6.9	7.07
Sulfate	mg/L	93.8	96.1	107	109	111	115	132	85.9	55.1	77.3	193	167	--	140	110	110	110	140	220
Total Dissolved Solids	mg/L	396	399	402	411	406	418	468	359	298	423	630	541	--	680	490	590	500	610	620
Antimony	ug/L	2.4	2.1	1.9	1.9	1.9	2.1	2.2	2.6	--	1.3	1.3	1.4	--	1.2	1.5	1	1	<1.1	1.1
Arsenic	ug/L	11.4	11.7	12	10.1	9.4	16.6	10.2	8.6	--	15	12.3	14.4	12.9	11	14	11	14	13	16
Barium	ug/L	65.3	59.8	56.4	51.6	46.6	95	51.1	48.7	--	95	121	110	--	140	110	120	110	120	120
Beryllium	ug/L	<0.08	<0.08	0.064	<0.012	<0.012	<0.012	<0.012	<0.012	--	<0.012	--	<0.089	--	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	<0.029	<0.029	<0.018	<0.018	<0.018	0.018	0.023	<0.018	--	<0.018	<0.07	<0.033	--	<0.077	0.074	<0.039	<0.049	<0.051	<0.051
Chromium	ug/L	0.58	0.5	0.41	<0.054	0.99	0.2	0.16	0.32	--	0.15	0.34	0.31	--	<0.98	<0.98	<1.1	<1.1	<1.1	<1.1
Cobalt	ug/L	0.75	0.72	0.79	0.83	0.63	0.74	0.83	0.55	--	0.57	1.1	0.75	--	1.4	1.2	1.1	1.1	0.91	0.9
Lead	ug/L	<0.19	<0.19	0.11	0.043	0.061	0.1	0.042	0.034	--	0.045	0.24	<0.13	--	<0.27	0.27	<0.27	<0.11	<0.21	0.24
Lithium	ug/L	12.1	12	10.6	8.2	9.6	8.6	9.9	14.4	--	10.8	6.9	13.4	--	17	13	11	17	14	14
Mercury	ug/L	<0.039	<0.039	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	--	<0.09	--	<0.09	--	<0.1	<0.1	<0.1	--	<0.15	<0.15
Molybdenum	ug/L	33.5	29.3	27.5	28.4	28.3	28.5	32.6	33.8	--	19.8	25.4	27.6	--	23	31	26	28	25	31
Selenium	ug/L	1.1	1	1.4	1.2	1.5	1.8	1.7	0.85	--	0.12	0.23	0.16	--	<1	<1	<1	--	<0.96	<0.96
Thallium	ug/L	<0.5	<0.5	<0.036	<0.036	0.12	0.037	0.068	<0.036	--	<0.036	--	<0.099	--	<0.27	<0.27	<0.26	--	<0.26	<0.26
Total Radium	pCi/L	1.74	0.439	0.162	0.311	0.632	0.964	1.15	0.384	--	1.26	0.768	1.31	--	--	<0.513	0.707	0.958	0.726	0.407
Radium-226	pCi/L	0.522	0.131	0.162	0.261	0.497	0.412	0.0708	0.355	--	0.589	0.271	0.175	--	--	<0.141	0.232	0.152	0.219	0.523
Radium-228	pCi/L	1.22	0.308	-0.0742	0.0497	0.135	0.552	1.08	0.0285	--	0.666	0.497	1.13	--	--	<0.513	0.475	0.807	0.507	-0.116
pH at 25 Degrees C	Std. Units	6.9	7.9	7.4	7.2	7.3	7.6	8	7.3	7.6	7.2	7.2	7.2	--	7.2	7	7	7	7.2	7.1
Field Oxidation Potential	mV	-72.9	-66.6	-80	-111.7	-15.1	-17.7	79.1	-40.9	-123	-151	-89	-18.1	-84.2	-62	-74.3	-85	-99.3	-15.8	-60.7
Field Specific Conductance	umhos/cm	993	622.8	621.3	1028	1144	602	1124	856	532	514	934	812	537	1125	816	841	771	968	1053
Field Temperature	deg C	16.1	12.6	10.8	9.9	10.3	11.9	14.4	18.7	20.6	11.8	18.1	18.8	8.8	9.64	15.67	10.1	15.7	9.1	16.1
Groundwater Elevation	feet	703.42	704.56	704.65	703.99	705.08	705.37	704.16	702.96	703.17	705.54	702.62	707.81	704.24	703.93	704.15	702.84	702.13	702.8	701.8
Oxygen, Dissolved	mg/L	0.07	0.12	0.14	0.15	0.13	0.2	0.23	0.18	0	0.1	0.2	0.21	0.86	0.93	0.28	0.14	0.08	0.21	0.25
Turbidity	NTU	3.65	0.91	0.43	1.13	2.23	1.4	1.76	3.9	12.65	3.98	10.26	9.07	8.73	4.99	2.96	1.63	0.02	1.2	8.5
Collected By		--	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	350	380	380
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<3.8	<4.6	<4.6
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	350	380	380
Calcium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	92000	--	--
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2000	3100	1600
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	29000	40000	39000
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1200	1400	1300
Arsenic, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14	13	15
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2000	3100	1500
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1200	1400	1200
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5200	5000	5600
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40000	50000	39000

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-304

Number of Sampling Dates: 24

Parameter Name	Units	4/26/2022	10/12/2022	4/19/2023	11/7/2023	4/15/2024
Boron	ug/L	740	960	770	1100	1200
Calcium	mg/L	140	130	130	130	150
Chloride	mg/L	10	12	9.5	11	13
Fluoride	mg/L	<0.22	0.34	0.51	0.46	0.41
Field pH	Std. Units	7	7.04	7	6.83	6.87
Sulfate	mg/L	160	220	220	230	270
Total Dissolved Solids	mg/L	660	710	610	710	760
Antimony	ug/L	1.4	1.1	<5	<1	<1
Arsenic	ug/L	14	19	14	21	17
Barium	ug/L	120	120	100	110	120
Beryllium	ug/L	<0.27	<0.27	<1.7	<0.33	<0.33
Cadmium	ug/L	<0.055	<0.055	<0.5	<0.1	<0.1
Chromium	ug/L	<1.1	<1.1	<5.5	<1.1	<1.2
Cobalt	ug/L	0.73	0.65	0.89	0.61	0.53
Lead	ug/L	<0.24	<0.24	<1.2	<0.24	<0.26
Lithium	ug/L	16	15	15	17	16
Mercury	ug/L	<0.11	<0.11	<0.14	<0.14	<0.11
Molybdenum	ug/L	24	27	20	37	36
Selenium	ug/L	1	<0.96	<7	<1.4	<1.4
Thallium	ug/L	<0.26	<0.26	<1.3	<0.26	<0.57
Total Radium	pCi/L	0.439	0.811	0.3	0.728	0.515
Radium-226	pCi/L	0.239	0.265	0.0991	0.282	0.137
Radium-228	pCi/L	0.2	0.545	0.201	0.446	0.378
pH at 25 Degrees C	Std. Units	7.2	7.2	7.2	7.8	7.3
Field Oxidation Potential	mV	-54	7.5	-40.7	17	-68.1
Field Specific Conductance	umhos/cm	954	1081	1014	1196	1204
Field Temperature	deg C	8.3	15.6	9.2	14.6	10.4
Groundwater Elevation	feet	703.82	701.86	702.43	701.54	702.08
Oxygen, Dissolved	mg/L	0.1	0.05	0.11	0.3	2.33
Turbidity	NTU	21.8	1.65	0.02	6.37	14.46
Collected By		--	--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	430	390	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	430	390	--	--	--
Calcium, total	ug/L	--	140000	--	--	--
Iron, total	ug/L	3600	1200	2300	1300	3700
Magnesium, total	ug/L	47000	45000	--	--	--
Manganese, total	ug/L	1800	1300	--	--	--
Arsenic, dissolved	ug/L	13	20	--	--	--
Iron, dissolved	ug/L	2900	1100	--	--	--
Manganese, dissolved	ug/L	1500	1300	--	--	--
Potassium, total	ug/L	5300	6000	--	--	--
Sodium, total	ug/L	49000	46000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-305

Number of Sampling Dates: 24

Parameter Name	Units	12/21/2016	1/24/2017	2/23/2017	3/28/2017	4/27/2017	5/25/2017	6/28/2017	8/17/2017	10/17/2017	5/8/2018	8/6/2018	10/9/2018	3/11/2019	4/22/2019	10/29/2019	4/27/2020	10/20/2020	4/27/2021	10/20/2021
Boron	ug/L	363	353	316	274	229	243	342	537	462	437	589	634	--	790	890	1000	1300	1100	1100
Calcium	mg/L	65.1	67.8	71.3	58.4	65	68.5	61.4	58.7	51.4	61	71.1	82.7	--	94	130	120	130	120	140
Chloride	mg/L	18	18.6	19.2	21	19.5	19.8	19.3	18	18.6	18.9	18.9	18.3	--	17	18	16	15	13	21
Fluoride	mg/L	0.63	0.56	0.53	0.55	0.66	0.57	0.68	0.65	0.63	0.61	0.62	0.61	--	0.45	0.31	0.51	0.37	<0.28	<0.28
Field pH	Std. Units	7.32	7.51	7.13	7.65	7.42	7.42	7.49	7.58	8.08	7.65	7.12	7.05	6.92	7.12	6.89	6.82	7.07	7.07	7.21
Sulfate	mg/L	72.1	79.8	79	88.7	104	104	112	59.4	44	61.9	98.2	98.9	--	150	210	240	230	260	330
Total Dissolved Solids	mg/L	370	359	389	383	383	400	416	347	307	348	434	424	--	520	650	710	660	650	730
Antimony	ug/L	2.7	2.7	2	2	2.1	2.5	2.4	2.6	--	1.6	1.6	1.1	--	0.92	1	0.74	0.79	<1.1	<1.1
Arsenic	ug/L	15.4	15.4	16	15.2	13.9	14.7	14.9	16.7	--	14.3	13	6.6	11.6	5.9	7.3	6.2	9.8	7.9	12
Barium	ug/L	71.4	67.4	65.3	60.1	56.5	60.7	61.9	59	--	63.7	90.3	95.6	--	110	130	110	140	120	150
Beryllium	ug/L	<0.08	<0.08	0.064	0.016	<0.012	<0.012	<0.012	<0.012	--	<0.012	--	<0.089	--	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	<0.029	<0.029	<0.018	<0.018	0.034	0.038	0.03	0.024	--	0.032	<0.07	0.04	--	0.081	0.053	0.072	<0.049	0.064	0.067
Chromium	ug/L	0.55	0.49	0.44	<0.054	1.9	0.2	0.2	0.5	--	0.18	0.28	0.14	--	<0.98	<0.98	<1.1	<1.1	<1.1	<1.1
Cobalt	ug/L	<0.5	<0.5	0.56	0.6	0.43	0.34	0.53	0.36	--	0.42	0.64	0.6	--	0.63	0.77	1.1	0.73	0.67	0.61
Lead	ug/L	<0.19	<0.19	0.07	<0.033	0.058	0.08	0.061	0.048	--	<0.033	0.42	<0.13	--	<0.27	0.56	<0.27	<0.11	<0.21	<0.21
Lithium	ug/L	15.5	13.5	9.7	8.6	9.6	7.1	8.1	16.4	--	10.7	9.5	13.3	--	15	14	12	20	17	17
Mercury	ug/L	<0.039	<0.039	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	--	<0.09	--	<0.09	--	<0.1	<0.1	<0.1	--	<0.15	<0.15
Molybdenum	ug/L	30.7	31	29	28.3	28.3	28.2	32.2	33.2	--	27.9	29	32	--	26	32	38	58	54	84
Selenium	ug/L	1.3	1.2	0.92	1	1.5	2	2.4	1.4	--	0.22	0.24	0.23	--	<1	<1	<1	--	<0.96	<0.96
Thallium	ug/L	<0.5	<0.5	<0.036	<0.036	0.051	<0.036	<0.036	0.38	--	<0.036	--	<0.099	--	<0.27	<0.27	<0.26	--	<0.26	<0.26
Total Radium	pCi/L	0.665	0.567	0.209	0.396	0.463	0.339	2.59	0.492	--	2.07	1.38	1.38	--	--	<0.484	<0.333	0.525	0.461	0.586
Radium-226	pCi/L	0	0.374	0	0.192	0	0.215	0.431	-0.062	--	0.108	0.172	0.512	--	--	0.16	0.148	0.297	0.182	0.314
Radium-228	pCi/L	0.665	0.193	0.209	0.204	0.463	0.124	2.16	0.492	--	1.96	1.21	0.864	--	--	<0.484	<0.333	0.228	0.279	0.271
pH at 25 Degrees C	Std. Units	7.1	8	7.6	7.3	7.5	7.7	7.8	7.5	7.6	7.6	7.4	7.4	--	7.3	7.1	7.1	7.2	7.4	7.4
Field Oxidation Potential	mV	-22.4	-40.4	17.2	-52.8	-31.4	3.9	110.2	-6.8	-11	-31.9	-80	168	-78.9	4.7	-11.9	20.5	-86.4	87.1	6.5
Field Specific Conductance	umhos/cm	938	599.5	602.3	938	1107	605	1063	831	537	423.7	679	719	526	810	980	971	930	977	1117
Field Temperature	deg C	14.4	12	11	10.8	11.2	12.23	14.6	18	19.9	10.9	18.5	18.3	7.54	9.48	15.87	9.6	15.5	9.3	16
Groundwater Elevation	feet	703.46	704.59	704.67	704.09	705.04	705.29	704.11	702.91	703.21	705.61	702.56	707.73	704.05	703.93	704.17	703.02	702.02	702.66	701.75
Oxygen, Dissolved	mg/L	0.16	0.16	0.1	0.19	0.16	0.17	0.2	0.16	0	0.08	0.19	0.2	1.58	1.1	0.3	0.7	0.1	0.1	0.22
Turbidity	NTU	0.65	1.14	0.4	0.46	0.66	0.22	1.16	0.29	2.29	0.65	3.43	9.54	3.61	4.58	1.79	3.97	0.02	1.1	11.5
Collected By		--	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	340	290	350
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.9	<4.2	<4.6
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	340	290	350
Calcium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	120000	--	--
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	220	59	150
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	36000	38000	43000
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1200	1200	1200
Arsenic, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8	7.4	11
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	180	47	97
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1100	1300	1100
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5400	4400	5400
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	46000	53000	55000

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-305

Number of Sampling Dates: 24

Parameter Name	Units	4/26/2022	10/12/2022	4/19/2023	11/7/2023	4/16/2024
Boron	ug/L	890	1200	1200	1300	1300
Calcium	mg/L	140	140	170	150	170
Chloride	mg/L	13	19	15	20	19
Fluoride	mg/L	<0.22	<0.22	<0.38	<0.38	<0.38
Field pH	Std. Units	7.1	7.24	7.07	6.87	6.89
Sulfate	mg/L	280	330	370	330	370
Total Dissolved Solids	mg/L	740	850	800	890	900
Antimony	ug/L	1.2	0.72	<5	<1	<1
Arsenic	ug/L	7.3	12	9.9	11	10
Barium	ug/L	120	160	150	160	150
Beryllium	ug/L	<0.27	<0.27	<1.7	<0.33	<0.33
Cadmium	ug/L	<0.055	<0.055	<0.5	<0.1	<0.1
Chromium	ug/L	<1.1	<1.1	<5.5	<1.1	<1.2
Cobalt	ug/L	0.29	0.63	<0.85	0.38	0.29
Lead	ug/L	<0.24	<0.24	<1.2	<0.24	<0.26
Lithium	ug/L	19	19	20	22	21
Mercury	ug/L	<0.11	<0.11	<0.14	<0.14	<0.11
Molybdenum	ug/L	47	78	35	60	42
Selenium	ug/L	1.8	<0.96	<7	<1.4	1.8
Thallium	ug/L	<0.26	<0.26	<1.3	<0.26	<0.57
Total Radium	pCi/L	0.478	0.539	1.24	0.446	0.609
Radium-226	pCi/L	0.184	0.317	0.252	0.093	0.0906
Radium-228	pCi/L	0.294	0.221	0.992	0.353	0.519
pH at 25 Degrees C	Std. Units	7.3	7.4	7.3	7.8	7.3
Field Oxidation Potential	mV	32.4	34	42	64.5	77.7
Field Specific Conductance	umhos/cm	1004	1268	1192	1408	1308
Field Temperature	deg C	7.6	16.1	7.3	14.4	9.1
Groundwater Elevation	feet	703.76	701.73	702.36	701.38	701.96
Oxygen, Dissolved	mg/L	0.9	0.06	0.8	0.41	0.89
Turbidity	NTU	21.7	3	0.1	6.21	6.05
Collected By		--	--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	230	380	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	230	380	--	--	--
Calcium, total	ug/L	--	160000	--	--	--
Iron, total	ug/L	<36	91	<180	74	48
Magnesium, total	ug/L	42000	46000	--	--	--
Manganese, total	ug/L	750	1600	--	--	--
Arsenic, dissolved	ug/L	7	13	--	--	--
Iron, dissolved	ug/L	<36	59	--	--	--
Manganese, dissolved	ug/L	660	1500	--	--	--
Potassium, total	ug/L	4000	6200	--	--	--
Sodium, total	ug/L	64000	72000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-306

Number of Sampling Dates: 23

Parameter Name	Units	12/21/2016	1/24/2017	2/23/2017	3/28/2017	4/27/2017	5/25/2017	6/28/2017	8/17/2017	10/17/2017	5/8/2018	8/6/2018	10/9/2018	4/22/2019	10/29/2019	4/27/2020	10/20/2020	4/27/2021	10/20/2021	4/26/2022
Boron	ug/L	2990	3050	3160	3060	3080	2890	3080	2850	2910	2930	2770	2890	3000	2400	2800	2800	2500	2200	2100
Calcium	mg/L	52.4	48.4	51.2	48.8	52.8	49.1	47.5	47.7	48.1	56.2	58.7	65.1	59	61	54	54	57	57	55
Chloride	mg/L	45.4	40.3	36.8	38.1	32.4	34.5	32.6	31.7	28.7	28.6	28.9	30.3	25	23	22	19	17	19	17
Fluoride	mg/L	0.26	0.23	0.26	0.25	0.29	0.24	0.28	0.33	0.3	0.3	0.26	0.32	<0.23	<0.23	0.38	0.29	<0.28	<0.28	<0.22
Field pH	Std. Units	7.53	7.71	7.31	7.84	7.5	7.53	7.77	7.36	8.45	7.47	7.45	7.4	7.58	7.63	6.94	7.66	7.47	7.4	7.55
Sulfate	mg/L	142	128	130	133	137	136	144	132	139	151	195	233	160	140	110	120	140	120	110
Total Dissolved Solids	mg/L	444	398	423	421	426	430	421	402	403	454	506	494	440	400	420	360	360	320	330
Antimony	ug/L	0.25	0.091	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	--	<0.026	<0.15	<0.078	<0.53	<0.53	<0.58	<0.51	<1.1	<1.1	<0.69
Arsenic	ug/L	0.82	0.58	0.5	0.61	0.55	0.6	0.59	0.57	--	0.58	0.7	0.72	1.9	1.6	1.3	1.1	1	0.87	<0.75
Barium	ug/L	53	47.4	47.7	47.2	47.8	50.1	48.8	46.1	--	54.4	59.3	62.1	110	82	73	67	72	56	54
Beryllium	ug/L	<0.08	<0.08	0.068	0.021	<0.012	<0.012	<0.012	<0.012	--	<0.012	--	<0.089	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	<0.029	<0.029	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	--	0.043	0.085	0.075	<0.077	0.095	0.09	0.1	0.11	0.099	<0.055
Chromium	ug/L	0.65	<0.34	0.34	<0.054	0.14	0.16	0.18	0.46	--	0.21	0.55	0.11	<0.98	<0.98	<1.1	<1.1	<1.1	<1.1	<1.1
Cobalt	ug/L	<0.5	<0.5	0.16	0.11	0.077	0.068	0.078	0.065	--	0.071	0.43	0.079	0.49	0.26	0.2	0.17	0.28	<0.19	<0.19
Lead	ug/L	<0.19	<0.19	0.075	0.13	0.15	0.3	0.068	0.037	--	0.075	1	<0.13	0.4	0.31	0.48	0.42	0.87	0.23	<0.24
Lithium	ug/L	<4.9	<4.9	<2.9	<2.9	3.5	<2.9	<2.9	4	--	<4.6	<4.6	<4.6	3	<2.7	<2.3	<2.5	<2.5	<2.5	3.3
Mercury	ug/L	<0.039	<0.039	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	--	<0.09	--	<0.09	<0.1	<0.1	<0.1	--	<0.15	<0.15	<0.11
Molybdenum	ug/L	272	277	282	287	278	275	272	278	--	271	234	235	200	230	250	260	240	220	220
Selenium	ug/L	<0.18	<0.18	<0.086	<0.086	<0.086	0.091	<0.086	<0.086	--	<0.086	<0.16	<0.085	<1	<1	<1	--	<0.96	<0.96	<0.96
Thallium	ug/L	<0.5	<0.5	<0.036	<0.036	<0.036	<0.036	<0.036	0.22	--	<0.036	--	<0.099	<0.27	<0.27	<0.26	--	<0.26	<0.26	<0.26
Total Radium	pCi/L	0.843	0.481	0.391	1.07	0.785	0.831	1.14	1.05	--	0.645	1.21	1.42	--	<0.476	0.578	0.387	0.205	0.899	1.21
Radium-226	pCi/L	0	0	-0.245	0.493	0.525	0.452	0.37	0.652	--	0.394	0.541	0.157	--	<0.134	<0.14	0.135	0.205	0.257	0.081
Radium-228	pCi/L	0.843	0.481	0.391	0.575	0.26	0.379	0.774	0.398	--	0.251	0.669	1.26	--	<0.476	<0.46	0.252	-0.062	0.642	1.13
pH at 25 Degrees C	Std. Units	7.2	7.8	7.7	7.2	7.4	7.7	7.8	7.6	7.6	7.6	7.7	7.6	7.6	7.6	7.6	7.7	7.7	7.7	7.7
Field Oxidation Potential	mV	-80.4	-88.9	-48.1	-140.5	-64.3	-111.6	36.6	-31.2	-128	-94	-81	-41.1	-97.6	-145.7	-142	-199.7	-104.7	-124.2	-119.8
Field Specific Conductance	umhos/cm	1079	644	629	1023	1165	624	1067	828	636	663	731	736	703	633	539.7	538.5	580	562.5	513.8
Field Temperature	deg C	13.2	13.4	13.4	13.6	13.1	13.49	13.5	13.6	14.7	13.6	16.4	15.6	12.87	12.56	13.2	12.5	13.4	12.9	12.3
Groundwater Elevation	feet	703.32	704.49	704.59	703.99	704.98	705.34	703.94	702.74	703.16	705.51	702.68	707.88	704.23	704.4	703.35	702.26	702.75	702.02	704.02
Oxygen, Dissolved	mg/L	0.11	0.23	0.13	0.12	0.17	0.15	0.21	0.04	0.8	3	1.4	0.45	0.99	0.29	0.18	0.13	0.34	0.24	0.16
Turbidity	NTU	1.97	2.25	0.79	0.77	0.43	0.3	0.59	1.04	3.45	0.62	14.59	1.74	21.3	8.16	3.92	19.93	1.2	12.7	18.9
Collected By		--	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	160	130	200	130
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.9	<3.1	<4.6	<4.6
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	160	130	200	130
Calcium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	54000	--	--	--
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1800	1700	1800	1700
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12000	12000	12000	13000
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	110	100	110	100
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1500	1500	1600	1400
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	100	96	93
Molybdenum, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	250	240	210	230
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	860	880	820	900
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	54000	52000	47000	55000

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-306

Number of Sampling Dates: 23

Parameter Name	Units	10/12/2022	4/19/2023	11/7/2023	4/15/2024
Boron	ug/L	2100	2300	2200	2300
Calcium	mg/L	57	66	74	86
Chloride	mg/L	17	18	19	19
Fluoride	mg/L	<0.22	0.49	<0.38	<0.38
Field pH	Std. Units	7.68	7.6	7.31	7.4
Sulfate	mg/L	110	130	130	160
Total Dissolved Solids	mg/L	380	360	450	480
Antimony	ug/L	<0.69	<5	<1	<1
Arsenic	ug/L	<0.75	<2.7	0.63	0.64
Barium	ug/L	60	62	68	78
Beryllium	ug/L	<0.27	<1.7	<0.33	<0.33
Cadmium	ug/L	0.065	<0.5	<0.1	<0.1
Chromium	ug/L	<1.1	<5.5	<1.1	<1.2
Cobalt	ug/L	<0.19	<0.85	<0.17	<0.17
Lead	ug/L	<0.24	<1.2	<0.24	<0.26
Lithium	ug/L	<2.5	<13	<2.5	2.7
Mercury	ug/L	<0.11	<0.14	<0.14	<0.11
Molybdenum	ug/L	210	200	150	160
Selenium	ug/L	<0.96	<7	<1.4	<1.4
Thallium	ug/L	<0.26	<1.3	<0.26	<0.57
Total Radium	pCi/L	0.356	0.809	0.62	0.328
Radium-226	pCi/L	0.0719	0.0792	0.235	0.0785
Radium-228	pCi/L	0.284	0.729	0.384	0.249
pH at 25 Degrees C	Std. Units	7.6	7.7	8	7.6
Field Oxidation Potential	mV	-100.1	-124	-58.2	-113
Field Specific Conductance	umhos/cm	578.7	632	803	767
Field Temperature	deg C	12.6	12	12.2	12.8
Groundwater Elevation	feet	701.97	702.74	701.68	702.25
Oxygen, Dissolved	mg/L	0.49	0.35	0.49	0.97
Turbidity	NTU	4.93	0.02	7.16	6.34
Collected By		--	--	--	--
Bicarbonate Alkalinity as CaCO3	mg/L	190	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	190	--	--	--
Calcium, total	ug/L	60000	--	--	--
Iron, total	ug/L	1800	2000	2200	2700
Magnesium, total	ug/L	13000	--	--	--
Manganese, total	ug/L	110	--	--	--
Iron, dissolved	ug/L	1600	--	--	--
Manganese, dissolved	ug/L	110	--	--	--
Molybdenum, dissolved	ug/L	210	--	--	--
Potassium, total	ug/L	1000	--	--	--
Sodium, total	ug/L	55000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-306A

Number of Sampling Dates: 9

Parameter Name	Units	9/15/2020	10/20/2020	4/27/2021	10/20/2021	4/26/2022	10/12/2022	4/19/2023	11/7/2023	4/15/2024
Boron	ug/L	2100	2400	2400	2100	2200	2200	--	--	--
Calcium	mg/L	150	150	150	150	150	150	--	--	--
Chloride	mg/L	63	65	66	70	62	66	--	--	--
Fluoride	mg/L	<0.23	<0.23	<0.28	<0.28	<0.22	<0.22	--	--	--
Field pH	Std. Units	7.87	7.29	7.24	7.21	7.21	7.26	7.32	7.09	7.11
Sulfate	mg/L	330	350	350	360	320	340	--	--	--
Total Dissolved Solids	mg/L	840	800	790	760	780	790	--	--	--
Antimony	ug/L	<0.51	0.64	<1.1	<1.1	<0.69	<0.69	--	--	--
Arsenic	ug/L	<0.88	<0.88	<0.75	<0.75	<0.75	<0.75	<2.7	<0.53	<0.53
Barium	ug/L	180	170	160	130	130	140	--	--	--
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	--	--	--
Cadmium	ug/L	0.073	<0.049	<0.051	<0.051	<0.055	<0.055	--	--	--
Chromium	ug/L	1.9	<1.1	<1.1	<1.1	<1.1	<1.1	--	--	--
Cobalt	ug/L	1.3	0.49	0.15	<0.19	<0.19	<0.19	--	--	--
Lead	ug/L	1.8	0.79	<0.21	<0.21	<0.24	<0.24	--	--	--
Lithium	ug/L	4.1	6.3	5.8	5.3	7.8	5.1	<13	5.8	6.3
Mercury	ug/L	<0.1	--	<0.15	<0.15	<0.11	<0.11	--	--	--
Molybdenum	ug/L	8.6	13	16	15	17	19	21	20	20
Selenium	ug/L	<1	--	<0.96	<0.96	<0.96	<0.96	--	--	--
Thallium	ug/L	<0.26	--	<0.26	<0.26	<0.26	<0.26	--	--	--
Total Radium	pCi/L	0.427	0.898	0.642	0.368	0.859	0.861	--	--	--
Radium-226	pCi/L	0.453	0.413	0.257	0.253	0.375	0.268	--	--	--
Radium-228	pCi/L	-0.0262	0.485	0.385	0.115	0.484	0.593	--	--	--
pH at 25 Degrees C	Std. Units	7.3	7.4	7.5	7.3	7.4	7.4	--	--	--
Field Oxidation Potential	mV	-100.3	-139.7	-17.8	-66.1	-77.6	-81.5	-84.6	29.7	-66.9
Field Specific Conductance	umhos/cm	1180	1054	873	1109	1036	1148	1163	1285	1215
Field Temperature	deg C	14.1	12.7	13.6	13.1	12.1	13.1	12.1	12.6	12.8
Groundwater Elevation	feet	--	--	703.63	702.31	704.16	702.18	703.03	701.92	702.48
Oxygen, Dissolved	mg/L	0.13	0.13	0.11	0.26	0.14	0.14	0.19	0.24	0.15
Turbidity	NTU	118.1	20.8	2.4	10.4	21.5	5.51	0.02	8.3	9.15
Bicarbonate Alkalinity as CaCO3	mg/L	--	200	200	320	230	220	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	--	<3.8	<4.6	<4.6	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	--	200	200	320	230	220	--	--	--
Calcium, total	ug/L	--	140000	--	--	--	160000	--	--	--
Iron, total	ug/L	--	2800	1800	1700	1900	1800	1800	--	--
Magnesium, total	ug/L	--	45000	46000	45000	49000	47000	--	--	--
Manganese, total	ug/L	--	410	360	380	390	390	--	--	--
Iron, dissolved	ug/L	--	1700	1700	1600	1600	1600	--	--	--
Manganese, dissolved	ug/L	--	360	380	340	350	380	--	--	--
Potassium, total	ug/L	--	1600	1600	1700	1700	1800	--	--	--
Sodium, total	ug/L	--	33000	34000	33000	40000	39000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-307
 Number of Sampling Dates: 11

Parameter Name	Units	4/23/2019	10/28/2019	5/27/2020	10/19/2020	4/26/2021	10/21/2021	4/25/2022	10/12/2022	4/20/2023	11/7/2023	4/18/2024
Boron	ug/L	840	730	630	890	1000	960	650	1200	600	1200	1300
Calcium	mg/L	22	18	16	21	21	16	27	21	26	23	31
Chloride	mg/L	15	3.5	4.2	<2	10	2.5	31	2.8	17	2.4	5.9
Fluoride	mg/L	0.54	0.67	0.49	0.29	0.31	0.4	<0.22	<0.22	0.53	<0.38	<0.38
Field pH	Std. Units	10.05	9.58	8.28	9.26	7.2	8.84	9.47	9.13	9.17	9.48	9.38
Sulfate	mg/L	52	32	32	30	42	36	36	50	29	50	70
Total Dissolved Solids	mg/L	150	140	38	80	82	26	100	110	66	110	140
Antimony	ug/L	0.92	1.2	0.83	1	<1.1	<1.1	0.72	0.7	<5	<1	1.2
Arsenic	ug/L	3.8	7.4	6.1	6.7	6.5	6.2	4.2	6.1	6.2	7.7	6.1
Barium	ug/L	30	34	26	45	36	35	52	58	50	41	52
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<1.7	<0.33	<0.33
Cadmium	ug/L	<0.077	<0.039	<0.039	<0.049	<0.051	<0.051	<0.055	<0.055	<0.5	<0.1	<0.1
Chromium	ug/L	<0.98	<0.98	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<5.5	<1.1	<1.2
Cobalt	ug/L	0.091	<0.091	<0.091	<0.091	<0.091	<0.19	<0.19	<0.19	<0.85	<0.17	<0.17
Lead	ug/L	<0.27	<0.27	<0.27	<0.11	<0.21	<0.21	<0.24	<0.24	2.9	<0.24	<0.26
Lithium	ug/L	10	15	8.3	16	9.4	10	12	13	<13	7.7	9.3
Mercury	ug/L	<0.1	<0.1	<0.1	--	<0.15	<0.15	<0.11	<0.11	<0.14	<0.14	<0.11
Molybdenum	ug/L	5.8	5.2	7	5.2	8.5	6.6	8.4	7.2	21	10	15
Selenium	ug/L	<1	<1	<1	--	2.5	<0.96	2.5	2.4	<7	5.8	8.5
Thallium	ug/L	<0.27	<0.27	<0.26	--	<0.26	<0.26	<0.26	<0.26	<1.3	<0.26	<0.57
Total Radium	pCi/L	--	<0.377	<0.458	0.233	0.043	0.242	0.331	0.362	0.0723	0.23	0.386
Radium-226	pCi/L	--	<0.135	<0.139	-0.043	0.043	0.141	0.0224	0.16	0.0723	0.109	0.0805
Radium-228	pCi/L	--	<0.377	<0.458	0.233	-0.0204	0.101	0.309	0.202	-0.0878	0.121	0.306
pH at 25 Degrees C	Std. Units	9.8	9.6	9.2	9.4	9.6	9.2	9.2	9.1	9.3	8.9	9.5
Field Oxidation Potential	mV	-53.1	-29.9	109.8	-123.4	11.6	130.8	8	17.5	102.7	-164.6	54.8
Field Specific Conductance	umhos/cm	225	157	243.5	145.2	857	142.5	235.3	187.4	214.8	199.7	244.1
Field Temperature	deg C	11.72	18.43	12.6	18.7	9	17.4	10.2	21.4	11.5	18.6	11.6
Groundwater Elevation	feet	709.86	708.57	708.14	706.56	706.38	706.29	708.27	705.32	707.21	704.67	706.22
Oxygen, Dissolved	mg/L	1.54	0.27	0.19	0.09	0.11	0.24	0.09	0.09	0.23	0.18	0.26
Turbidity	NTU	15.6	2.16	2.98	2.09	2.8	10.7	14.8	3.08	0.02	3.95	7.35
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	41	9.9	82	39	96	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	<1.9	9.9	<4.6	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	--	--	--	41	20	82	39	96	--	--	--
Calcium, total	ug/L	--	--	--	19000	--	--	--	22000	--	--	--
Iron, total	ug/L	--	--	--	<50	<36	<36	<36	<36	<180	<36	<36
Magnesium, total	ug/L	--	--	--	2300	1300	1400	2300	3300	--	--	--
Manganese, total	ug/L	--	--	--	<4	<4.4	<4.4	<3.6	<3.6	--	--	--
Iron, dissolved	ug/L	--	--	--	<50	<36	<36	<36	<36	--	--	--
Manganese, dissolved	ug/L	--	--	--	<4	<4.4	<4.4	<3.6	3.6	--	--	--
Potassium, total	ug/L	--	--	--	1600	1400	1300	1700	1900	--	--	--
Sodium, total	ug/L	--	--	--	4600	9500	5500	10000	8000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-308
 Number of Sampling Dates: 13

Parameter Name	Units	4/23/2019	10/28/2019	5/27/2020	10/19/2020	4/26/2021	7/14/2021	10/21/2021	2/22/2022	4/25/2022	10/12/2022	4/20/2023	11/7/2023	4/18/2024
Boron	ug/L	5700	6100	6100	6400	5900	--	6100	--	4300	6000	5500	5000	5300
Calcium	mg/L	59	60	68	54	65	--	53	--	76	52	96	58	120
Chloride	mg/L	15	13	11	8.4	7.9	--	8.1	--	8.3	6.6	6.2	6	6.7
Fluoride	mg/L	0.77	0.26	0.54	<0.23	<0.28	--	<0.28	--	<0.22	<0.22	0.52	<0.38	<0.38
Field pH	Std. Units	9.24	9.19	7.86	9.23	7.15	9.65	9.17	8.99	9.22	9.14	9.2	9.03	8.88
Sulfate	mg/L	190	190	180	150	200	--	140	--	170	180	240	170	260
Total Dissolved Solids	mg/L	450	460	390	370	430	--	270	--	400	370	450	370	520
Antimony	ug/L	1.4	1.7	0.7	1.4	<1.1	--	3	--	0.84	<0.69	<5	<1	<1
Arsenic	ug/L	45	63	58	50	53	--	48	--	44	39	46	42	34
Barium	ug/L	39	38	38	53	50	--	36	--	54	41	71	50	83
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27	<0.27	--	<0.27	--	<0.27	<0.27	<1.7	<0.33	<0.33
Cadmium	ug/L	<0.077	0.077	0.04	0.071	0.055	--	<0.051	--	<0.055	<0.055	<0.5	<0.1	<0.1
Chromium	ug/L	<0.98	<0.98	<1.1	<4.4	<1.1	--	<1.1	--	<1.1	<1.1	<5.5	<1.1	<1.2
Cobalt	ug/L	<0.091	<0.091	<0.091	<0.36	<0.091	--	<0.19	--	<0.19	<0.19	<0.85	<0.17	<0.17
Lead	ug/L	<0.27	<0.27	<0.27	<0.11	<0.21	--	0.29	--	<0.24	<0.24	<1.2	<0.24	<0.26
Lithium	ug/L	29	31	35	47	39	47	39	37	50	42	53	44	62
Mercury	ug/L	<0.1	<0.1	<0.1	--	<0.15	--	<0.15	--	<0.11	<0.11	<0.14	<0.14	<0.11
Molybdenum	ug/L	58	58	64	58	53	--	58	--	73	63	88	63	93
Selenium	ug/L	<1	2.2	<1	--	<0.96	--	<0.96	--	5.9	<0.96	<7	<1.4	<1.4
Thallium	ug/L	<0.27	<0.27	<0.26	--	<0.26	--	<0.26	--	<0.26	<0.26	<1.3	<0.26	<0.57
Total Radium	pCi/L	--	<0.488	<0.488	1.05	0.361	--	0.219	--	0.299	0.514	0.0698	0.267	0.462
Radium-226	pCi/L	--	<0.127	<0.204	-0.21	0.0686	--	0.102	--	0.0556	0.186	0.0514	0.186	0.0318
Radium-228	pCi/L	--	<0.488	<0.488	1.05	0.292	--	0.116	--	0.243	0.328	0.0183	0.081	0.43
pH at 25 Degrees C	Std. Units	8.9	9.2	9.1	9.4	9.1	--	9.2	--	9.1	9.1	9.1	8.8	9.1
Field Oxidation Potential	mV	-62.5	-58.1	-22.4	-178	10.7	-228.9	-170.3	210.7	-113.8	-19.1	-116.4	-219.3	-112.9
Field Specific Conductance	umhos/cm	659	618	1008	318.1	743	551.7	507.2	486	616.7	577.7	689	572	788
Field Temperature	deg C	12.11	15.05	12.7	14.9	9	15.3	14.6	12.2	11.1	15.1	12.4	14.6	12.1
Groundwater Elevation	feet	706.19	706.31	705.64	703.87	705.05	703.38	703.21	702.84	705.45	702.6	703.97	702.18	703.51
Oxygen, Dissolved	mg/L	1.16	0.43	0.1	0.21	0.16	0.13	0.2	0.14	0.06	0.07	0.15	0.11	0.29
Turbidity	NTU	2.13	2.44	2.33	1.08	9.5	0.14	9.8	0	16.6	3.57	0.02	6.89	6.45
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	82	89	--	52	--	49	130	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	41	39	--	62	--	98	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	--	--	--	120	130	--	110	--	150	130	--	--	--
Calcium, total	ug/L	--	--	--	43000	--	--	--	--	--	57000	--	--	--
Iron, total	ug/L	--	--	--	<50	<36	--	<36	--	<36	<36	<180	<36	<36
Magnesium, total	ug/L	--	--	--	3100	7000	--	2600	--	8100	3300	--	--	--
Manganese, total	ug/L	--	--	--	47	85	--	38	--	92	58	--	--	--
Arsenic, dissolved	ug/L	--	--	--	44	50	--	50	--	43	41	--	--	--
Iron, dissolved	ug/L	--	--	--	<50	<36	--	<36	--	<36	<36	--	--	--
Manganese, dissolved	ug/L	--	--	--	52	85	--	36	--	79	58	--	--	--
Potassium, total	ug/L	--	--	--	5300	6800	--	6900	--	8600	6700	--	--	--
Sodium, total	ug/L	--	--	--	33000	46000	--	42000	--	53000	37000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-309
 Number of Sampling Dates: 11

Parameter Name	Units	10/29/2019	1/9/2020	4/27/2020	10/21/2020	4/27/2021	10/22/2021	4/27/2022	10/12/2022	4/19/2023	11/7/2023	4/15/2024
Boron	ug/L	1000	1000	1100	1800	1200	1200	970	1500	--	--	--
Calcium	mg/L	120	130	120	120	120	110	130	110	--	--	--
Chloride	mg/L	18	17	16	13	12	17	14	14	--	--	--
Fluoride	mg/L	0.68	0.51	0.75	0.61	0.36	0.36	<0.22	0.24	--	--	--
Field pH	Std. Units	7.33	6.95	7.09	7.22	7.34	7.42	7.24	7.46	7.37	7.32	7.1
Sulfate	mg/L	130	130	130	170	110	130	95	140	--	--	--
Total Dissolved Solids	mg/L	550	650	630	620	560	480	530	590	--	--	--
Antimony	ug/L	<0.53	<0.53	<0.58	<0.51	<1.1	<1.1	<0.69	<0.69	--	--	--
Arsenic	ug/L	140	110	75	89	100	75	39	47	28	46	34
Barium	ug/L	130	130	130	130	190	100	100	110	--	--	--
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	--	--	--
Cadmium	ug/L	<0.039	<0.039	<0.039	<0.049	<0.051	<0.051	<0.055	<0.055	--	--	--
Chromium	ug/L	<0.98	<0.98	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	--	--	--
Cobalt	ug/L	0.42	0.23	0.35	0.14	0.12	<0.19	0.2	<0.19	--	--	--
Lead	ug/L	0.54	<0.27	<0.27	<0.11	<0.21	<0.21	<0.24	<0.24	--	--	--
Lithium	ug/L	15	15	13	19	15	15	16	15	16	16	15
Mercury	ug/L	<0.1	<0.1	<0.1	--	<0.15	<0.15	<0.11	<0.11	--	--	--
Molybdenum	ug/L	19	18	19	21	17	24	18	23	21	20	17
Selenium	ug/L	<1	<1	<1	--	<0.96	<0.96	1.1	<0.96	--	--	--
Thallium	ug/L	<0.27	<0.27	<0.26	--	<0.26	<0.26	<0.26	<0.26	--	--	--
Total Radium	pCi/L	0.801	0.543	0.837	0.815	0.829	0.818	0.739	1.07	--	--	--
Radium-226	pCi/L	0.346	0.176	0.211	0.199	0.337	0.288	0.112	0.205	--	--	--
Radium-228	pCi/L	0.455	<0.386	0.627	0.616	0.492	0.531	0.627	0.863	--	--	--
pH at 25 Degrees C	Std. Units	7.4	7.4	7.2	7.4	7.7	7.5	7.4	7.6	--	--	--
Field Oxidation Potential	mV	-103.8	-335.3	-117.7	-145.9	-55.8	-123.4	-3.2	-134.7	-88.6	-142.7	-93.9
Field Specific Conductance	umhos/cm	931	1016	898	955	914	855	948	902	1066	945	1036
Field Temperature	deg C	18.6	15.69	13.2	18.8	13.6	17.9	11.7	18.2	12.6	16.7	14.4
Groundwater Elevation	feet	703.84	703.1	702.84	701.97	702.68	701.7	703.56	702.08	702.3	701.59	702.06
Oxygen, Dissolved	mg/L	7.45	4.42	0.06	0.1	0.11	0.21	0.1	0.21	0.19	0.22	1
Turbidity	NTU	4.96	1.81	4.21	1.86	0.7	19.8	11.4	4.59	5.19	6.06	7.26
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	360	410	390	440	380	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	<3.8	<4.6	<4.6	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	--	--	--	360	410	390	440	380	--	--	--
Calcium, total	ug/L	--	--	--	100000	--	--	--	120000	--	--	--
Iron, total	ug/L	--	--	--	1200	4400	1300	1700	1300	2100	--	--
Magnesium, total	ug/L	--	--	--	33000	39000	32000	37000	33000	--	--	--
Manganese, total	ug/L	--	--	--	920	1400	1300	1600	910	--	--	--
Arsenic, dissolved	ug/L	--	--	--	78	62	72	36	48	--	--	--
Iron, dissolved	ug/L	--	--	--	1200	1300	1200	1300	860	--	--	--
Manganese, dissolved	ug/L	--	--	--	980	1400	1200	1400	890	--	--	--
Potassium, total	ug/L	--	--	--	4800	4400	4800	4600	5200	--	--	--
Sodium, total	ug/L	--	--	--	34000	35000	34000	36000	38000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-309A

Number of Sampling Dates: 9

Parameter Name	Units	9/15/2020	10/21/2020	4/27/2021	10/22/2021	4/26/2022	10/12/2022	4/19/2023	11/7/2023	4/15/2024
Boron	ug/L	530	470	780	740	830	660	--	--	--
Calcium	mg/L	100	110	110	110	120	110	--	--	--
Chloride	mg/L	23	24	26	30	25	30	--	--	--
Fluoride	mg/L	<0.23	<0.23	<0.28	<0.28	<0.22	<0.22	--	--	--
Field pH	Std. Units	7.26	7.33	7.1	7.19	7.18	7.13	7.32	7.16	7.02
Sulfate	mg/L	110	110	130	140	120	130	--	--	--
Total Dissolved Solids	mg/L	490	460	490	440	490	520	--	--	--
Antimony	ug/L	<0.51	<0.51	<1.1	<1.1	<0.69	<0.69	--	--	--
Arsenic	ug/L	<0.88	<0.88	0.98	0.87	0.79	0.77	<2.7	1	0.84
Barium	ug/L	170	170	190	180	180	190	--	--	--
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	--	--	--
Cadmium	ug/L	<0.049	<0.049	<0.051	<0.051	<0.055	<0.055	--	--	--
Chromium	ug/L	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	--	--	--
Cobalt	ug/L	0.22	0.32	0.3	0.32	0.34	0.22	--	--	--
Lead	ug/L	<0.11	<0.11	<0.21	<0.21	<0.24	<0.24	--	--	--
Lithium	ug/L	4.1	5.9	5.8	4.9	8.4	5.7	<13	6.2	7.2
Mercury	ug/L	<0.1	--	<0.15	<0.15	<0.11	<0.11	--	--	--
Molybdenum	ug/L	8.5	7.1	9.1	11	11	9	10	8.9	11
Selenium	ug/L	<1	--	<0.96	<0.96	<0.96	<0.96	--	--	--
Thallium	ug/L	<0.26	--	<0.26	<0.26	<0.26	<0.26	--	--	--
Total Radium	pCi/L	0.783	0.509	1.06	2.49	0.981	1.21	--	--	--
Radium-226	pCi/L	0.23	0.0367	0.404	0.306	0.318	0.411	--	--	--
Radium-228	pCi/L	0.553	0.473	0.659	2.18	0.663	0.802	--	--	--
pH at 25 Degrees C	Std. Units	7.2	7.4	7.3	7.3	7.2	7.1	--	--	--
Field Oxidation Potential	mV	-144.8	-181.6	-36.1	-144.2	-135.7	-106.4	-119.6	-150.2	-115.7
Field Specific Conductance	umhos/cm	815	749	907	824	770	837	893	917	907
Field Temperature	deg C	16.1	15.7	14.1	15.6	14.4	16	14.7	15.4	15
Groundwater Elevation	feet	--	--	702.92	701.6	702.93	702.12	702.61	701.7	702.27
Oxygen, Dissolved	mg/L	0.14	0.13	4.8	0.32	0.2	0.19	0.18	0.39	0.45
Turbidity	NTU	1.3	1.46	12.5	19.8	8.18	1.3	0.02	3.7	4
Bicarbonate Alkalinity as CaCO3	mg/L	--	280	290	370	290	290	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	--	<1.9	<4.6	<4.6	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	--	280	290	370	290	290	--	--	--
Calcium, total	ug/L	--	100000	--	--	--	120000	--	--	--
Iron, total	ug/L	--	7500	9100	8900	9700	9500	9800	--	--
Magnesium, total	ug/L	--	29000	31000	31000	32000	32000	--	--	--
Manganese, total	ug/L	--	710	770	740	800	770	--	--	--
Iron, dissolved	ug/L	--	7600	8600	8700	8800	9100	--	--	--
Manganese, dissolved	ug/L	--	710	760	720	740	800	--	--	--
Potassium, total	ug/L	--	1700	2000	2000	2100	2300	--	--	--
Sodium, total	ug/L	--	14000	21000	18000	22000	21000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-310
 Number of Sampling Dates: 11

Parameter Name	Units	10/29/2019	1/9/2020	4/27/2020	10/21/2020	4/27/2021	10/22/2021	4/27/2022	10/12/2022	4/19/2023	11/7/2023	4/15/2024
Boron	ug/L	950	940	880	1300	850	870	860	1100	--	--	--
Calcium	mg/L	88	85	87	110	110	110	120	130	--	--	--
Chloride	mg/L	20	19	20	20	18	24	22	22	--	--	--
Fluoride	mg/L	0.53	0.61	0.93	<0.23	0.36	0.47	<0.22	<0.22	--	--	--
Field pH	Std. Units	7.3	7.33	7.41	7.2	7.21	7.28	7.3	7.26	7.39	7.19	7.13
Sulfate	mg/L	130	130	130	170	140	160	140	210	--	--	--
Total Dissolved Solids	mg/L	430	500	520	580	550	490	530	690	--	--	--
Antimony	ug/L	<0.53	<0.53	<0.58	<0.51	<1.1	<1.1	<0.69	<0.69	--	--	--
Arsenic	ug/L	31	28	23	36	25	25	20	23	24	27	22
Barium	ug/L	130	140	140	160	160	150	160	190	--	--	--
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	--	--	--
Cadmium	ug/L	<0.039	<0.039	<0.039	<0.049	<0.051	<0.051	<0.055	<0.055	--	--	--
Chromium	ug/L	<0.98	<0.98	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	--	--	--
Cobalt	ug/L	0.17	0.095	0.098	0.11	0.098	<0.19	<0.19	<0.19	--	--	--
Lead	ug/L	<0.27	<0.27	<0.27	<0.11	<0.21	<0.21	<0.24	<0.24	--	--	--
Lithium	ug/L	15	14	11	18	15	14	18	15	15	16	17
Mercury	ug/L	<0.1	<0.1	<0.1	--	<0.15	<0.15	<0.11	<0.11	--	--	--
Molybdenum	ug/L	60	59	55	71	43	45	45	58	33	40	32
Selenium	ug/L	<1	<1	<1	--	<0.96	<0.96	<0.96	<0.96	--	--	--
Thallium	ug/L	<0.27	<0.27	<0.26	--	<0.26	<0.26	<0.26	<0.26	--	--	--
Total Radium	pCi/L	<0.471	<0.377	0.341	0.351	1.11	0.588	0.576	0.813	--	--	--
Radium-226	pCi/L	0.211	0.232	0.226	0.17	0.453	0.136	0.181	0.438	--	--	--
Radium-228	pCi/L	<0.471	<0.377	<0.341	0.182	0.652	0.452	0.395	0.375	--	--	--
pH at 25 Degrees C	Std. Units	7.3	7.5	7.3	7.4	7.5	7.5	7.4	7.4	--	--	--
Field Oxidation Potential	mV	-129.8	-342.4	-148.01	-162.5	-115.1	-145.2	-125.3	-149.1	-128.4	-149.8	-119.7
Field Specific Conductance	umhos/cm	801	784	734	894	893	880	972	1039	1060	1014	1097
Field Temperature	deg C	16.48	15.23	12.9	17.5	13.3	16.3	11.8	17.3	12.2	16.2	13.7
Groundwater Elevation	feet	703.71	702.81	702.53	701.78	702.11	701.48	703.33	701.73	702.04	701.34	701.73
Oxygen, Dissolved	mg/L	7.59	3.72	0.09	0.14	0.09	0.22	0.08	0.07	0.19	0.17	0.17
Turbidity	NTU	3.03	3.3	6.3	3.72	8.4	20	10.2	0.58	4.61	8.31	6.56
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	300	350	380	350	370	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	<3.8	<4.6	<4.6	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	--	--	--	300	350	380	350	370	--	--	--
Calcium, total	ug/L	--	--	--	100000	--	--	--	140000	--	--	--
Iron, total	ug/L	--	--	--	4400	5700	4500	4900	5800	6800	--	--
Magnesium, total	ug/L	--	--	--	26000	31000	29000	35000	34000	--	--	--
Manganese, total	ug/L	--	--	--	980	1400	1200	1300	1400	--	--	--
Arsenic, dissolved	ug/L	--	--	--	32	23	25	19	24	--	--	--
Iron, dissolved	ug/L	--	--	--	4100	5500	4200	4000	4400	--	--	--
Manganese, dissolved	ug/L	--	--	--	960	1400	1100	1100	1300	--	--	--
Potassium, total	ug/L	--	--	--	5800	5200	5400	5800	6400	--	--	--
Sodium, total	ug/L	--	--	--	53000	41000	37000	48000	56000	--	--	--

Single Location

Name: IPL - Prairie Creek Generating Station

Location ID: MW-310A										
Number of Sampling Dates: 9										
Parameter Name	Units	9/15/2020	10/21/2020	4/27/2021	10/22/2021	4/27/2022	10/12/2022	4/19/2023	11/7/2023	4/16/2024
Boron	ug/L	330	340	290	240	250	190	--	--	--
Calcium	mg/L	180	180	160	140	140	140	--	--	--
Chloride	mg/L	46	48	44	48	43	52	--	--	--
Fluoride	mg/L	<0.23	<0.23	<0.28	<0.28	<0.22	<0.22	--	--	--
Field pH	Std. Units	7.25	7.24	7.19	7.31	7.25	7.51	7.41	7.3	7.17
Sulfate	mg/L	310	330	240	190	140	150	--	--	--
Total Dissolved Solids	mg/L	890	850	690	570	570	620	--	--	--
Antimony	ug/L	<0.51	0.66	<1.1	<1.1	<0.69	<0.69	--	--	--
Arsenic	ug/L	<0.88	<0.88	<0.75	<0.75	<0.75	<0.75	<2.7	<0.53	<0.53
Barium	ug/L	210	210	200	160	160	180	--	--	--
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	--	--	--
Cadmium	ug/L	<0.049	<0.049	<0.051	<0.051	<0.055	<0.055	--	--	--
Chromium	ug/L	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	--	--	--
Cobalt	ug/L	0.54	2.1	4.4	2.8	1.8	1	--	--	--
Lead	ug/L	<0.11	<0.11	<0.21	<0.21	<0.24	<0.24	--	--	--
Lithium	ug/L	3.2	5.3	4.9	3.5	6.6	4	<13	4.6	4.8
Mercury	ug/L	<0.1	--	<0.15	<0.15	<0.11	<0.11	--	--	--
Molybdenum	ug/L	20	21	24	20	19	18	16	16	17
Selenium	ug/L	<1	--	<0.96	<0.96	<0.96	<0.96	--	--	--
Thallium	ug/L	<0.26	--	<0.26	<0.26	<0.26	<0.26	--	--	--
Total Radium	pCi/L	1.21	1.27	0.627	0.673	0.663	0.818	--	--	--
Radium-226	pCi/L	0.484	0.495	0.32	0.155	0.337	0.572	--	--	--
Radium-228	pCi/L	0.725	0.779	0.308	0.519	0.325	0.246	--	--	--
pH at 25 Degrees C	Std. Units	7.6	7.4	7.4	7.4	7.3	7.6	--	--	--
Field Oxidation Potential	mV	-128.9	-165.8	11.6	-149.4	-152.1	-128.9	-124.4	-158.6	-122.9
Field Specific Conductance	umhos/cm	1304	1168	862	963	982	969	1015	1025	1075
Field Temperature	deg C	16	15.3	13.6	15.1	14.6	15.5	14.4	15.2	14.7
Groundwater Elevation	feet	--	--	702.69	701.76	703.68	701.92	704.44	701.51	702.05
Oxygen, Dissolved	mg/L	0.19	0.11	0.12	--	0.09	0.23	0.26	0.51	0.35
Turbidity	NTU	1.72	2.82	1	19.9	8.94	0	0.02	3.26	6.11
Bicarbonate Alkalinity as CaCO3	mg/L	--	320	300	340	320	340	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	--	<3.8	<4.6	<4.6	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	--	320	300	340	320	340	--	--	--
Calcium, total	ug/L	--	180000	--	--	--	150000	--	--	--
Iron, total	ug/L	--	6300	7000	6100	6500	6800	6000	--	--
Magnesium, total	ug/L	--	48000	42000	37000	39000	40000	--	--	--
Manganese, total	ug/L	--	520	400	360	350	370	--	--	--
Iron, dissolved	ug/L	--	6100	6800	6000	5600	6300	--	--	--
Manganese, dissolved	ug/L	--	490	420	330	310	360	--	--	--
Potassium, total	ug/L	--	1100	990	880	970	1100	--	--	--
Sodium, total	ug/L	--	15000	14000	13000	16000	16000	--	--	--

Single Location
Name: IPL - Prairie Creek
Generating Station

Location ID: MW-312

Number of Sampling Dates: 6

Parameter Name	Units	5/25/2022	7/15/2022	10/12/2022	4/19/2023	11/7/2023	4/15/2024
Boron	ug/L	--	--	220	<380	250	250
Calcium	mg/L	--	100	92	99	85	100
Chloride	mg/L	--	--	68	69	74	80
Fluoride	mg/L	--	--	<0.22	<0.38	<0.38	<0.38
Field pH	Std. Units	6.9	6.97	6.97	7.04	6.83	6.72
Sulfate	mg/L	--	--	22	41	15	44
Total Dissolved Solids	mg/L	--	--	420	400	430	450
Antimony	ug/L	--	--	<0.69	<5	<1	<1
Arsenic	ug/L	10	13	9.2	9	3.2	7.3
Barium	ug/L	--	--	180	150	130	150
Beryllium	ug/L	--	--	<0.27	<1.7	<0.33	<0.33
Cadmium	ug/L	--	--	<0.055	<0.5	<0.1	<0.1
Chromium	ug/L	--	--	<1.1	<5.5	<1.1	<1.2
Cobalt	ug/L	--	--	<0.19	<0.85	<0.17	<0.17
Lead	ug/L	--	--	<0.24	<1.2	<0.24	<0.26
Lithium	ug/L	--	--	5.6	<13	6.6	5.7
Mercury	ug/L	--	--	<0.11	<0.14	<0.14	<0.11
Molybdenum	ug/L	7	--	14	7.7	5.7	5
Selenium	ug/L	--	--	<0.96	<7	<1.4	<1.4
Thallium	ug/L	--	--	<0.26	<1.3	<0.26	<0.57
Total Radium	pCi/L	--	--	0.69	1.14	1.38	1.67
Radium-226	pCi/L	--	--	0.257	0.143	0.448	0.424
Radium-228	pCi/L	--	--	0.433	0.999	0.931	1.25
pH at 25 Degrees C	Std. Units	--	--	7.1	7.2	7.3	7.2
Field Oxidation Potential	mV	201.1	-46.1	-85.4	-82.3	-142.8	-77.3
Field Specific Conductance	umhos/cm	843	793	795	799	825	874
Field Temperature	deg C	17.8	21.5	24.8	17.8	23.5	20.4
Groundwater Elevation	feet	--	703.8	702.85	701.96	702.24	702.65
Oxygen, Dissolved	mg/L	0.1	0.14	0.05	0.11	0.23	2.9
Turbidity	NTU	3.84	0	3.27	1.36	4.21	21.32
Bicarbonate Alkalinity as CaCO3	mg/L	--	280	320	--	--	--
Carbonate Alkalinity as CaCO3	mg/L	--	<4.6	<4.6	--	--	--
Total Alkalinity as CaCO3	mg/L	--	280	320	--	--	--
Calcium, total	ug/L	--	--	100000	--	--	--
Iron, total	ug/L	--	5600	7600	6400	4600	7100
Magnesium, total	ug/L	--	22000	22000	--	--	--
Manganese, total	ug/L	--	1600	1500	--	--	--
Arsenic, dissolved	ug/L	--	11	9.7	--	--	--
Iron, dissolved	ug/L	--	4700	7100	--	--	--
Manganese, dissolved	ug/L	--	1300	1500	--	--	--
Molybdenum, dissolved	ug/L	--	9.8	14	--	--	--
Potassium, total	ug/L	--	2200	2800	--	--	--
Sodium, total	ug/L	--	30000	31000	--	--	--
Cobalt, Dissolved	ug/L	--	<0.19	--	--	--	--
Lithium, dissolved	ug/L	--	3.9	6.3	--	--	--

Appendix E

Statistical Evaluation

E1 Confidence Interval Evaluation – November 2023 Event

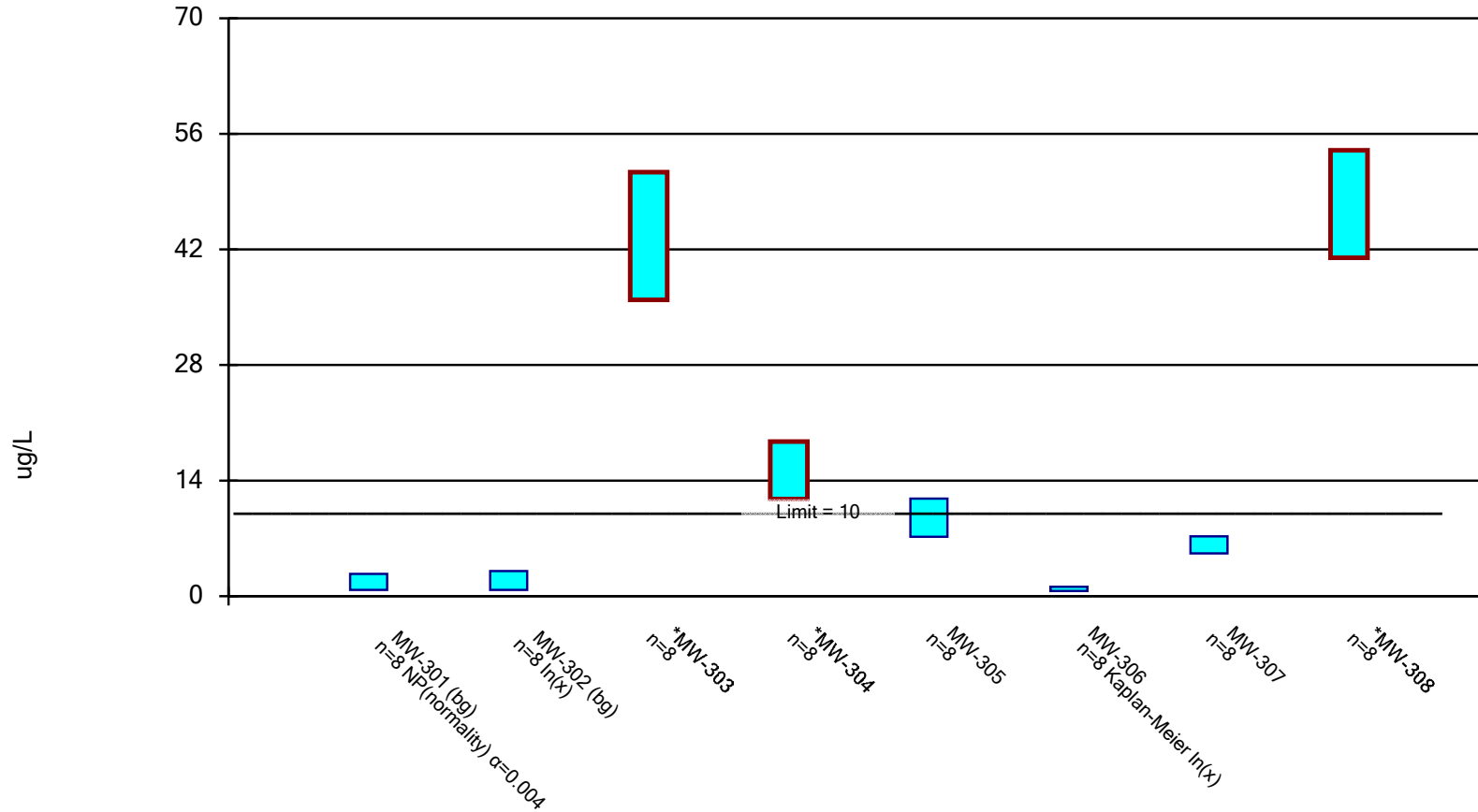
Confidence Interval

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020 Printed 3/7/2024, 2:01 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (ug/L)	MW-301 (bg)	2.7	0.75	10	No	8	62.5	No	0.004	NP (normality)
Arsenic (ug/L)	MW-302 (bg)	3.043	0.7593	10	No	8	12.5	ln(x)	0.01	Param.
Arsenic (ug/L)	MW-303	51.35	35.9	10	Yes	8	0	No	0.01	Param.
Arsenic (ug/L)	MW-304	18.73	11.77	10	Yes	8	0	No	0.01	Param.
Arsenic (ug/L)	MW-305	11.82	7.201	10	No	8	0	No	0.01	Param.
Arsenic (ug/L)	MW-306	1.137	0.63	10	No	8	37.5	ln(x)	0.01	Param.
Arsenic (ug/L)	MW-307	7.242	5.183	10	No	8	0	No	0.01	Param.
Arsenic (ug/L)	MW-308	54.01	40.99	10	Yes	8	0	No	0.01	Param.
Lithium (ug/L)	MW-301 (bg)	16.49	12.26	40	No	8	0	No	0.01	Param.
Lithium (ug/L)	MW-302 (bg)	10.57	4.55	40	No	8	12.5	No	0.01	Param.
Lithium (ug/L)	MW-303	19.64	15.11	40	No	8	0	No	0.01	Param.
Lithium (ug/L)	MW-304	16.95	12.8	40	No	8	0	No	0.01	Param.
Lithium (ug/L)	MW-305	21.44	15.06	40	No	8	0	No	0.01	Param.
Lithium (ug/L)	MW-306	13	2.3	40	No	8	87.5	No	0.004	NP (NDs)
Lithium (ug/L)	MW-307	13.68	7.041	40	No	8	12.5	No	0.01	Param.
Lithium (ug/L)	MW-308	49.94	37.81	40	No	8	0	No	0.01	Param.
Molybdenum (ug/L)	MW-301 (bg)	4.6	1.1	100	No	8	87.5	No	0.004	NP (NDs)
Molybdenum (ug/L)	MW-302 (bg)	4.6	1.1	100	No	8	87.5	No	0.004	NP (NDs)
Molybdenum (ug/L)	MW-303	15.57	10.03	100	No	8	0	No	0.01	Param.
Molybdenum (ug/L)	MW-304	32.62	21.88	100	No	8	0	No	0.01	Param.
Molybdenum (ug/L)	MW-305	75.25	38.25	100	No	8	0	No	0.01	Param.
Molybdenum (ug/L)	MW-306	255.2	182.3	100	Yes	8	0	No	0.01	Param.
Molybdenum (ug/L)	MW-307	13.14	5.432	100	No	8	0	ln(x)	0.01	Param.
Molybdenum (ug/L)	MW-308	76.64	53.36	100	No	8	0	No	0.01	Param.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 3/7/2024 2:00 PM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Confidence Interval

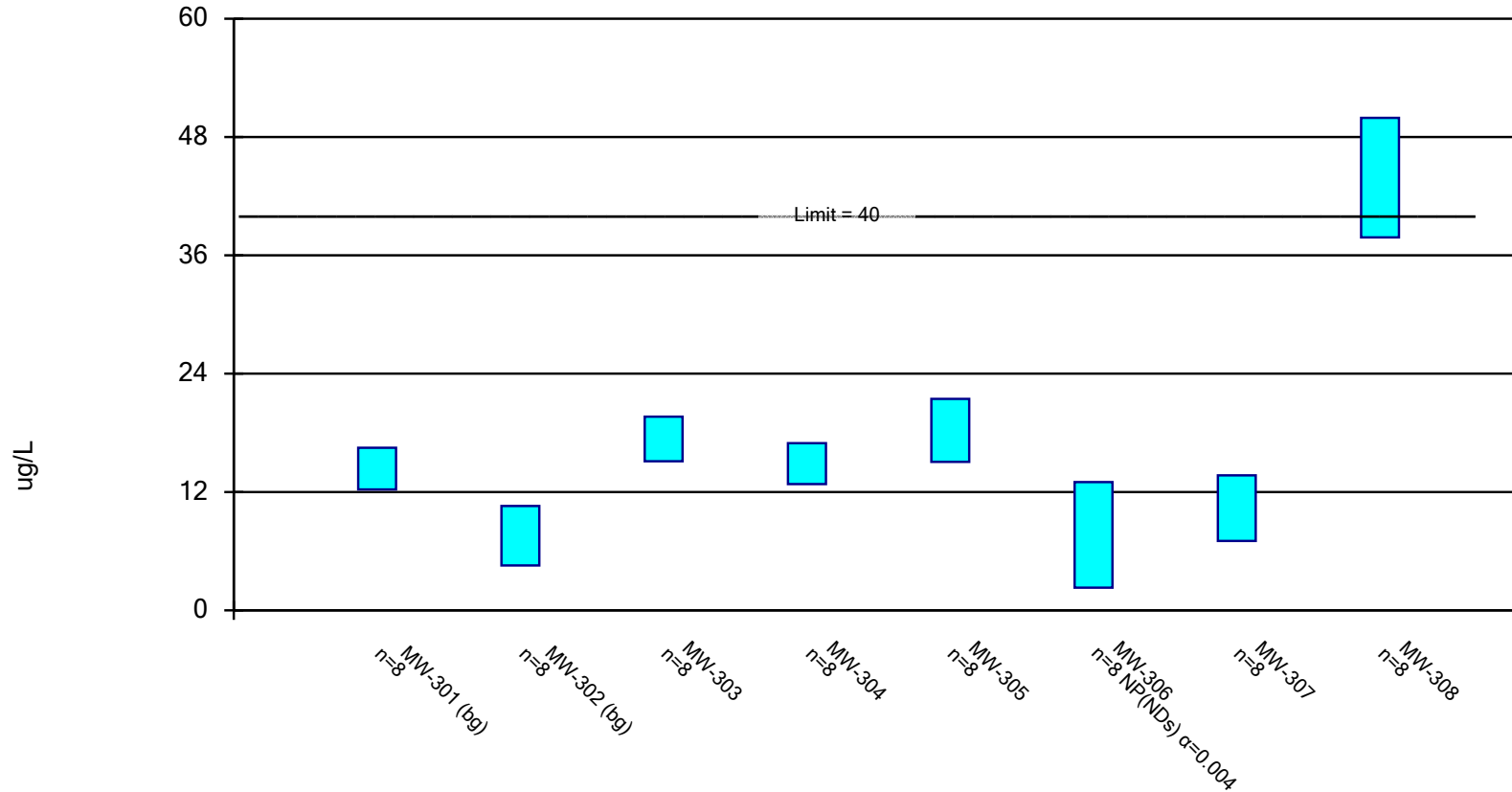
Constituent: Arsenic (ug/L) Analysis Run 3/7/2024 2:01 PM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

	MW-301 (bg)	MW-302 (bg)	MW-303	MW-304	MW-305	MW-306	MW-307	MW-308
4/27/2020	<0.88 (U)	4.4	48	11	6.2	1.3 (J)		
5/27/2020							6.1	58
10/19/2020	<0.88 (U)	2					6.7	50
10/20/2020			56	14	9.8	1.1 (J)		
4/26/2021							6.5	53
4/27/2021	<0.75 (U)	3.4	39	13	7.9	1 (J)		
10/20/2021					12	0.87 (J)		
10/21/2021	0.88 (J)	0.9 (J)	46	16			6.2	48
4/25/2022	0.8 (J)	1.2 (J)					4.2	44
4/26/2022			36	14	7.3	<0.75 (U)		
10/12/2022	<0.75 (U)	0.76 (J)	42	19	12	<0.75 (U)	6.1	39
4/19/2023			34	14	9.9 (J)	<2.7 (U)		
4/20/2023	<2.7 (U)	<2.7 (U)					6.2 (J)	46
11/6/2023	1.5 (J)							
11/7/2023		0.86 (J)	48	21	11	0.63 (J)	7.7	42
Mean	1.143	1.859	43.63	15.25	9.513	1.138	6.213	47.5
Std. Dev.	0.6746	1.345	7.289	3.284	2.181	0.6674	0.9717	6.141
Upper Lim.	2.7	3.043	51.35	18.73	11.82	1.137	7.242	54.01
Lower Lim.	0.75	0.7593	35.9	11.77	7.201	0.63	5.183	40.99

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 3/7/2024 2:00 PM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Confidence Interval

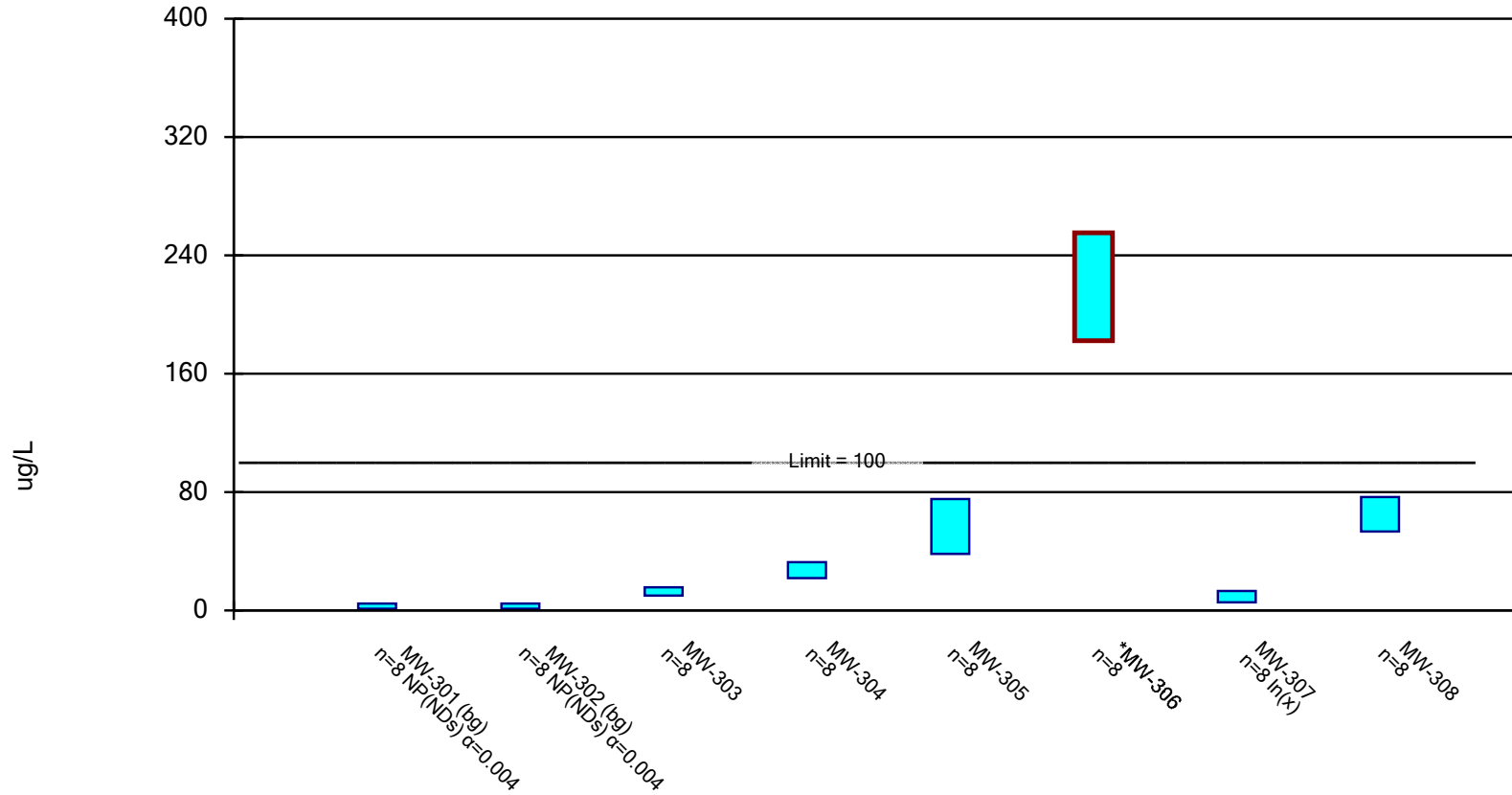
Constituent: Lithium (ug/L) Analysis Run 3/7/2024 2:01 PM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

	MW-301 (bg)	MW-302 (bg)	MW-303	MW-304	MW-305	MW-306	MW-307	MW-308
4/27/2020	11	3.8 (J)	14	11	12	<2.3 (U)		
5/27/2020							8.3 (J)	
10/19/2020	15	8.2 (J)					16	
10/20/2020			21	17	20	<2.5 (U)		
4/26/2021							9.4 (J)	39
4/27/2021	13	6.3 (J)	16	14	17	<2.5 (U)		
7/14/2021								47
10/20/2021					17	<2.5 (U)		
10/21/2021	13	6.9 (J)	17	14			10	39
2/22/2022								37
4/25/2022	17	5 (J)					12	50
4/26/2022			18	16	19	3.3 (J)		
10/12/2022	14	7.8 (J)	18	15	19	<2.5 (U)	13	42
4/19/2023			16 (J)	15 (J)	20 (J)	<13 (U)		
4/20/2023	16 (J)	<13 (U)					<13 (U)	53
11/6/2023	16							
11/7/2023		9.5 (J)	19	17	22	<2.5 (U)	7.7 (J)	44
Mean	14.38	7.563	17.38	14.88	18.25	3.887	10.36	43.88
Std. Dev.	1.996	2.842	2.134	1.959	3.012	3.694	3.134	5.718
Upper Lim.	16.49	10.57	19.64	16.95	21.44	13	13.68	49.94
Lower Lim.	12.26	4.55	15.11	12.8	15.06	2.3	7.041	37.81

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 3/7/2024 2:00 PM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

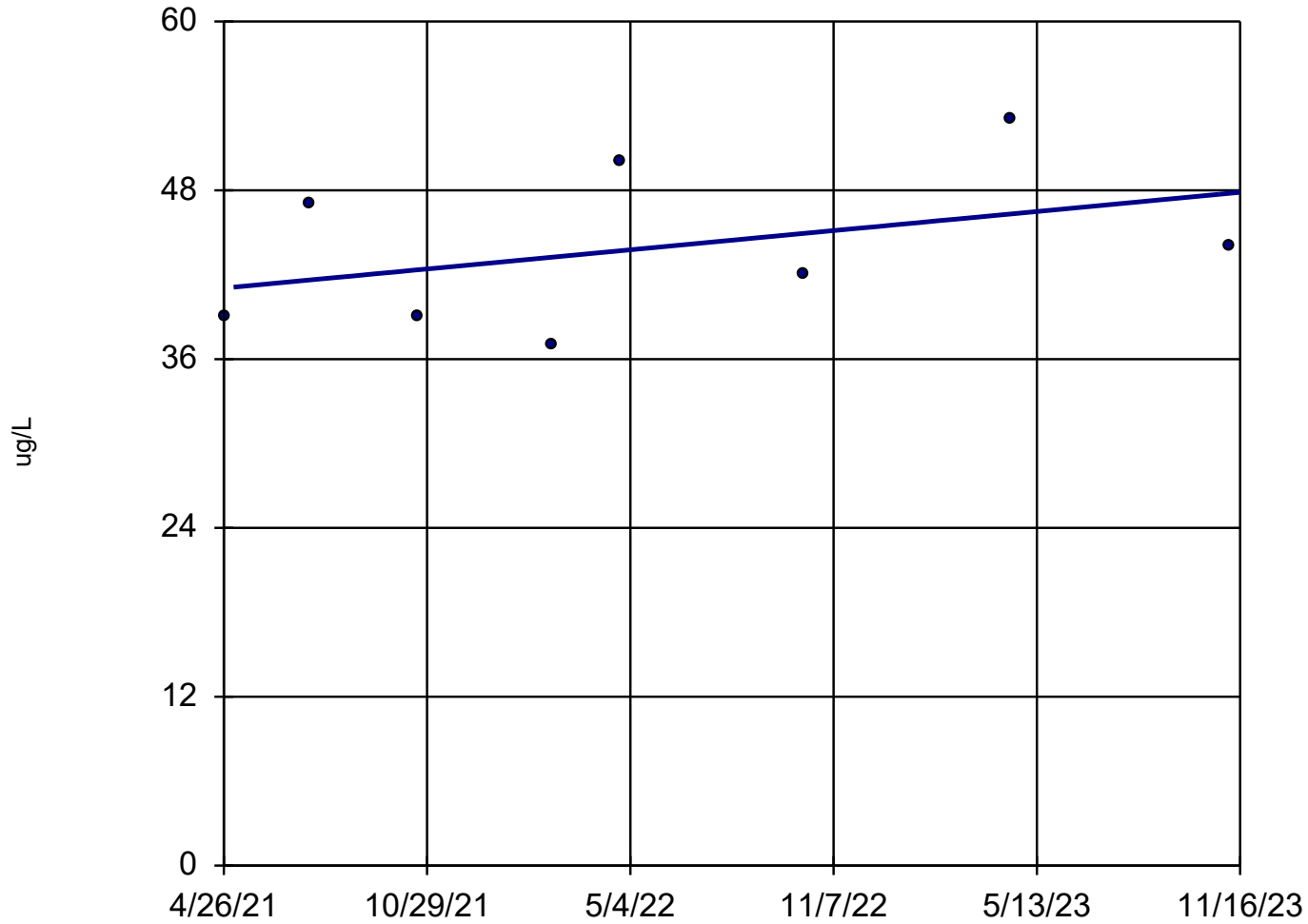
Confidence Interval

Constituent: Molybdenum (ug/L) Analysis Run 3/7/2024 2:01 PM View: PCS
 Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

	MW-301 (bg)	MW-302 (bg)	MW-303	MW-304	MW-305	MW-306	MW-307	MW-308
4/27/2020	<1.1 (U)	<1.1 (U)	8.4	26	38	250		
5/27/2020							7	64
10/19/2020	<1.1 (U)	<1.1 (U)					5.2	58
10/20/2020			17	28	58	260		
4/26/2021							8.5	53
4/27/2021	<1.3 (U)	<1.3 (U)	12	25	54	240		
10/20/2021					84	220		
10/21/2021	<1.3 (U)	<1.3 (U)	14	31			6.6	58
4/25/2022	<1.2 (U)	<1.2 (U)					8.4	73
4/26/2022			11	24	47	220		
10/12/2022	<1.2 (U)	<1.2 (U)	15	27	78	210	7.2	63
4/19/2023			12	20	35	200		
4/20/2023	<4.6 (U)	<4.6 (U)					21	88
11/6/2023	2.5							
11/7/2023		1.1 (J)	13	37	60	150	10	63
Mean	1.787	1.612	12.8	27.25	56.75	218.8	9.238	65
Std. Dev.	1.226	1.21	2.614	5.064	17.46	34.41	4.966	10.98
Upper Lim.	4.6	4.6	15.57	32.62	75.25	255.2	13.14	76.64
Lower Lim.	1.1	1.1	10.03	21.88	38.25	182.3	5.432	53.36

Linear Regression

MW-308



n = 8

Slope = 2.662
units/year.

alpha = 0.02
t = 1.096
critical = 2.612

No significant trend.

Normality test on residuals:
Shapiro Wilk @alpha
= 0.01, calculated
= 0.8309, critical
= 0.749.

Constituent: Lithium Analysis Run 3/7/2024 2:11 PM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Linear Regression

Constituent: Lithium (ug/L) Analysis Run 3/7/2024 2:11 PM View: PCS

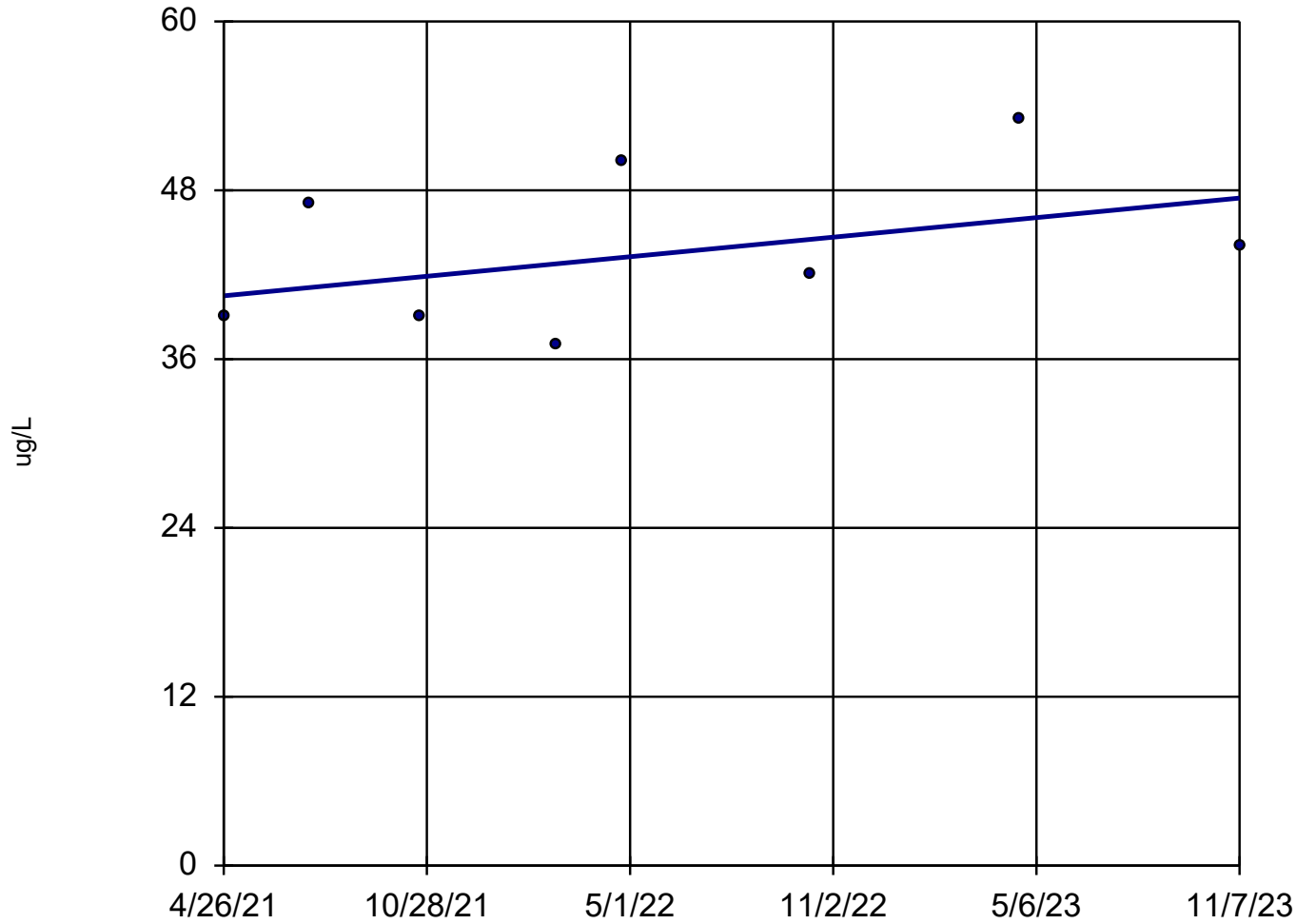
Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

MW-308

4/23/2019	29
10/28/2019	31
5/27/2020	35
10/19/2020	47
4/26/2021	39
7/14/2021	47
10/21/2021	39
2/22/2022	37
4/25/2022	50
10/12/2022	42
4/20/2023	53
11/7/2023	44

Sen's Slope Estimator

MW-308



n = 8
Slope = 2.742
units per year.
Mann-Kendall
statistic = 9
critical = 20
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Lithium Analysis Run 3/7/2024 2:11 PM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Sen's Slope Estimator

Constituent: Lithium (ug/L) Analysis Run 3/7/2024 2:12 PM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

MW-308

4/23/2019	29
10/28/2019	31
5/27/2020	35
10/19/2020	47
4/26/2021	39
7/14/2021	47
10/21/2021	39
2/22/2022	37
4/25/2022	50
10/12/2022	42
4/20/2023	53
11/7/2023	44

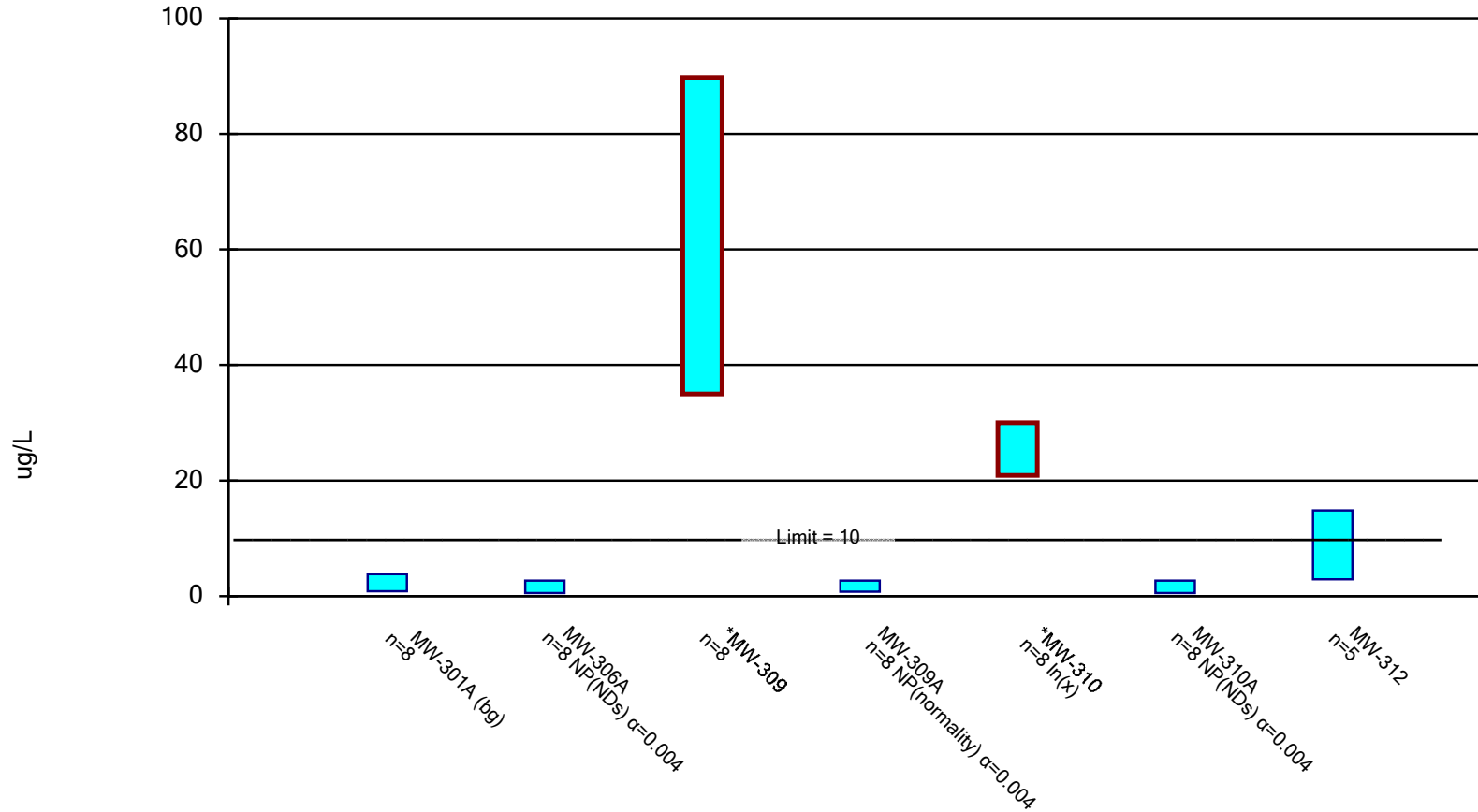
Confidence Interval

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020 Printed 3/7/2024, 2:02 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (ug/L)	MW-301A (bg)	3.794	0.8357	10	No	8	12.5	No	0.01	Param.
Arsenic (ug/L)	MW-306A	2.7	0.53	10	No	8	100	No	0.004	NP (NDs)
Arsenic (ug/L)	MW-309	89.77	34.98	10	Yes	8	0	No	0.01	Param.
Arsenic (ug/L)	MW-309A	2.7	0.77	10	No	8	37.5	No	0.004	NP (normality)
Arsenic (ug/L)	MW-310	30	20.89	10	Yes	8	0	ln(x)	0.01	Param.
Arsenic (ug/L)	MW-310A	2.7	0.53	10	No	8	100	No	0.004	NP (NDs)
Arsenic (ug/L)	MW-312	14.84	2.92	10	No	5	0	No	0.01	Param.
Molybdenum (ug/L)	MW-301A (bg)	4.155	2.189	100	No	8	12.5	ln(x)	0.01	Param.
Molybdenum (ug/L)	MW-306A	20.5	11.9	100	No	8	0	No	0.01	Param.
Molybdenum (ug/L)	MW-309	22.9	17.85	100	No	8	0	No	0.01	Param.
Molybdenum (ug/L)	MW-309A	10.71	7.935	100	No	8	0	No	0.01	Param.
Molybdenum (ug/L)	MW-310	61.45	36.05	100	No	8	0	No	0.01	Param.
Molybdenum (ug/L)	MW-310A	22.07	16.43	100	No	8	0	No	0.01	Param.
Molybdenum (ug/L)	MW-312	16.99	0.213	100	No	4	0	No	0.01	Param.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 3/7/2024 2:02 PM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

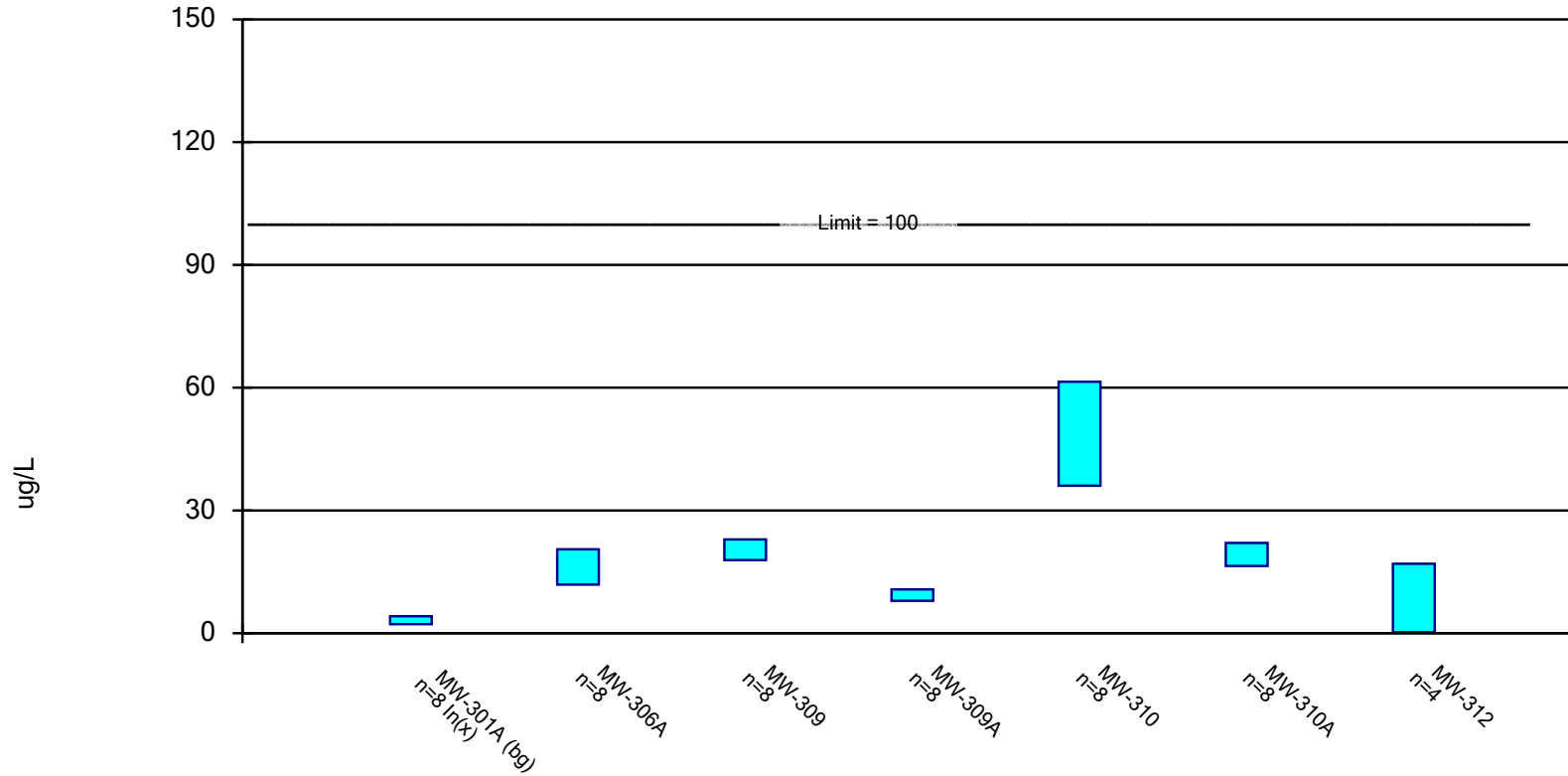
Confidence Interval

Constituent: Arsenic (ug/L) Analysis Run 3/7/2024 2:02 PM View: PCS
 Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

	MW-301A (bg)	MW-306A	MW-309	MW-309A	MW-310	MW-310A	MW-312
4/27/2020			75		23		
9/15/2020	3.7	<0.88 (U)		<0.88 (U)		<0.88 (U)	
10/20/2020		<0.88 (U)					
10/21/2020	1.9 (J)		89	<0.88 (U)	36	<0.88 (U)	
4/27/2021		<0.75 (U)	100	0.98 (J)	25	<0.75 (U)	
4/28/2021	0.87 (J)						
10/20/2021		<0.75 (U)					
10/21/2021			75				
10/22/2021	1.4 (J)			0.87 (J)	25	<0.75 (U)	
4/26/2022		<0.75 (U)		0.79 (J)			
4/27/2022			39		20	<0.75 (U)	
4/29/2022	3.3						
5/25/2022							10
7/15/2022							13
10/12/2022		<0.75 (U)	47	0.77 (J)	23	<0.75 (U)	9.2
10/13/2022	1.3 (J)						
4/19/2023		<2.7 (U)	28	<2.7 (U)	24	<2.7 (U)	9 (J)
4/20/2023	<2.7 (U)						
11/7/2023	4.7	<0.53 (U)	46	1 (J)	27	<0.53 (U)	3.2
Mean	2.315	0.9988	62.38	1.109	25.38	0.9988	8.88
Std. Dev.	1.396	0.6959	25.85	0.6479	4.749	0.6959	3.557
Upper Lim.	3.794	2.7	89.77	2.7	30	2.7	14.84
Lower Lim.	0.8357	0.53	34.98	0.77	20.89	0.53	2.92

Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 3/7/2024 2:02 PM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Confidence Interval

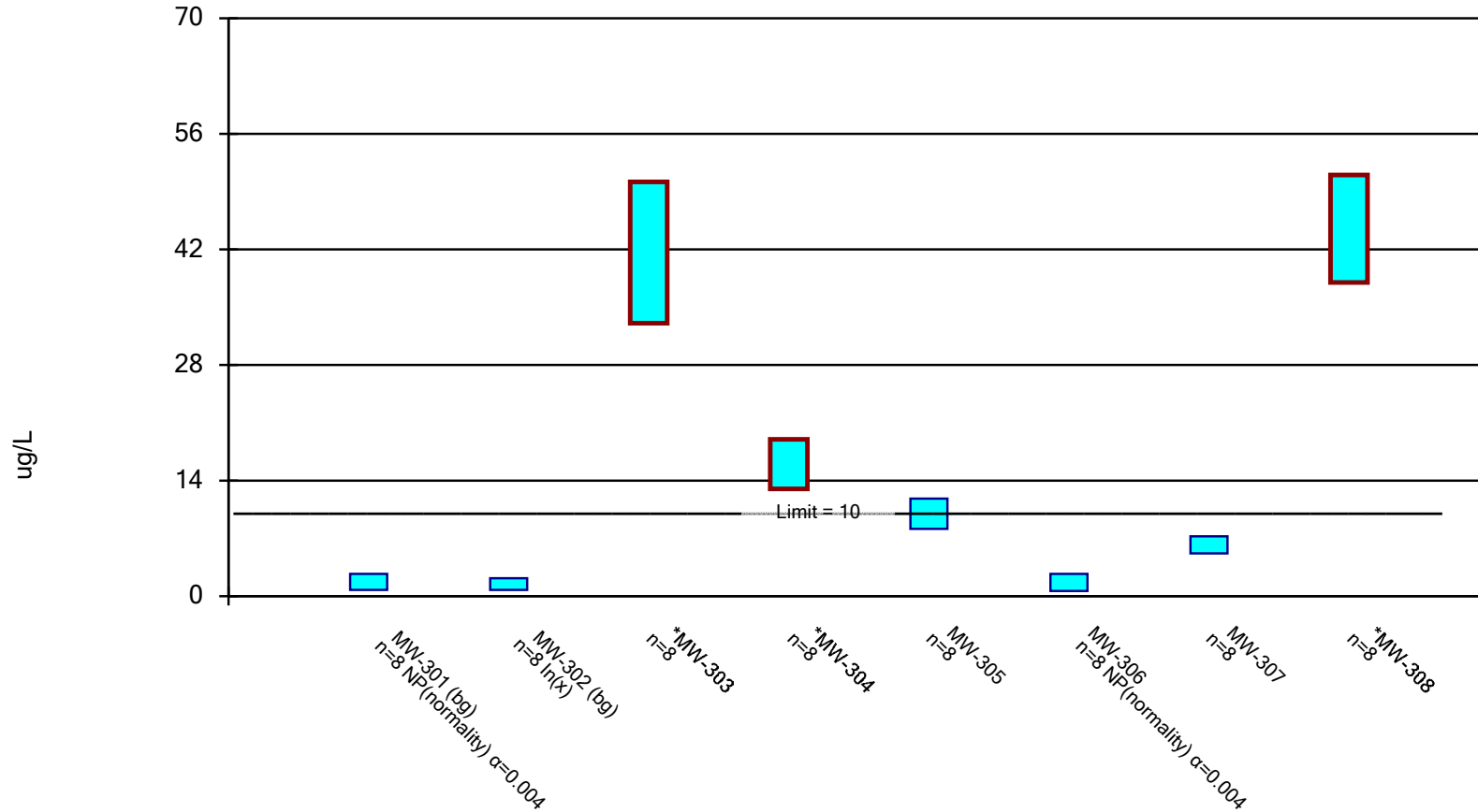
Constituent: Molybdenum (ug/L) Analysis Run 3/7/2024 2:02 PM View: PCS
 Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

	MW-301A (bg)	MW-306A	MW-309	MW-309A	MW-310	MW-310A	MW-312
4/27/2020			19		55		
9/15/2020	2.1	8.6		8.5		20	
10/20/2020		13					
10/21/2020	3.1		21	7.1	71	21	
4/27/2021		16	17	9.1	43	24	
4/28/2021	3.1						
10/20/2021		15					
10/21/2021			24				
10/22/2021	3.1			11	45	20	
4/26/2022		17		11			
4/27/2022			18		45	19	
4/29/2022	2.5						
5/25/2022							7
10/12/2022		19	23	9	58	18	14
10/13/2022	3.4						
4/19/2023		21	21	10	33	16	7.7 (J)
4/20/2023	<4.6 (U)						
11/7/2023	5.6	20	20	8.9	40	16	5.7
Mean	3.15	16.2	20.38	9.325	48.75	19.25	8.6
Std. Dev.	1.09	4.061	2.387	1.311	11.99	2.659	3.694
Upper Lim.	4.155	20.5	22.9	10.71	61.45	22.07	16.99
Lower Lim.	2.189	11.9	17.85	7.935	36.05	16.43	0.213

E2 Confidence Interval Evaluation – April 2024 Event

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 7/11/2024 9:10 AM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Confidence Interval

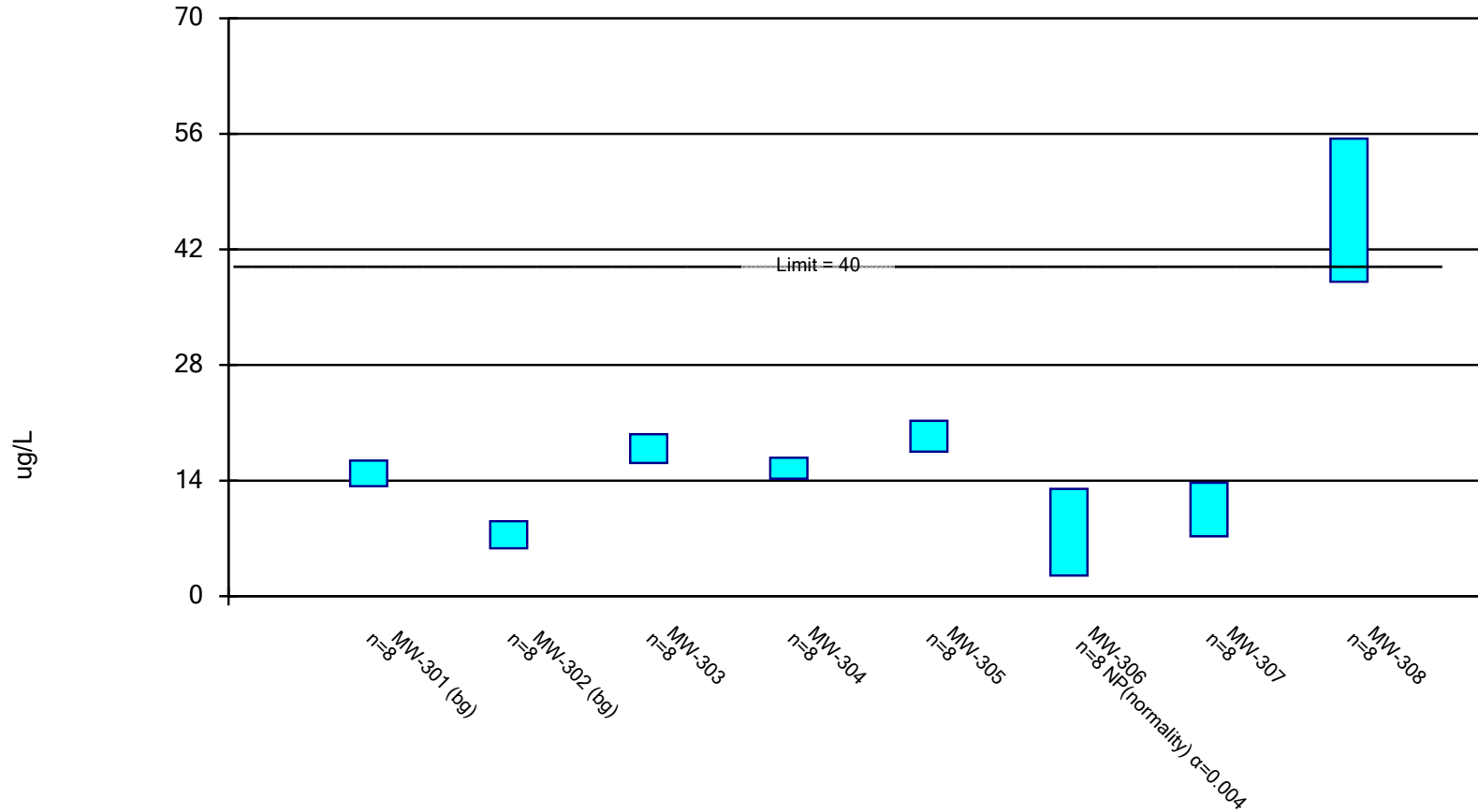
Constituent: Arsenic (ug/L) Analysis Run 7/11/2024 9:11 AM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

	MW-301 (bg)	MW-302 (bg)	MW-303	MW-304	MW-305	MW-306	MW-307	MW-308
10/19/2020	<0.88 (U)	2					6.7	50
10/20/2020			56	14	9.8	1.1 (J)		
4/26/2021							6.5	53
4/27/2021	<0.75 (U)	3.4	39	13	7.9	1 (J)		
10/20/2021					12	0.87 (J)		
10/21/2021	0.88 (J)	0.9 (J)	46	16			6.2	48
4/25/2022	0.8 (J)	1.2 (J)					4.2	44
4/26/2022			36	14	7.3	<0.75 (U)		
10/12/2022	<0.75 (U)	0.76 (J)	42	19	12	<0.75 (U)	6.1	39
4/19/2023			34	14	9.9 (J)	<2.7 (U)		
4/20/2023	<2.7 (U)	<2.7 (U)					6.2 (J)	46
11/6/2023	1.5 (J)							
11/7/2023		0.86 (J)	48	21	11	0.63 (J)	7.7	42
4/15/2024			32	17		0.64 (J)		
4/16/2024					10			
4/17/2024		1.1 (J)						
4/18/2024	0.87 (J)						6.1	34
Mean	1.141	1.446	41.63	16	9.988	1.055	6.213	44.5
Std. Dev.	0.6752	0.8805	8.07	2.828	1.722	0.685	0.9717	6.141
Upper Lim.	2.7	2.167	50.18	19	11.81	2.7	7.242	51.01
Lower Lim.	0.75	0.7539	33.07	13	8.163	0.63	5.183	37.99

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/11/2024 9:10 AM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Confidence Interval

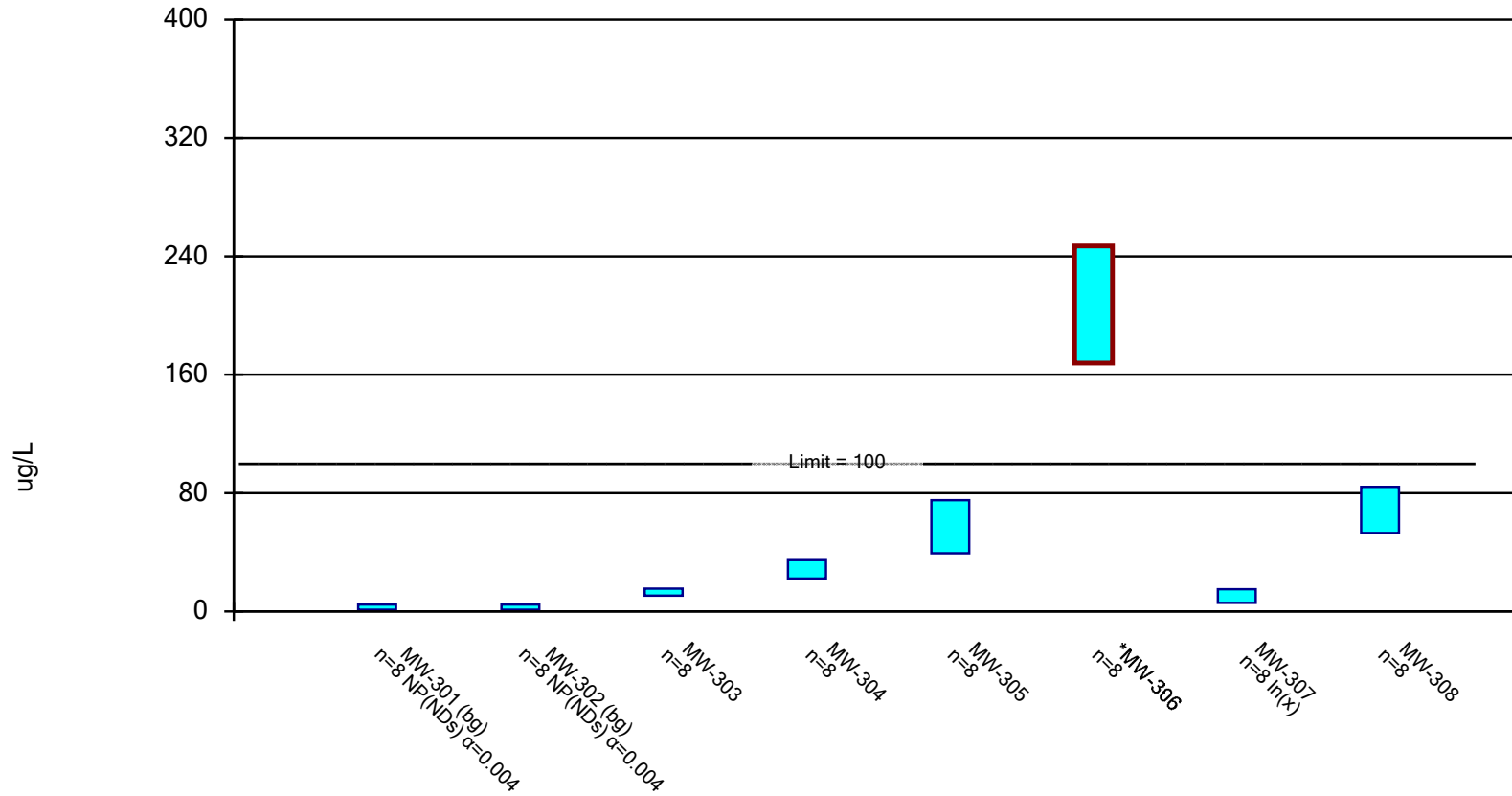
Constituent: Lithium (ug/L) Analysis Run 7/11/2024 9:11 AM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

	MW-301 (bg)	MW-302 (bg)	MW-303	MW-304	MW-305	MW-306	MW-307	MW-308
10/19/2020	15	8.2 (J)					16	
10/20/2020			21	17	20	<2.5 (U)		
4/26/2021							9.4 (J)	
4/27/2021	13	6.3 (J)	16	14	17	<2.5 (U)		
7/14/2021								47
10/20/2021					17	<2.5 (U)		
10/21/2021	13	6.9 (J)	17	14			10	39
2/22/2022								37
4/25/2022	17	5 (J)					12	50
4/26/2022			18	16	19	3.3 (J)		
10/12/2022	14	7.8 (J)	18	15	19	<2.5 (U)	13	42
4/19/2023			16 (J)	15 (J)	20 (J)	<13 (U)		
4/20/2023	16 (J)	<13 (U)					<13 (U)	53
11/6/2023	16							
11/7/2023		9.5 (J)	19	17	22	<2.5 (U)	7.7 (J)	44
4/15/2024			18	16		2.7 (J)		
4/16/2024					21			
4/17/2024		9.3 (J)						
4/18/2024	15						9.3 (J)	62
Mean	14.88	7.438	17.88	15.5	19.38	3.938	10.49	46.75
Std. Dev.	1.458	1.551	1.642	1.195	1.768	3.672	3.059	8.172
Upper Lim.	16.42	9.081	19.62	16.77	21.25	13	13.73	55.41
Lower Lim.	13.33	5.794	16.13	14.23	17.5	2.5	7.245	38.09

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/11/2024 9:10 AM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

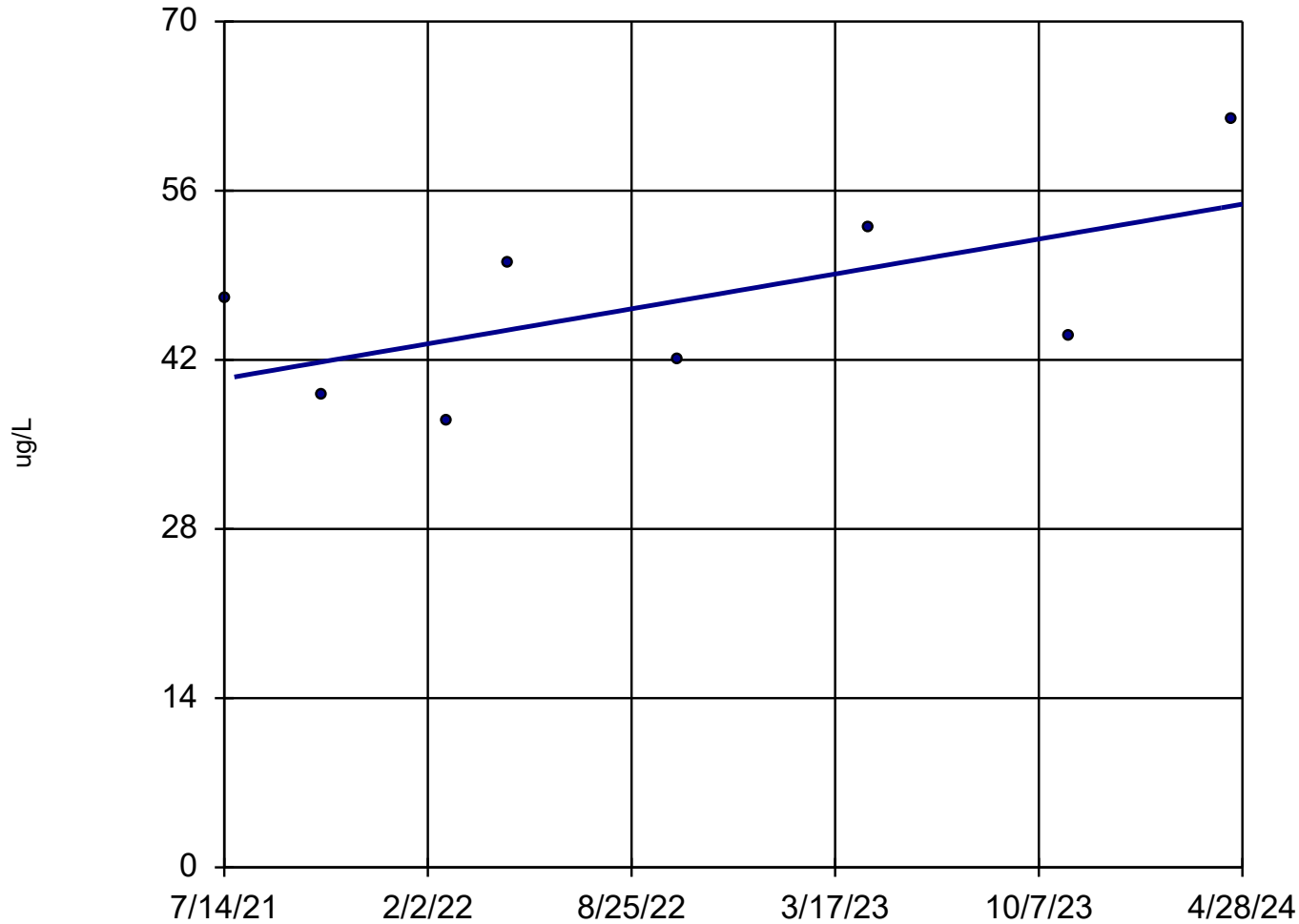
Confidence Interval

Constituent: Molybdenum (ug/L) Analysis Run 7/11/2024 9:11 AM View: PCS
 Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

	MW-301 (bg)	MW-302 (bg)	MW-303	MW-304	MW-305	MW-306	MW-307	MW-308
10/19/2020	<1.1 (U)	<1.1 (U)					5.2	58
10/20/2020			17	28	58	260		
4/26/2021							8.5	53
4/27/2021	<1.3 (U)	<1.3 (U)	12	25	54	240		
10/20/2021					84	220		
10/21/2021	<1.3 (U)	<1.3 (U)	14	31			6.6	58
4/25/2022	<1.2 (U)	<1.2 (U)					8.4	73
4/26/2022			11	24	47	220		
10/12/2022	<1.2 (U)	<1.2 (U)	15	27	78	210	7.2	63
4/19/2023			12	20	35	200		
4/20/2023	<4.6 (U)	<4.6 (U)					21	88
11/6/2023	2.5							
11/7/2023		1.1 (J)	13	37	60	150	10	63
4/15/2024			10	36		160		
4/16/2024					42			
4/17/2024		<1.3						
4/18/2024	<1.3						15	93
Mean	1.812	1.637	13	28.5	57.25	207.5	10.24	68.63
Std. Dev.	1.212	1.2	2.268	5.88	16.89	37.32	5.248	14.74
Upper Lim.	4.6	4.6	15.4	34.73	75.16	247.1	15.02	84.25
Lower Lim.	1.1	1.1	10.6	22.27	39.34	167.9	5.749	53

Linear Regression

MW-308



n = 8

Slope = 5.175
units/year.

alpha = 0.02
t = 1.962
critical = 2.612

No significant trend.

Normality test on residuals:
Shapiro Wilk @alpha
= 0.01, calculated
= 0.8802, critical
= 0.749.

Constituent: Lithium Analysis Run 7/11/2024 9:13 AM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Linear Regression

Constituent: Lithium (ug/L) Analysis Run 7/11/2024 9:14 AM View: PCS

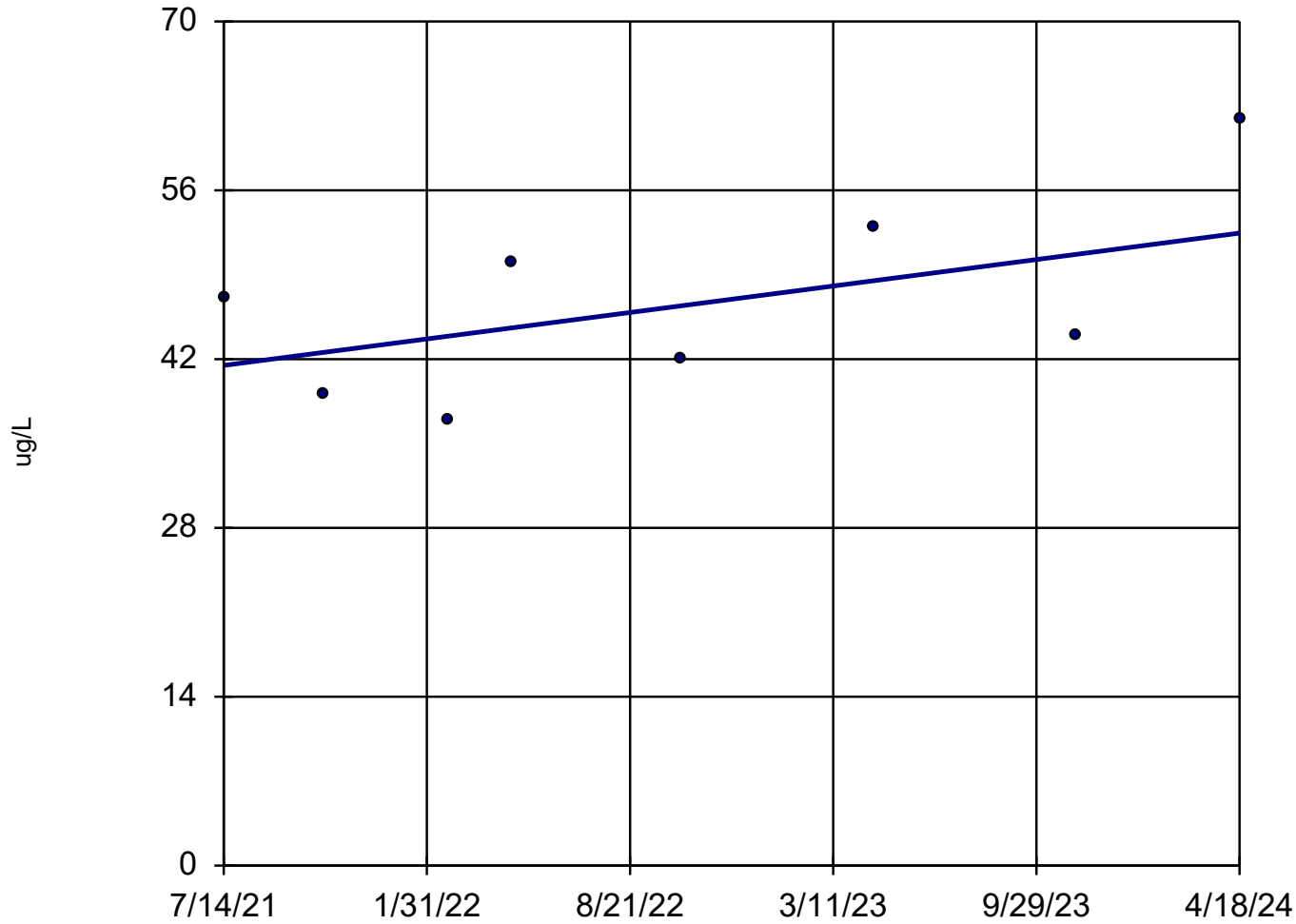
Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

MW-308

4/23/2019	29
10/28/2019	31
5/27/2020	35
10/19/2020	47
4/26/2021	39
7/14/2021	47
10/21/2021	39
2/22/2022	37
4/25/2022	50
10/12/2022	42
4/20/2023	53
11/7/2023	44
4/18/2024	62

Sen's Slope Estimator

MW-308



n = 8
Slope = 3.972
units per year.
Mann-Kendall
statistic = 12
critical = 20
Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Lithium Analysis Run 7/11/2024 9:14 AM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Sen's Slope Estimator

Constituent: Lithium (ug/L) Analysis Run 7/11/2024 9:15 AM View: PCS

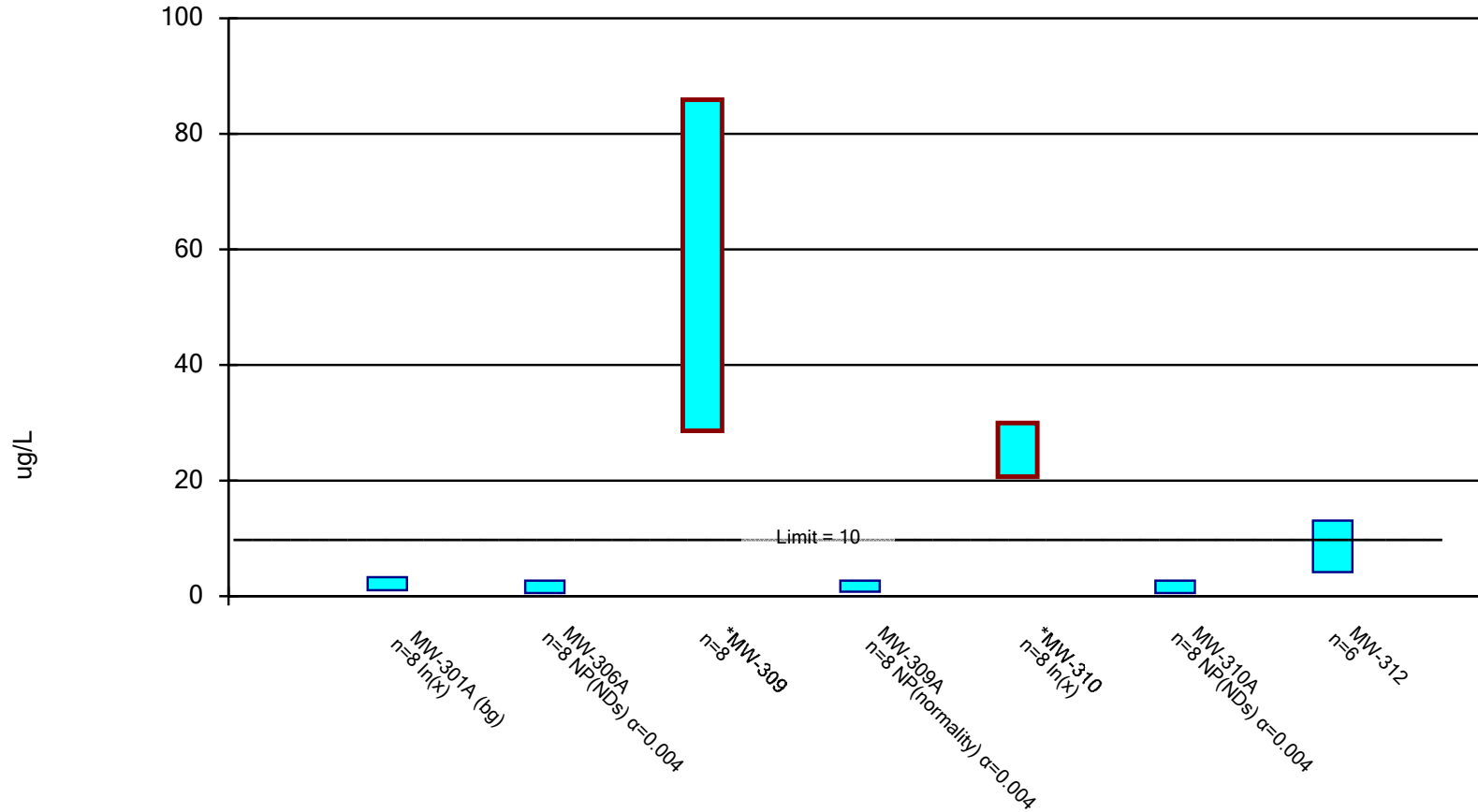
Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

MW-308

4/23/2019	29
10/28/2019	31
5/27/2020	35
10/19/2020	47
4/26/2021	39
7/14/2021	47
10/21/2021	39
2/22/2022	37
4/25/2022	50
10/12/2022	42
4/20/2023	53
11/7/2023	44
4/18/2024	62

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 7/11/2024 9:20 AM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Confidence Interval

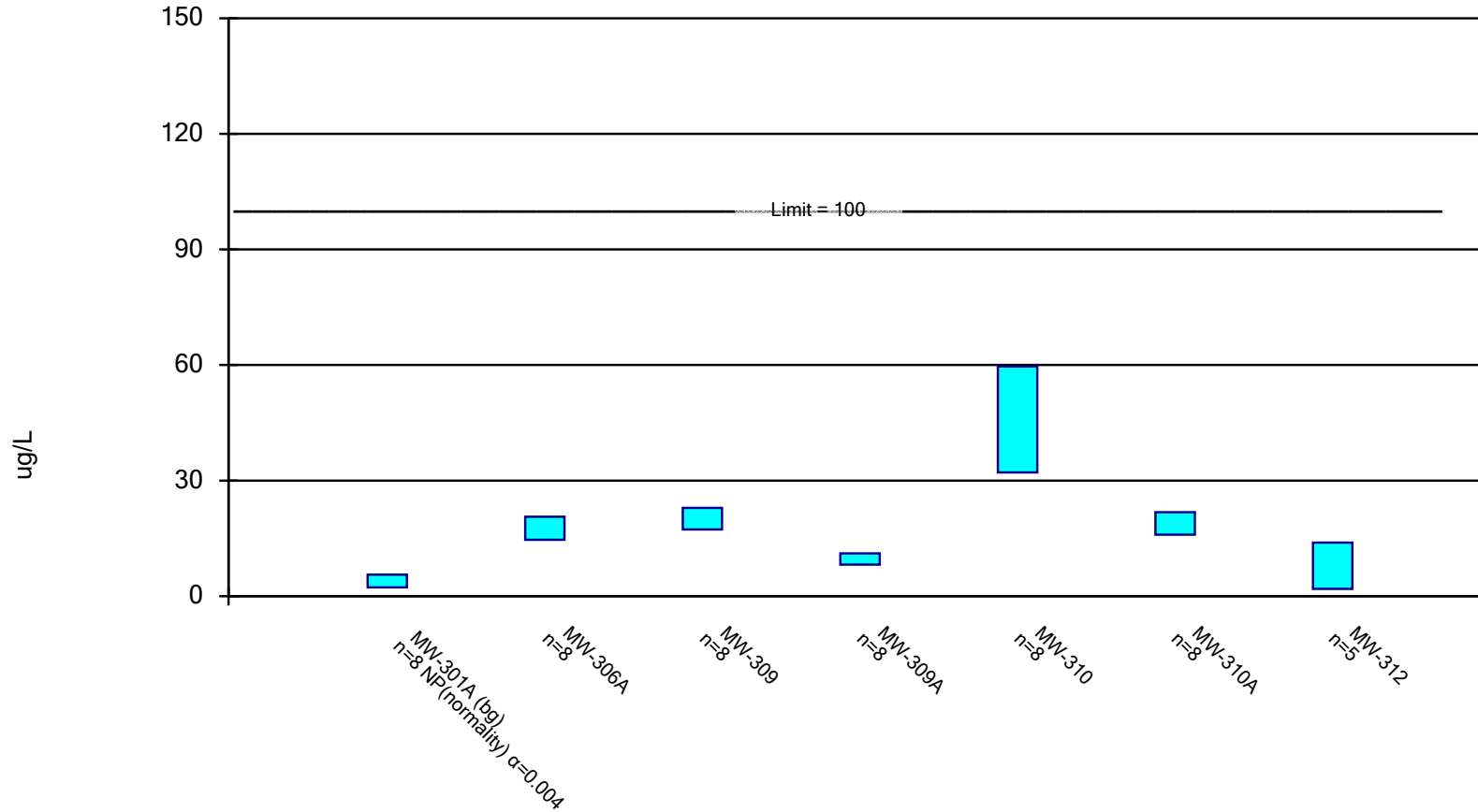
Constituent: Arsenic (ug/L) Analysis Run 7/11/2024 9:21 AM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

	MW-301A (bg)	MW-306A	MW-309	MW-309A	MW-310	MW-310A	MW-312
10/20/2020		<0.88 (U)					
10/21/2020	1.9 (J)		89	<0.88 (U)	36	<0.88 (U)	
4/27/2021		<0.75 (U)	100	0.98 (J)	25	<0.75 (U)	
4/28/2021	0.87 (J)						
10/20/2021		<0.75 (U)					
10/21/2021			75				
10/22/2021	1.4 (J)			0.87 (J)	25	<0.75 (U)	
4/26/2022		<0.75 (U)		0.79 (J)			
4/27/2022			39		20	<0.75 (U)	
4/29/2022	3.3						
5/25/2022							10
7/15/2022							13
10/12/2022		<0.75 (U)	47	0.77 (J)	23	<0.75 (U)	9.2
10/13/2022	1.3 (J)						
4/19/2023		<2.7 (U)	28	<2.7 (U)	24	<2.7 (U)	9 (J)
4/20/2023	<2.7 (U)						
11/7/2023	4.7	<0.53 (U)	46	1 (J)	27	<0.53 (U)	3.2
4/15/2024		<0.53	34	0.84 (J)	22		7.3
4/16/2024						<0.53	
4/17/2024	2.1						
Mean	2.115	0.955	57.25	1.104	25.25	0.955	8.617
Std. Dev.	1.279	0.7151	27.02	0.6501	4.833	0.7151	3.246
Upper Lim.	3.287	2.7	85.89	2.7	29.96	2.7	13.08
Lower Lim.	1.032	0.53	28.61	0.77	20.69	0.53	4.157

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/11/2024 9:20 AM View: PCS

Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

Confidence Interval

Constituent: Molybdenum (ug/L) Analysis Run 7/11/2024 9:21 AM View: PCS
 Prairie Creek Generating Station Client: SCS Engineers Data: PCS - Chem-export-Dec2020

	MW-301A (bg)	MW-306A	MW-309	MW-309A	MW-310	MW-310A	MW-312
10/20/2020		13					
10/21/2020	3.1		21	7.1	71	21	
4/27/2021		16	17	9.1	43	24	
4/28/2021	3.1						
10/20/2021		15					
10/21/2021			24				
10/22/2021	3.1			11	45	20	
4/26/2022		17		11			
4/27/2022			18		45	19	
4/29/2022	2.5						
5/25/2022							7
10/12/2022		19	23	9	58	18	14
10/13/2022	3.4						
4/19/2023		21	21	10	33	16	7.7 (J)
4/20/2023	<4.6 (U)						
11/7/2023	5.6	20	20	8.9	40	16	5.7
4/15/2024		20	17	11	32		5
4/16/2024						17	
4/17/2024	2.8						
Mean	3.237	17.63	20.13	9.638	45.88	18.88	7.88
Std. Dev.	1.02	2.825	2.642	1.382	12.99	2.748	3.581
Upper Lim.	5.6	20.62	22.93	11.1	59.64	21.79	13.88
Lower Lim.	2.3	14.63	17.32	8.172	32.11	15.96	1.879