

2022 Annual Groundwater Monitoring and Corrective Action Report

M.L. Kapp Generating Station
3301 Highway 67 S
Clinton, Iowa 52732

Prepared for:



Interstate Power and Light Company
4902 N. Biltmore Lane
Madison, Wisconsin 53718

SCS ENGINEERS

25222077.00 | August 1, 2023

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

OVERVIEW OF CURRENT STATUS

M.L. Kapp Generating Station 2022 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 for the capped inactive impoundments at the M.L. Kapp Generating Station (KAP) monitors a capped and closed main ash pond. 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 an SSI over background for one or more constituents listed in Appendix III to this part pursuant to §257.94(e): (A) Identify those constituents listed in Appendix III to this part and the names of the monitoring wells associated with such an increase; and	<p>SSIs initially determined on July 18, 2019, based on April 2019 monitoring results. In 2022, SSIs for semiannual events for compliance wells at the waste boundary included the following; see Tables 5A and 5B for complete results.</p> <p><u>April 2022</u> Boron: MW-301, MW-302, MW-303, MW-304, MW-305, MW-306</p> <p>Chloride: MW-306</p> <p>Sulfate: MW-301, MW-302, MW-303, MW-304, MW-305, MW-306</p>

Category	Rule Requirement	Site Status
		<p>Total Dissolved Solids (TDS): MW-303</p> <p><u>November 2022</u> Boron: MW-301, MW-302, MW-303, MW-304, MW-305, MW-306</p> <p>Chloride: MW-306</p> <p>Sulfate: MW-301, MW-302, MW-303, MW-304, MW-305, MW-306</p>
	(B) Provide the date when the assessment monitoring program was initiated for the CCR unit.	January 13, 2020
Statistically Significant Levels (SSL) Above Groundwater Protection Standard (GPS)	(iv) If it was determined that there was an SSL above the GPS for one or more constituents listed in Appendix IV to this part pursuant to §257.95(g) include all of the following:	
	(A) Identify those constituents listed in Appendix IV to this part and the names of the monitoring wells associated with such an increase;	<p>Molybdenum: Initially determined to be at an SSL above the GPS on July 13, 2020 at compliance monitoring wells MW-301, MW-302, MW-304, and MW-305.</p> <p>Lithium: Initially determined to be at an SSL above the GPS on August 5, 2021 at compliance monitoring well MW-306.</p> <p>Arsenic: Initially determined to be at an SSL above the GPS on March 6, 2023 at monitoring well MW-303.</p>

Category	Rule Requirement	Site Status
		<p>For the 2022 monitoring events, compliance wells/parameters determined to be at SSL above the GPS were as follows:</p> <p><u>April 2022</u> Lithium: MW-306 Molybdenum: MW-301, MW-302, MW-304, MW-305</p> <p><u>November 2022</u> Arsenic: MW-303 Lithium: MW-306 Molybdenum: MW-301, MW-302, MW-304, MW-305</p> <p>Note: See Tables 5A and 5B for complete results from 2022.</p>
	(B) Provide the date when the assessment of corrective measures was initiated for the CCR unit;	October 12, 2020
	(C) Provide the date when the public meeting will be held for the assessment of corrective measures for the CCR unit; and	To Be Determined
	(D) Provide the date when the assessment of corrective measures will be completed for the CCR unit.	<p>March 11, 2021 (Molybdenum)</p> <p>Updated ACM information for lithium and arsenic will be included with the Selection of Remedy Report, which is in progress.</p>

Category	Rule Requirement	Site Status
Selection of Remedy	(v) Whether a remedy was selected pursuant to §257.97 during the current annual reporting period and, if so, the date of remedy selection; and	Not applicable – Selection of remedy not yet completed
Corrective Action	(vi) Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.	Not applicable – remedial activities not yet initiated

Table of Contents

Section	Page
OVERVIEW OF CURRENT STATUS.....	i
1.0 Introduction.....	1
2.0 Background.....	1
2.1 Geologic and Hydrogeologic Setting.....	1
2.1.1 Regional Geologic Information	1
2.1.2 Site Information	2
2.2 CCR Rule Monitoring System	2
3.0 257.100(e)(5) Groundwater Monitoring and Corrective Action for Inactive CCR Surface Impoundments	3
4.0 §257.90(e) Annual Report Requirements.....	3
4.1 §257.90(e)(1) Site Map.....	3
4.2 §257.90(e)(2) Monitoring System Changes.....	3
4.3 §257.90(e)(3) Summary of Sampling Events.....	4
4.4 §257.90(e)(4) Monitoring Transition Narrative.....	4
4.5 §257.90(e)(5) Other Requirements.....	5
4.5.1 §257.90(e) General Requirements.....	5
4.5.2 §257.94(d) Alternative Detection Monitoring Frequency.....	7
4.5.3 §257.94(e)(2) Alternative Source Demonstration for Detection Monitoring	7
4.5.4 §257.95(c) Alternative Assessment Monitoring Frequency.....	7
4.5.5 §257.95(d)(3) Assessment Monitoring Results and Standards	7
4.5.6 §257.95(g)(3)(ii) Alternative Source Demonstration for Assessment Monitoring ..	7
4.5.7 §257.96(a) Extension of Time for Corrective Measures Assessment	8
5.0 §257.90(e)(6) Overview	8
6.0 References.....	8

Tables

Table 1.	Groundwater Monitoring Well Network
Table 2.	Groundwater Samples Summary
Table 3.	Groundwater Elevation Summary
Table 4A.	Horizontal Gradients and Flow Velocity
Table 4B.	Vertical Gradients
Table 5A.	Groundwater Analytical Results – February 2022
Table 5B.	Groundwater Analytical Results – April - November 2022
Table 6.	2022 Groundwater Field Data

Figures

- Figure 1. Site Location Map
- Figure 2. Site Plan and Monitoring Well Location Map
- Figure 3. Water Table Map – April 2022
- Figure 4. Water Table Map – November 2022

Appendices

- Appendix A Summary of Regional Hydrogeologic Stratigraphy
- Appendix B Boring Logs and Well Construction Documentation
- Appendix C Laboratory Reports
 - C1 February 2022 Supplemental Assessment Monitoring
 - C2 April 2022 Assessment Monitoring
 - C3 August 2022 Supplemental Assessment Monitoring
 - C4 November 2022 Assessment Monitoring
- Appendix D Historical Monitoring Results
- Appendix E Statistical Evaluation
 - E1 LCL Evaluation – April 2022 Event
 - E2 LCL Evaluation – November 2022 Event
 - E3 UPL Update and Tolerance Limit Calculation – April 2022 Event

I:\25222077.00\Deliverables\2022 - Federal Annual Report M.L. Kapp\230801_Federal Annual Report_KAPP_Final.docx

1.0 INTRODUCTION

This 2022 Annual Groundwater Monitoring and Corrective Action Report was prepared to support compliance with the groundwater monitoring requirements of the “Coal Combustion Residuals (CCR) Final Rule” published by the U.S. Environmental Protection Agency (U.S. EPA) in the *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities*; Final Rule, dated April 17, 2015 (U.S. EPA, 2015) and subsequent amendments. Specifically, this report was prepared to fulfill the requirements of 40 CFR 257.100 and 40 CFR 257.90(e). The applicable sections of the Rule are provided below in *italics*, followed by applicable information relative to the 2020 Annual Groundwater Monitoring and Corrective Action Report for the CCR unit.

This report covers the period of groundwater monitoring from January 1, 2022, through December 31, 2022.

The groundwater monitoring system for the M.L. Kapp Generating Station (KAP) monitors a single CCR unit:

- Kapp Main Ash Pond (inactive surface impoundment – closed January 2018)

The system is designed to detect monitored constituents at the waste boundary of the KAP CCR unit as required by 40 CFR 257.91(d). As of the end of 2022, the groundwater monitoring system consisted of one upgradient background well, six downgradient compliance wells at the waste boundary, five downgradient delineation wells, and one sidegradient supplemental background well (Table 1, Figure 1 and Figure 2)

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 Geologic Information

The uppermost geologic formation beneath KAP that meets the definition of the “uppermost aquifer,” as defined under 40 CFR 257.53, is the surficial alluvial aquifer. The alluvial aquifer is composed of glacial drift, sand, silt, and clay. Immediately underlying the surficial alluvial aquifer is the Silurian bedrock aquifer, which consists of limestone and dolomite (Wahl et al., 1978). A map of the regional geology in the area is included in **Appendix A**.

The Mississippi River and associated alluvial aquifers are a major source of surface water and shallow groundwater in the area.

Regional information indicates that groundwater flow within the Silurian dolomite and limestone is to the south-southeast. A map of regional flow is included in **Appendix A**.

2.1.2 Site Information

Soils at the site are primarily sand, silt, and clay to a depth of approximately 25 feet and overlie weathered limestone bedrock. During drilling of wells MW-301 through MW-306, MW-308, and MW-309, the unconsolidated materials were identified as consisting primarily of sand, lean clay, and sandy silt. During drilling of background monitoring well MW-307, installed in April 2020, the unconsolidated materials were identified as primarily clayey sand, silty sand, and silty clay. Limestone bedrock was encountered at MW-306 at a depth of 10 feet below ground surface (bgs) and at MW-310, installed in September 2021, at a depth of 20 ft bgs. During drilling for downgradient monitoring wells MW-311 and MW-311A, installed in December 2021, limestone bedrock was encountered at approximately 8 feet bgs. The boring logs for monitoring wells MW-301 through MW-311A are provided in **Appendix B**.

Shallow groundwater at the site generally flows to the east; however, historically the groundwater flow direction has been variable and the hydraulic gradient at the water table is generally relatively flat. Shallow groundwater flow on the site is influenced by water levels in a ditch to the south of the pond closure area and a small creek to the east, as well as the Mississippi River water level. The groundwater flow patterns for April 2022 and November 2022 are shown on **Figures 3 and 4**, respectively. In April and November 2022, the groundwater flow direction was toward the river.

The groundwater monitoring well network summary is provided in **Table 1**. The sampling event summary is provided in **Table 2**, and the groundwater elevation data for the monitoring wells is provided in **Table 3**. Estimated horizontal gradients and flow velocities within the aquifer are provided in **Table 4A**, and a vertical gradient summary is provided in **Table 4B**.

2.2 CCR RULE MONITORING SYSTEM

The groundwater monitoring system established in accordance with the CCR Rule to monitor groundwater quality at the waste boundary consists of one upgradient (background) monitoring well and six downgradient monitoring wells (**Table 1** and **Figure 2**). The background well is MW-307, which was installed in 2020 after the recognition that analytical results from MW-306, initially installed as a background well, suggested this well may not represent natural background groundwater conditions at this site. The downgradient compliance wells are MW-301 through MW-306.

Following the detection of molybdenum at a statistically significant level (SSL) above the Groundwater Protection Standard (GPS) at four compliance wells, additional downgradient wells were installed to delineate the nature and extent of impacts to groundwater and to support the assessment of corrective measures. The delineation wells include MW-304A, MW-308, MW-309, MW-311, and MW-311A. Downgradient delineation well MW-304A was installed in February 2021, MW-308 and MW-309 were installed in April 2021. Downgradient delineation wells MW-311, and MW-311A, were installed in December 2021 to provide information on groundwater quality at locations downgradient of the pond closure area and to support the assessment of corrective measures.

A supplemental background monitoring well, MW-310, was installed in September 2021 at a sidegradient location and is screened in shallow bedrock to evaluate possible geochemical differences between the alluvial and bedrock aquifers.

The CCR Rule wells were installed in the upper portion of the surficial alluvial aquifer and within the limestone bedrock. Well depths range from approximately 14 to 66 feet bgs.

Multiple attempts were made throughout 2022 to negotiate with additional off-site property owners for the installation of delineation wells on their properties. Negotiations moved forward in 2022 with one of the property owners for the potential installation of a delineation well nest on their property in 2023.

Locations for potential additional delineation wells along the downgradient KAP property line were also evaluated in 2022. The downgradient property line was staked out by a surveyor and locations accessible to a drilling rig were marked for future consideration if access agreements with additional off-site property owners cannot be achieved. The off-site locations for additional delineation wells are preferred over the on-site locations because the distance from the compliance wells to the downgradient property line is only about 130 feet.

3.0 257.100(E)(5) GROUNDWATER MONITORING AND CORRECTIVE ACTION FOR INACTIVE CCR SURFACE IMPOUNDMENTS

The owner or operator of the inactive CCR surface impoundments must: (i) No later than April 17, 2019, comply with groundwater monitoring requirements set forth in §§257.90(b) and 257.94(b); and (ii) No later than August 1, 2019, prepare the initial groundwater monitoring and corrective action report as set forth in §257.90(e).

This report is submitted to fulfill the report requirement.

4.0 §257.90(E) ANNUAL REPORT REQUIREMENTS

Annual groundwater monitoring and corrective action report. 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:

4.1 §257.90(E)(1) SITE MAP

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

A map showing the site location is provided on **Figure 1**. A map showing the CCR unit, monitoring system wells, and supplemental and delineation wells with identification numbers for the groundwater monitoring program is provided on **Figure 2**.

4.2 §257.90(E)(2) MONITORING SYSTEM CHANGES

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

No monitoring wells were installed or decommissioned during 2022.

4.3 §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;

Four groundwater sampling events were completed for the KAP CCR unit in 2022.

Supplemental sampling was completed to obtain additional monitoring data from wells MW-310, MW-311, and MW-311A in February 2022, and MW-311 and MW-311A in August 2022. Wells MW-310, MW-311, and MW-311A were sampled to further characterize the nature and extent of groundwater impacts in the ash pond closure area.

Two semiannual sampling events were completed in April and November 2022, as required by the assessment monitoring program.

A summary of the 2022 groundwater sampling events for each background and downgradient well, and the dates the samples were collected is included in **Table 2**.

Groundwater samples collected in the February, April, and November events were analyzed for both Appendix III and Appendix IV constituents, and additional parameters were collected to support monitoring natural attenuation. Groundwater samples collected in August 2022 at MW-311 and MW-311A were analyzed for lithium and molybdenum only.

The sampling results for Appendix III and Appendix IV parameters in 2022 are summarized in **Table 5A** and **Table 5B**. Field parameter results for the 2022 sampling events are provided in **Table 6**. The analytical laboratory reports for 2022 are provided in **Appendix C**. Historical results for each monitoring well are summarized in **Appendix D**.

4.4 §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 2022.

Assessment monitoring for KAP was initiated in January 2020 and continued through 2022. An Assessment of Corrective Measures (ACM) was initiated for the KAP CCR Unit in October 2020 and completed in March 2021. The selection of remedy is in progress. Assessment monitoring continued during the ACM and will continue during the selection of remedy and implementation of the corrective action program.

The ACM was initiated in response to the detection of molybdenum at an SSL exceeding the GPS in monitoring wells MW-301, MW-302, MW-304, and MW-305. Lithium was added to the selection of remedy process, following a determination that lithium was at an SSL above the GPS at MW-306 in the evaluation of the April 2021 monitoring event.

The statistical evaluation of the April 2022 assessment monitoring event was completed in August 2022. Statistical evaluation of the November 2022 assessment monitoring results was completed in March 2023.

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 evaluation of whether a parameter has been detected at an SSL exceeding the GPS is based on comparison of the lower confidence limit (LCL) for the mean, calculated from the assessment monitoring results, to the GPS. 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 includes arsenic, lithium, and molybdenum. The LCLs were calculated with Sanitas™ using historical concentrations measured since assessment monitoring began in January 2020. The LCL evaluations completed for the April and November 2022 events are provided in **Appendix E**.

Consistent with previous determinations, lithium and molybdenum were determined to be at SSLs above the GPS's in the evaluation of the 2022 assessment monitoring results. The evaluation completed in March 2023 following the November 2022 monitoring event indicated that arsenic was also at an SSL above the GPS at monitoring well MW-303. Arsenic will be added to the selection of remedy process, including preparation of an update to the ACM.

4.5 §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 each 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 2022 Annual Groundwater Monitoring and Corrective Action Report for the CCR Unit.

4.5.1 §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.

- Statistical evaluation for the October 2021 assessment monitoring event, completed on January 18, 2022 and included in the 2021 Annual Groundwater Monitoring and Corrective Action Report (July 29, 2022).
- Supplemental sampling and analysis events for monitoring wells installed in September and December 2021 (February and August 2022).

- Statistical evaluation for the December 2021 assessment monitoring event, completed on April 28, 2022 and included in **Appendix E** of this report.
- Evaluation of the February 2022 supplemental monitoring event completed on June 20, 2022.
- Two semiannual groundwater sampling and analysis events (April and November 2022).
- Statistical evaluation for the April 2022 assessment monitoring event, completed on August 22, 2022.
- Calculation of updated UPLs using a background dataset including data collected through April 2022 at background well MW-307 (**Appendix E**).
- Evaluation of the August 2022 supplemental monitoring event, completed on December 6, 2022.
- Two Semiannual progress reports for Selection of Remedy completed (March 10, 2022 and September 12, 2022).

Description of Any Problems Encountered. No problems were encountered during the groundwater sampling events in 2022.

Discussion of Actions to Resolve the Problems. Not applicable.

Projection of Key Activities for the Upcoming Year (2023):

- Installation of supplemental bedrock background well MW-312 to gather background bedrock groundwater quality information. Installation of delineation well MW-313, to delineate potential groundwater impacts southwest of the site (Completed February 2023).
- Statistical evaluation and determination of any SSLs exceeding the GPS for the November 2022 monitoring event (completed March 6, 2023, and provided in **Appendix E**).
- Two Semiannual Groundwater Sampling and Analysis Events (April and October 2023).
- Two Semiannual progress reports for Selection of Remedy (March and September 2023).
- Statistical evaluation and determination of any SSLs exceeding the GPS for the April 2023 monitoring event.
- . Further outreach efforts to neighboring properties for well installations.
- Further evaluations of well installation locations on IPL property (utility easement area).

4.5.2 §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. KAP is no longer in detection monitoring.

4.5.3 §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. KAP is no longer in detection monitoring.

4.5.4 §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.

4.5.5 §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 2022 assessment monitoring results, background upper prediction limits (UPLs), and GPSs established for the site are provided in **Tables 5A** and **5B**.

The laboratory reports are provided in **Appendix C**. Historical monitoring results are summarized in **Appendix D**.

4.5.6 §257.95(g)(3)(ii) Alternative Source Demonstration for Assessment Monitoring

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

Not Applicable. No alternative source demonstration for assessment monitoring was completed in 2022.

4.5.7 §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. No demonstration of the need for additional time was completed in 2022.

The assessment of corrective measures (ACM) was initiated on October 12, 2020. The ACM was completed on March 11, 2021. A demonstration of need for a deadline extension was completed in January 2021 and included in the 2021 Annual Groundwater Monitoring and Corrective Action Report.

5.0 §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.

6.0 REFERENCES

Wahl, K.D., G.A. Ludvigson, G.L. Ryan, W.C. Steinkampf, 1978, Water Resources of East-Central Iowa; U.S. Geologic Survey and Iowa Geologic Survey, Iowa, 1978.

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

Tables

- 1 Groundwater Monitoring Well Network
- 2 Groundwater Sample Summary
- 3 Groundwater Elevation Summary
- 4A Horizontal Gradients and Flow Velocity
- 4B Vertical Gradients
- 5A Groundwater Analytical Results Summary – February 2022
- 5B Groundwater Analytical Results Summary – April - November 2022
- 6 2022 Groundwater Field Data Summary

**Table 1. Groundwater Monitoring Well Network
M.L. Kapp Generating Station / SCS Engineers Project #25222077.00**

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

Note:

Groundwater data from well MW-310 is not used in the statistical evaluation.

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

Date: 10/6/2022
 Date: 10/6/2022
 Date: 3/9/2023

\\Mad-fs01\data\Projects\25222077.00\Deliverables\2022 - Federal Annual Report M.L. Kapp\Tables\[Table 1 - GW Monitoring Well Ne

**Table 2. Groundwater Sample Summary
M.L. Kapp Generating Station / SCS Engineers Project #25222077.00**

Sample Dates	Compliance Wells						Delineation Wells					Background Well	Supplemental Background Well
	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-304A	MW-308	MW-309	MW-311	MW-311A	MW-307	MW-310
2/21/2022	--	--	--	--	--	--	--	--	--	S	S	--	S
4/18-19/2022	A	A	A	A	A	A	A	A	A	A	A	A	A
8/22/2022	--	--	--	--	--	--	--	--	--	S	S	--	S
11/1-3/2022	A	A	A	A	A	A	A	A	A	A	A	A	A
Total Samples	2	2	2	2	2	2	2	2	2	4	4	2	3

Abbreviations:

A = Assessment Monitoring Program NI = Not Installed S = Supplemental Monitoring Event

-- = Not Applicable

Created by: NDK Date: 10/6/2022
 Last revision by: RM Date: 12/21/2022
 Checked by: ACW Date: 12/23/2022

\\Mad-fs01\data\Projects\25222077.00\Deliverables\2022 - Federal Annual Report M.L. Kapp\Tables\[Table 2 - GW Samples Summary Table.xlsx]GW Summary

Table 3. Groundwater Elevation Summary
IPL - M.L. Kapp / SCS Engineers Project #25222077.00
 Groundwater Elevation in feet above mean sea level (amsl)

Well Number	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A
Top of Casing Elevation (feet amsl)	592.13	591.54	592.40	592.12	591.89	592.60	590.83	603.39	588.78	591.24	597.58	587.59	587.82
Screen Length (ft)	10.00	10.00	10.00	10.00	5.00	10.00	10.00	10.00	10.00	10.00	5.00	15.00	5.00
Total Depth (ft from top of casing)	25.20	26.10	27.78	27.25	55.00	27.30	27.20	19.46	19.65	24.11	32.48	27.30	67.53
Top of Well Screen Elevation (ft)	576.93	575.44	574.62	574.87	541.88	575.30	573.63	593.93	579.13	577.13	570.10	575.29	525.29
Measurement Date													
March 28, 2018	577.65	576.62	577.37	577.05	NI	576.58	577.93	NI	NI	NI	NI	NI	NI
May 22, 2018	579.20	579.37	580.00	579.47	NI	579.34	579.47	NI	NI	NI	NI	NI	NI
June 25, 2018	578.57	578.04	577.24	570.77	NI	571.28	576.93	NI	NI	NI	NI	NI	NI
July 25, 2018	577.83	577.62	577.83	577.56	NI	577.52	577.97	NI	NI	NI	NI	NI	NI
October 5, 2018	580.04	579.88	579.74	579.32	NI	579.15	579.46	NI	NI	NI	NI	NI	NI
November 29, 2018	577.55	576.52	578.74	578.43	NI	578.69	579.28	NI	NI	NI	NI	NI	NI
January 10, 2019	577.36	577.05	579.06	578.56	NI	578.84	579.47	NI	NI	NI	NI	NI	NI
February 13, 2019	577.23	576.51	578.90	578.26	NI	578.45	579.40	NI	NI	NI	NI	NI	NI
April 9, 2019	585.25	585.29	584.61	585.25	NI	585.23	585.29	NI	NI	NI	NI	NI	NI
September 6, 2019	--	--	--	--	NI	577.42	--	NI	NI	NI	NI	NI	NI
October 7, 2019	580.97	580.74	581.39	581.62	NI	581.88	582.28	NI	NI	NI	NI	NI	NI
December 10, 2019	577.39	577.41	578.90	578.85	NI	578.89	579.49	NI	NI	NI	NI	NI	NI
February 4, 2020	578.07	577.74	579.58	578.73	NI	578.85	579.31	NI	NI	NI	NI	NI	NI
April 29, 2020	578.76	579.38	580.82	580.95	NI	580.40	580.70		NI	NI	NI	NI	NI
June 4, 2020	578.62	578.29	579.76	579.19	NI	579.20	579.82	595.06	NI	NI	NI	NI	NI
July 7, 2020	577.04	576.36	577.55	577.15	NI	577.21	577.95	593.85	NI	NI	NI	NI	NI
August 7, 2020	--	--	--	--	NI	--	--	593.06	NI	NI	NI	NI	NI
October 22, 2020	577.42	574.64	575.82	575.32	NI	575.25	576.82	592.77	NI	NI	NI	NI	NI
February 9, 2021	--	--	--	--	570.48	--	--	--	NI	NI	NI	NI	NI
February 22, 2021	--	--	--	573.90	573.92	--	--	592.12	NI	NI	NI	NI	NI
April 5, 2021	577.30	577.47	578.57	577.25	577.36	577.16	578.15	594.32	NI	NI	NI	NI	NI
June 17, 2021	--	--	--	--	--	--	--	593.33	576.05	571.84	NI	NI	NI
July 22, 2021	--	--	--	--	--	--	--	592.65	--	--	NI	NI	NI
October 5, 2021	--	--	--	--	--	--	--	--	--	--	588.92	NI	NI
October 18-19, 2021	576.35	573.32	573.97	573.33	573.42	573.20	574.22	590.84	573.43	571.64	589.55	NI	NI
December 30, 2021	--	--	--	--	--	--	--	--	--	--	--	572.33	572.54
February 21, 2022	576.64	573.79	574.31	573.00	573.09	572.94	574.18	591.02	573.13	--	589.10	572.14	572.34
April 18-19, 2022	577.53	577.59	577.70	576.47	576.65	576.10	577.24	592.46	576.93	576.75	590.20	574.77	575.17
August 22, 2022	576.80	573.93	575.51	575.19	575.21	575.16	576.17	591.01	575.53	572.08	589.56	574.51	574.76
November 1-3, 2022	576.16	573.23	574.26	573.39	573.47	573.30	574.63	589.14	573.80	--	578.18	572.54	572.90
Bottom of Well Elevation (ft)	566.93	565.44	564.62	564.87	536.88	565.30	563.63	583.93	569.13	567.13	565.10	560.29	520.29

Notes:

-- Location not measured

NI = Not Installed

Created by: AJR

Date: 10/9/2018

Last rev. by: RM

Date: 11/7/2022

Checked by: NDK

Date: 11/7/2022

\\Mad-fs01\data\Projects\25222077.00\Deliverables\2022 - Federal Annual Report M.L. Kapp\Tables\[Table 3 - GW Elevation Summary - M.L. Kapp.xls]levels

**Table 4A. Horizontal Gradients and Flow Velocity
M.L. Kapp Generating Station /
SCS Engineers Project #25222077.00
January - December 2022**

Southeast					
Sampling Dates	h1 (ft)	h2 (ft)	Δl (ft)	Δh/Δl (ft/ft)	V (ft/d)
4/18-19/2022	578	576	670	0.003	0.11
11/1-3/2022	577	573.3	720	0.005	0.20

Southwest					
Sampling Dates	h1 (ft)	h2 (ft)	Δl (ft)	Δh/Δl (ft/ft)	V (ft/d)
4/18-19/2022	577.59	576.10	1110	0.001	0.051

Wells	K Values (cm/sec)	K Values (ft/d)	Assumed Porosity, n
MW-301	5.30E-02	150	
MW-302	3.11E-03	8.8	0.40
MW-303	3.56E-03	10	
MW-304	7.92E-03	22	
MW-305	9.92E-04	2.8	
MW-306	4.33E-03	12	
MW-307	1.74E-03	5	
Geometric Mean	5.4E-03	15	

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

ft = feet

ft/d = feet per day

K = hydraulic conductivity

n = effective porosity

V = groundwater flow velocity

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

Δl = distance between location 1 and 2

Δh/Δl = hydraulic gradient

Created by: RM
Last revision by: RM
Checked by: MDB

Date: 3/10/2023
Date: 5/17/2023
Date: 6/16/2023

I:\25222077.00\Deliverables\2022 - Federal Annual Report M.L. Kapp\Tables\[Table 4A - Horizontal Gradients and Flow Velocity Table.xlsx]Sheet1

Table 4B. Vertical Gradients
IPL - M.L. Kapp / SCS Engineers Project #25222077.00
2022

Vertical Hydraulic Gradients	MW-304/MW-304A		MW-311/MW-311A	
	Shallow Well Screen midpoint ⁽²⁾ (feet amsl)	MW-304 569.87		MW-311 567.79
Deep Well Screen midpoint (feet amsl)	MW-304A 539.38		MW-311A 522.79	
Measurement Date	Distance Between Midpoints ⁽²⁾ (ft)	Vertical Gradient (ft/ft)	Distance Between Midpoints ⁽²⁾ (ft)	Vertical Gradient (ft/ft)
February 21, 2022	29.6	0.003	43.4	0.005
April 18-19, 2022	30.5	0.006	44.7	0.009
August 22, 2022	30.5	0.001	44.6	0.006
November 1-3, 2022	29.8	0.003	43.6	0.008

Notes:

- 1: A positive vertical gradient indicates upward groundwater flow. A negative gradient indicates downward flow.
- 2: The well screen at MW-304 was not fully submerged during the February and November 2022 sampling events. The well screen at MW-311 was not fully submerged during the all four 2022 sampling events. In these cases, the effective screen midpoint is calculated as the midpoint between the water table elevation and screen bottom elevation, and this value is used to calculate Distance Between Midpoints.

Created by: RM	Date: 3/9/2023
Last rev. by: RM	Date: 3/10/2023
Checked by: MDB	Date: 5/12/2023
Proj Mgr QA/QC: TK	Date: 7/12/2023

**Table 5A. Groundwater Analytical Results Summary - February 2022
Assessment Monitoring
M.L. Kapp Generating Station / SCS Engineers Project #25222077.00**

Parameter Name	UPL Method	UPL	GPS	Supplemental Background Well	Delineation Wells	
				MW-310	MW-311	MW-311A
Appendix III				2/21/2022	2/21/2022	2/21/2022
Boron, µg/L	P	280		1000	4,600	10,000
Calcium, mg/L	P	260		100	110	110
Chloride, mg/L	P	63		78.0	16.0	23.0
Fluoride, mg/L	P	DQ		<0.22	0.34 J	<0.22
Field pH, Std. Units	NP	7.45		7.21	7.27	7.63
Sulfate, mg/L	P	29.6		120	110	300
Total Dissolved Solids, mg/L	P	1,400		590	440	520
Appendix IV						
Antimony, ug/L	P*	DQ	6	<0.69	<0.69	<0.69
Arsenic, ug/L	P*	2.72	10	<0.75	<0.75	<0.75
Barium, ug/L	P	370	2,000	55.0	49.0	24.0
Beryllium, ug/L	DQ	DQ	4	<0.27	<0.27	<0.27
Cadmium, ug/L	P*	0.343	5	<0.055	<0.055	0.067 J
Chromium, ug/L	P*	DQ	100	<1.10	<1.10	<1.10
Cobalt, ug/L	P*	12	6	0.43 J	<0.19	<0.19
Fluoride, mg/L	P	DQ	4	<0.22	0.34 J	<0.22
Lead, ug/L	NP*	0.210	15	<0.24	<0.24	<0.24
Lithium, ug/L	P	4.42	40	2.80 J	34.0	19.0
Mercury, ug/L	NP*	DQ	2	<0.11	<0.11	<0.11
Molybdenum, ug/L	P	3.40	100	<1.20	31.0	210
Selenium, ug/L	P	DQ	50	<0.96	3.70 J	1.20 J
Thallium, ug/L	NP*	DQ	2	<0.26	<0.26	<0.26
Radium 226/228 Combined, pCi/L	P	3.5	5	0.213	0.003	0.193
Additional Parameters - Selection of Remedy						
Iron, ug/L				<36.0	<36.0	<36.0
Lithium, dissolved, ug/L				--	33.0	18.0
Magnesium, ug/L				44,000	26,000	21,000
Manganese, ug/L				210	<3.6	4.0 J
Molybdenum, dissolved, ug/L #				--	29.0	190
Potassium, ug/L				1,100	6,200	7,300
Sodium, ug/L				67,000	30,000	45,000
Total Alkalinity, mg/L				410	320	150
Carbonate Alkalinity, mg/L				<4.6	<4.6	<4.6
Bicarbonate Alkalinity, mg/L				410	320	150

Blue highlighted cell indicates the compliance well results exceeds the UPL and the LOQ.
 Yellow highlighted cell indicates the compliance well result exceeds the GPS.
 Grayscale indicates additional parameters sampled for selection of remedy and evaluation of MNA.

Abbreviations:

UPL = Upper Prediction Limit
 ug/L = micrograms per Liter
 mg/L = milligrams per Liter
 GPS = Groundwater Protection Standard
 DQ= Double Quantification (not detected in background)
 P = Parametric UPL with 1-of-2 retesting
 NP = Nonparametric UPL (highest background value)
 LOD = Limit of Detection
 LOQ = Limit of Quantification
 -- = Not measured

* = UPL is below the LOQ for background sampling. For compliance wells, only results confirmed above the LOQ are evaluated as potential SSIs above background.

Lab Notes/Qualifiers:

J = Result is less than the LOQ but greater than or equal to the LOD and the concentration is an approximate value.

Notes:

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 letter 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 calculated based on results from background well MW-307.
4. MW-310 is a supplemental background well. The well data are currently being used for comparison purposes and are not being incorporated into the statistical evaluation.

Created by: <u>NDK</u>	Date: <u>7/10/2019</u>
Last revision by: <u>JAO</u>	Date: <u>5/10/2022</u>
Checked by: <u>NDK</u>	Date: <u>6/3/2022</u>
Proj Mgr QA/QC: <u>TK</u>	Date: <u>6/9/2022</u>

\\Mad-fs01\data\Projects\25222077.00\Deliverables\2022 - Federal Annual Report M.L. Kapp\Tables\[Table 5A 2022 Feb CCR GW Screening Summary.xlsx]Single event - Updated GPS

Table 6. Groundwater Monitoring Results - Field Parameters
IPL - M.L. Kapp / SCS Engineers Project #25222077.00
January - December 2022

Sample	Sample Date	GW Elevation (ft amsl)	Temperature (Deg. C)	pH (Std. Units)	Dissolved Oxygen (mg/L)	Specific Conductivity (µs/cm)	ORP (mV)	Turbidity
MW-301	4/18/2022	577.53	9.5	6.69	0.37	885	24.9	26.30
	11/2/2022	576.16	15.3	6.43	0.05	840	90.1	2.76
MW-302	4/18/2022	577.59	9.8	7.42	0.14	815	119.2	4.51
	11/1/2022	573.23	15.4	7.36	0.21	759	179.7	0.86
MW-303	4/18/2022	577.70	10.8	6.81	0.20	1,592	132.0	565
	11/1/2022	574.26	14.3	7.26	0.20	894	102.8	83
MW-304	4/18/2022	576.47	10.5	6.97	0.14	1,154	-42.2	56.5
	11/2/2022	573.39	13.6	6.69	0.09	920	103.1	84.0
MW-304A	4/18/2022	576.65	11.2	7.12	0.17	596	83.9	6.70
	11/2/2022	573.47	12.4	6.94	0.01	561	15.8	1.06
MW-305	4/18/2022	576.10	10.1	7.36	0.17	1,438	-34.8	6.78
	11/2/2022	573.30	13.9	7.22	0.00	1,178	74.8	3.39
MW-306	4/19/2022	577.24	9.5	6.88	1.56	1,588	114.2	4.35
	11/2/2022	574.63	14.6	6.93	0.19	1,508	126.4	1.42
MW-307	4/19/2022	592.46	9.8	6.52	0.12	1,199	11.2	6.60
	11/3/2022	589.14	14.7	6.22	0.08	1,096	66.5	2.11
MW-308	4/19/2022	576.93	9.8	6.46	1.02	817	103.2	6.06
	11/2/2022	573.80	16.0	6.14	0.21	730	137.7	12.50
MW-309	4/19/2022	576.75	9.1	6.94	0.16	1,196	-124.3	5.33
	11/2/2022	--	15.8	6.59	0.00	1,021	-126.9	2.89
MW-310	2/21/2022	589.10	12.4	7.21	0.30	1,060	48.8	2.00
	4/19/2022	590.20	12.2	7.04	0.29	1,004	-35.3	4.91
	11/3/2022	578.18	13.7	6.88	0.05	943	130.3	1.49
MW-311	2/21/2022	572.14	12.0	7.27	3.39	785	100.9	3.00
	4/19/2022	574.77	11.4	7.16	2.43	718	111.8	5.94
	8/22/2022	574.51	13.8	7.28	4.89	842	89.7	1.90
	11/3/2022	572.54	14.2	7.18	2.72	684	149.0	1.94
MW-311A	2/21/2022	572.34	12.3	7.63	0.10	830	80.7	1.00
	4/19/2022	575.17	12.2	7.39	0.13	689	95.1	4.57
	8/22/2022	574.76	13.6	7.55	0.89	870	79.6	0.14
	11/3/2022	572.90	12.9	7.42	0.00	770	147.4	1.05

Abbreviations:

mg/L = milligrams per liter

mV = millivolts

amsl = above mean sea level

-- = Not measured

NA = not applicable

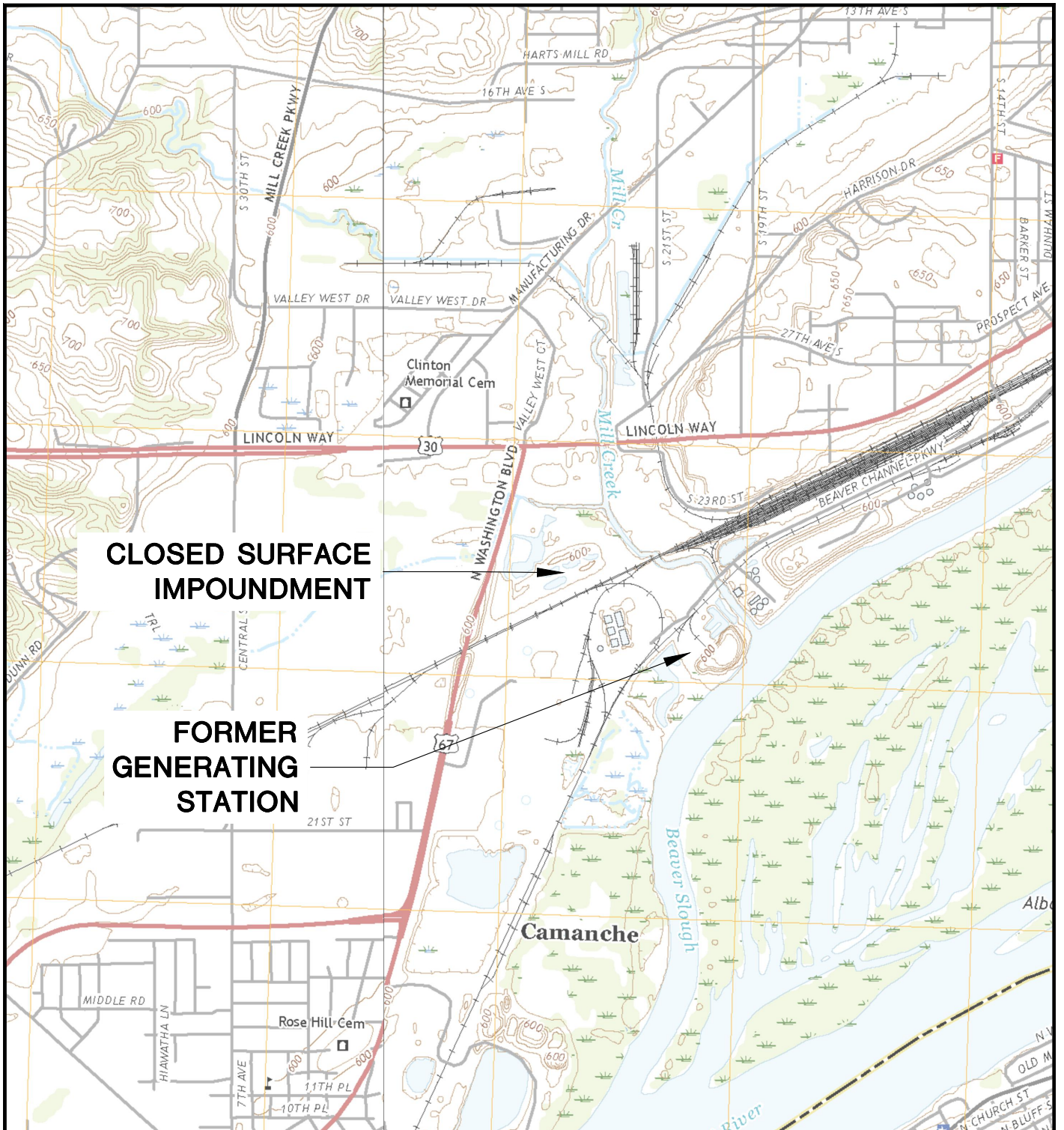
Created by: NDK
 Last revision by: ACW
 Checked by: RM

Date: 10/6/2022
 Date: 12/27/2022
 Date: 3/8/2023

\\Mad-fs01\data\Projects\25222077.00\Deliverables\2022 - Federal Annual Report M.L. Kapp\Tables\[Table 6 - 2022 Field Parameters.xlsx]GW Field Paramet

Figures

- 1 Site Location Map
- 2 Site Plan and Monitoring Well Location Map
- 3 Water Table Map – April 2022
- 4 Water Table Map – November 2022



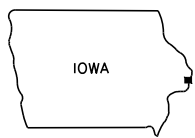
**CLOSED SURFACE
IMPOUNDMENT**

**FORMER
GENERATING
STATION**

Camanche



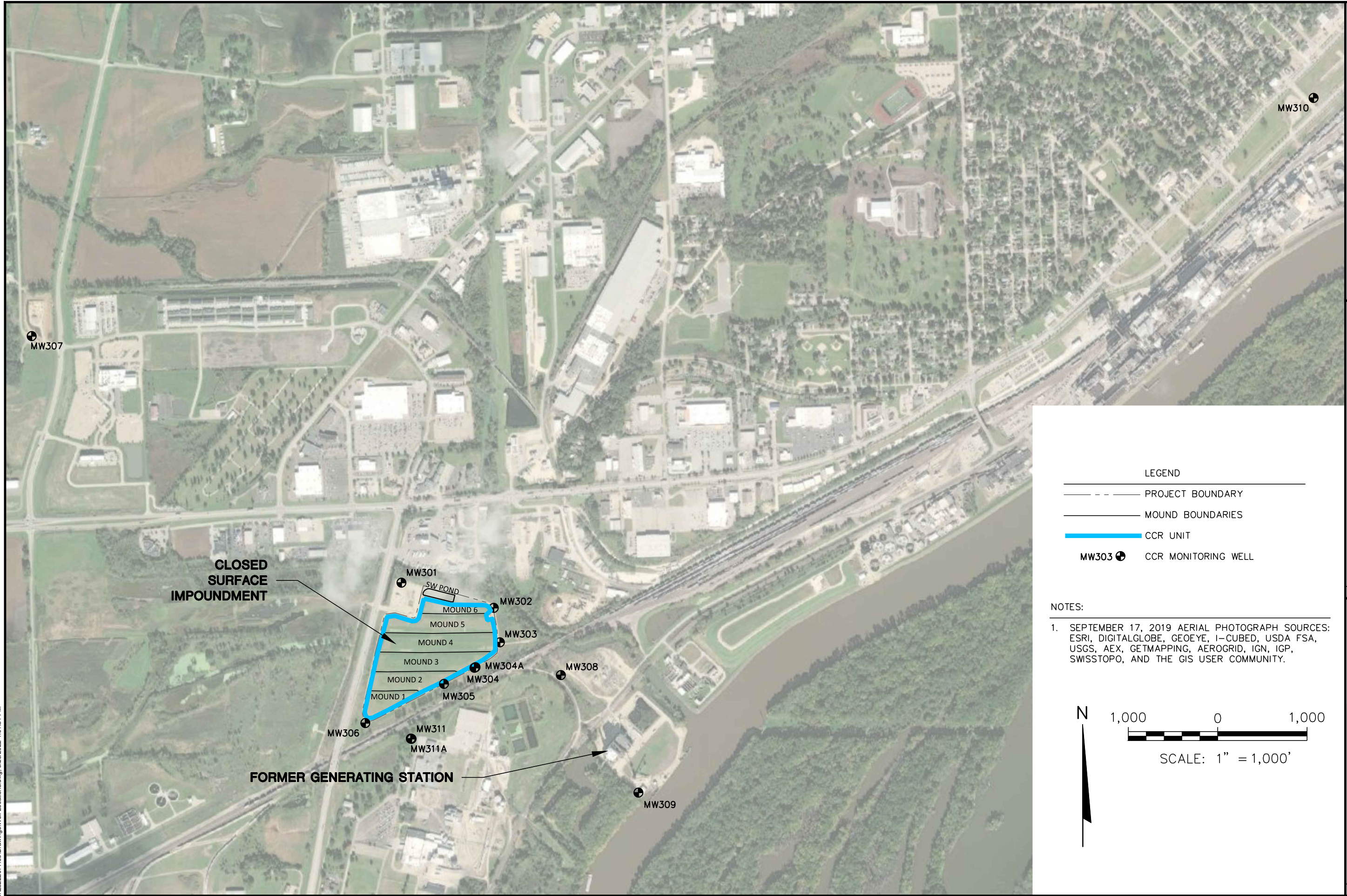
CLINTON QUADRANGLE
IOWA-ILLINOIS
7.5 MINUTE SERIES (TOPOGRAPHIC)
2018
SCALE: 1" = 2,000'



CLIENT	ALLIANT ENERGY	SITE	M.L. KAPP GENERATING STATION 3301 HIGHWAY 67 S CLINTON, IA 52732	ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE	1
	PROJECT NO.		25220077.00				
	DRAWN:	11/20/2019	CHECKED BY:	NDK			
	REVISED:	09/04/2020	APPROVED BY:	TK, 3/10/2023			

I:\25220077.00\Drawings\Site Location Map.dwg, 8/31/2021 8:27:09 AM

I:\2522077\001\Drawings\Well Locations.dwg, 6/29/2022, 1:01:31 PM

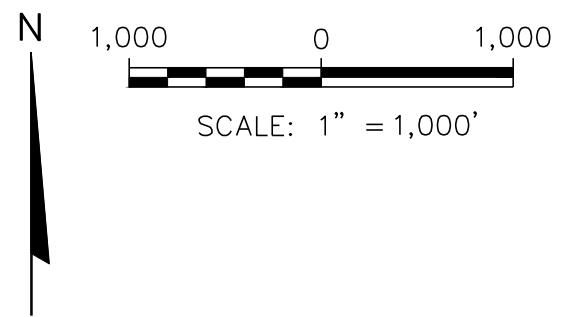


LEGEND

- PROJECT BOUNDARY
- MOUND BOUNDARIES
- █ CCR UNIT
- MW303 CCR MONITORING WELL

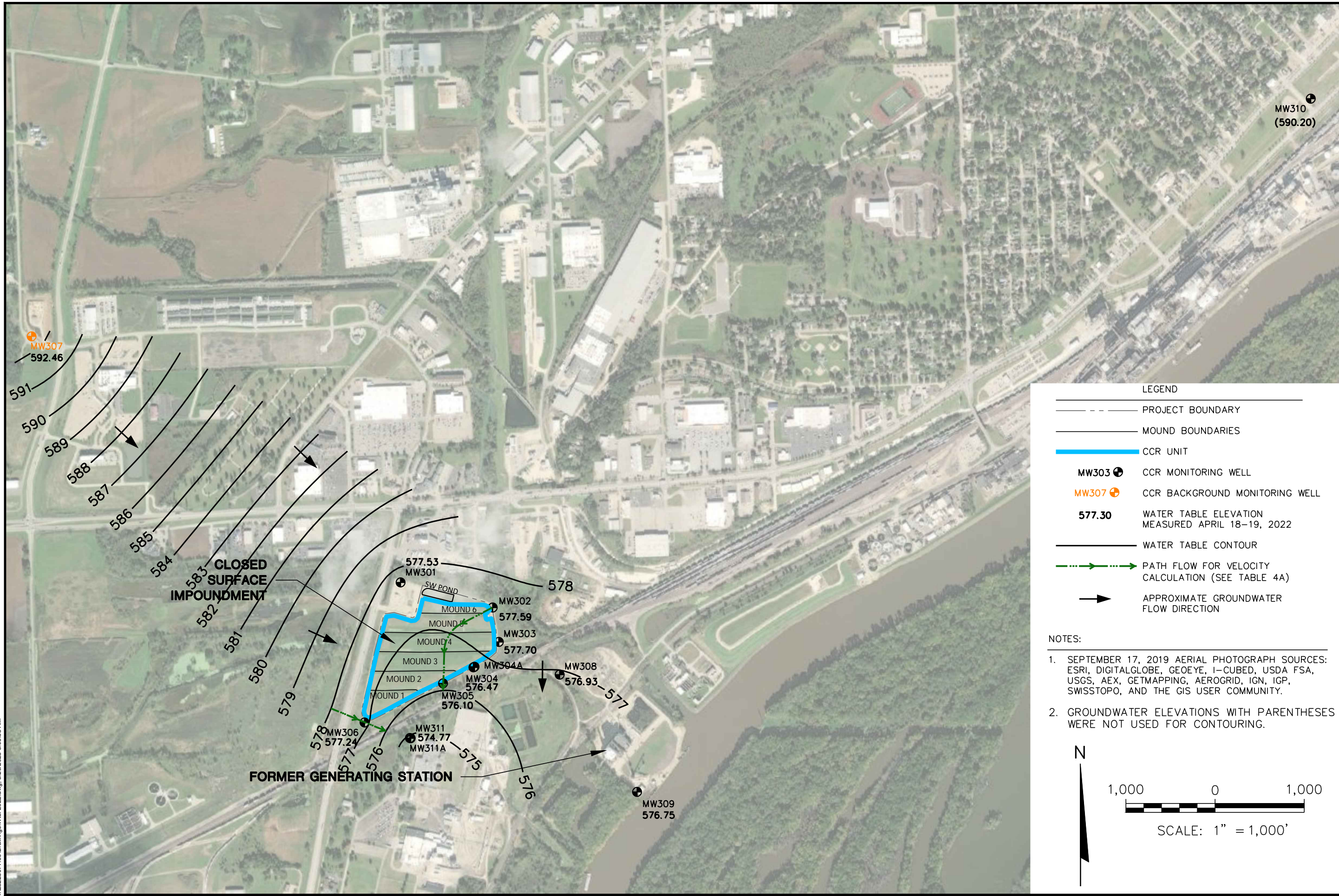
NOTES:

1. SEPTEMBER 17, 2019 AERIAL PHOTOGRAPH SOURCES: ESRI, DIGITALGLOBE, GEOEYE, I-CUBED, USDA FSA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY.



ALLIANT ENERGY M.L. KAPP GENERATING STATION 2001 BEAVER CHANNEL PKWY CLINTON, IA 52732	PROJECT NO. 25222077.00	DRAWN BY: KP/ZTW	M.L. KAPP GENERATING STATION 3301 HIGHWAY 67 S, CLINTON, IA 52732	SITE ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE 2
	DRAWN: 09/04/2020	CHECKED BY: NK	APPROVED BY: TK 7/28/2023	ENGINEER		

I:\25223077\001\Drawings\Wtbl 2022.dwg, 6/20/2023 8:06:53 AM

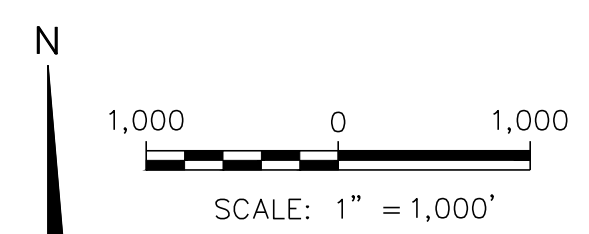


LEGEND

- PROJECT BOUNDARY
- MOUND BOUNDARIES
- CCR UNIT
- MW303 CCR MONITORING WELL
- MW307 CCR BACKGROUND MONITORING WELL
- 577.30 WATER TABLE ELEVATION MEASURED APRIL 18-19, 2022
- WATER TABLE CONTOUR
- PATH FLOW FOR VELOCITY CALCULATION (SEE TABLE 4A)
- APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTES:

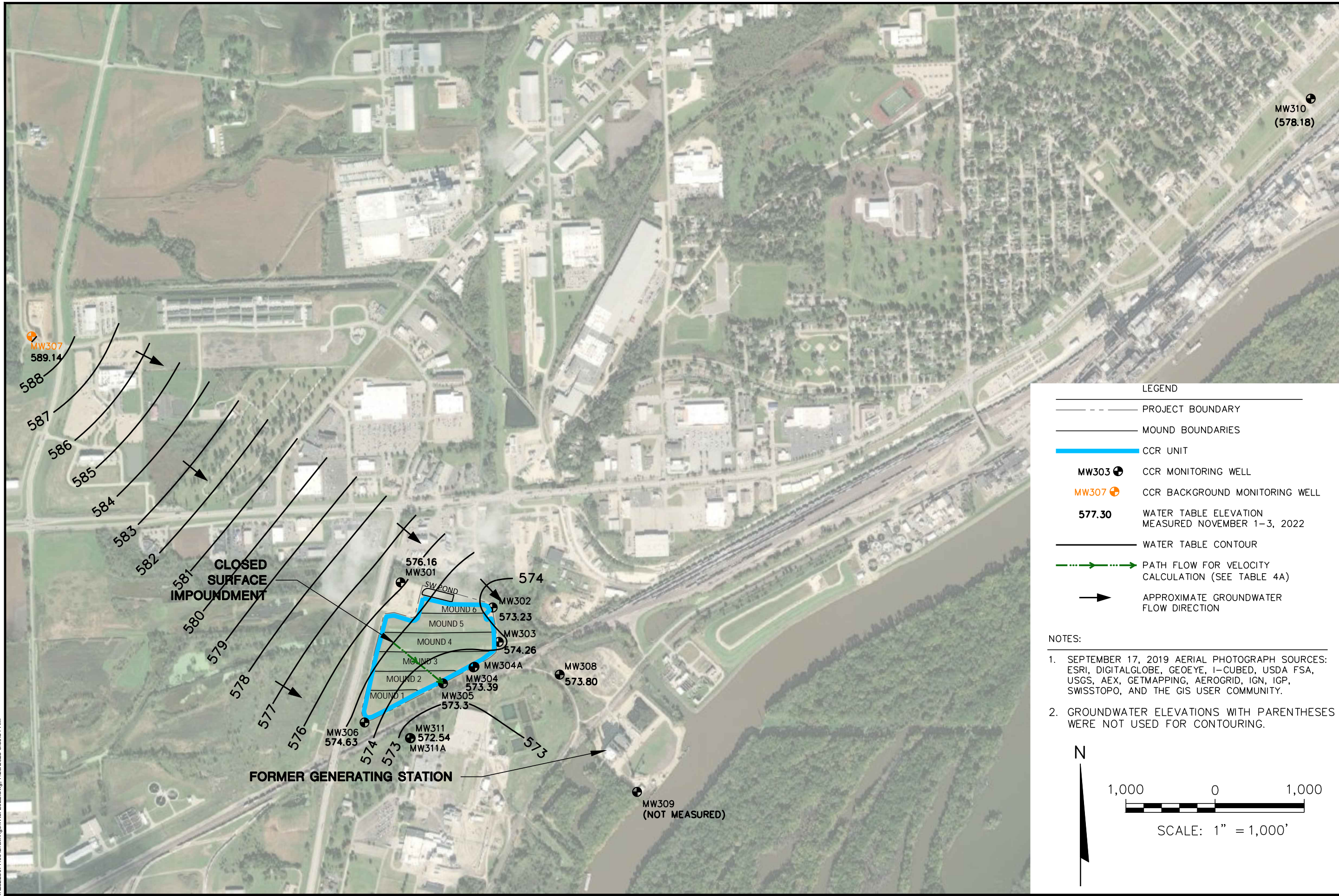
- SEPTEMBER 17, 2019 AERIAL PHOTOGRAPH SOURCES: ESRI, DIGITALGLOBE, GEOEYE, I-CUBED, USDA FSA, USGS, AEX, GETMAPPING, AEROGRIID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY.
- GROUNDWATER ELEVATIONS WITH PARENTHESES WERE NOT USED FOR CONTOURING.



CLIENT	ALLIANT ENERGY M.L. KAPP GENERATING STATION 2001 BEAVER CHANNEL PKWY CLINTON, IA 52732		M.L. KAPP GENERATING STATION 3301 HIGHWAY 67 S, CLINTON, IA 52732		WATER TABLE MAP APRIL 2022	
	PROJECT NO.	25223077.00	DRAWN BY:	KP	ENGINEER	FIGURE
DRAWN:	05/02/2023	CHECKED BY:	RM			3
REVISED:	06/20/2023	APPROVED BY:	TK 7/28/2023			

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

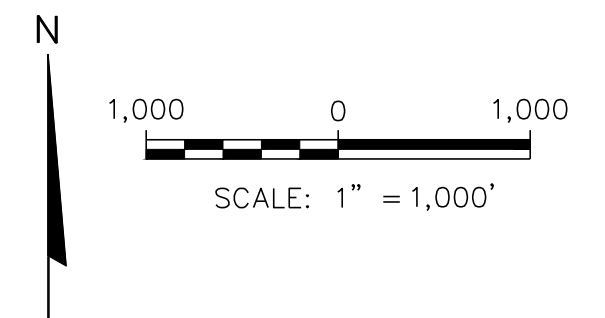
I:\2523077\00\Drawings\Wtbl 2022.dwg, 7/25/2023 8:38:51 AM



LEGEND


- PROJECT BOUNDARY
- MOUND BOUNDARIES
- CCR UNIT
- MW303 ● CCR MONITORING WELL
- MW307 ● CCR BACKGROUND MONITORING WELL
- 577.30 WATER TABLE ELEVATION MEASURED NOVEMBER 1-3, 2022
- WATER TABLE CONTOUR
- PATH FLOW FOR VELOCITY CALCULATION (SEE TABLE 4A)
- APPROXIMATE GROUNDWATER FLOW DIRECTION

- NOTES:**
- SEPTEMBER 17, 2019 AERIAL PHOTOGRAPH SOURCES: ESRI, DIGITALGLOBE, GEOEYE, I-CUBED, USDA FSA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY.
 - GROUNDWATER ELEVATIONS WITH PARENTHESES WERE NOT USED FOR CONTOURING.



CLIENT	ALLIANT ENERGY M.L.-KAPP GENERATING STATION 2001 BEAVER CHANNEL PKWY CLINTON, IA 52732		M.L. KAPP GENERATING STATION 3301 HIGHWAY 67 S, CLINTON, IA 52732		WATER TABLE MAP NOVEMBER 2022	
	PROJECT NO.	25223077.00	DRAWN BY:	KP	ENGINEER	FIGURE
DRAWN:	12/23/2022	CHECKED BY:	RM			4
REVISED:	07/25/2023	APPROVED BY:	TK 7/28/2023			

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



Appendix A
Summary of Regional Hydrogeologic Stratigraphy

Table 2. — Hydrologic units in east-central Iowa

Hydrologic unit	General thickness in feet	Age of rocks	Name of rock units	Type of rock
Surficial aquifers alluvial buried-channel drift	0 to 400	Quaternary (0 to 1 million years old)	Quaternary deposits, undifferentiated	Sand, gravel, silt, and clay Sand, gravel, silt, and clay Till (sandy, pebbly clay) sand, and silt
Pennsylvanian rocks principally confining beds; locally contains waterbearing sandstone	0 to 70	Pennsylvanian (280 to 310 million years old)	Pennsylvanian rocks, undifferentiated	Shale, sandstone, limestone, and coal
Mississippian aquifer	0 to 220	Mississippian (310 to 345 million years old)	Meramecian Series Osagean Series Kinderhookian Series	Limestone and sandstone Dolomite, limestone, and shale Limestone, dolomite, and siltstone
Devonian confining beds	0 to 350	Devonian (345 to 400 million years old)	Yellow Spring Group	Shale, dolomite and siltstone
Devonian aquifer	0 to 400		Lime Creek Shale	Dolomite and shale
Silurian aquifer	0 to 450	Silurian (400 to 425 million years old)	Cedar Valley Limestone Wapsipinicon Limestone	Limestone and dolomite Dolomite, limestone, and shale
			Gower Dolomite * Hopkinton Dolomite Kankakee Limestone Edgewood Dolomite	Dolomite, with some chert and limestone
Ordovician confining beds	300 - 600	Ordovician (425 to 500 million years old)	Maquoketa Shale Galena Dolomite Decorah Formation Platteville Formation	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	Sandstone Dolomite, sandstone, and shale Sandstone Dolomite
Cambrian confining beds	90 - 290	Cambrian (500 to 600 million years old)	Franconia Sandstone	Shale, siltstone, and sandstone
Dresbach aquifer	157 to 1644		Dresbach Group Galesville Sandstone Eau Claire Sandstone Mt. Simon Sandstone	Sandstone Sandstone, shale, and dolomite Sandstone
Precambrian rocks		Precambrian (600 to more than 2 billion years old)	Crystalline rocks, undifferentiated	Sandstone, igneous and metamorphic rocks.

*Upper part includes the LaPorte City Chert in the northwest part of the report area.

The 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.

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.

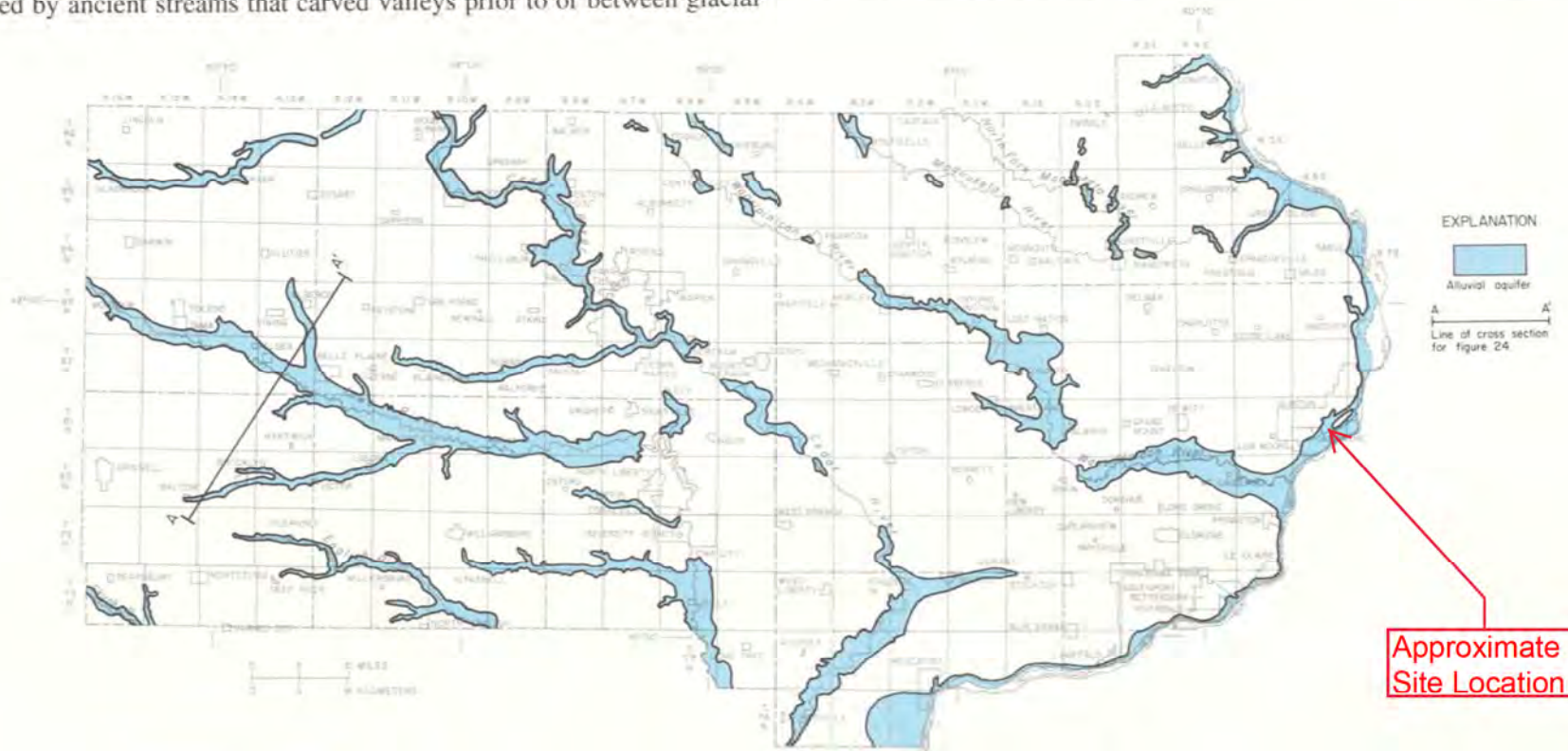


Figure 22.—Areal distribution of alluvial aquifers in east-central Iowa

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.

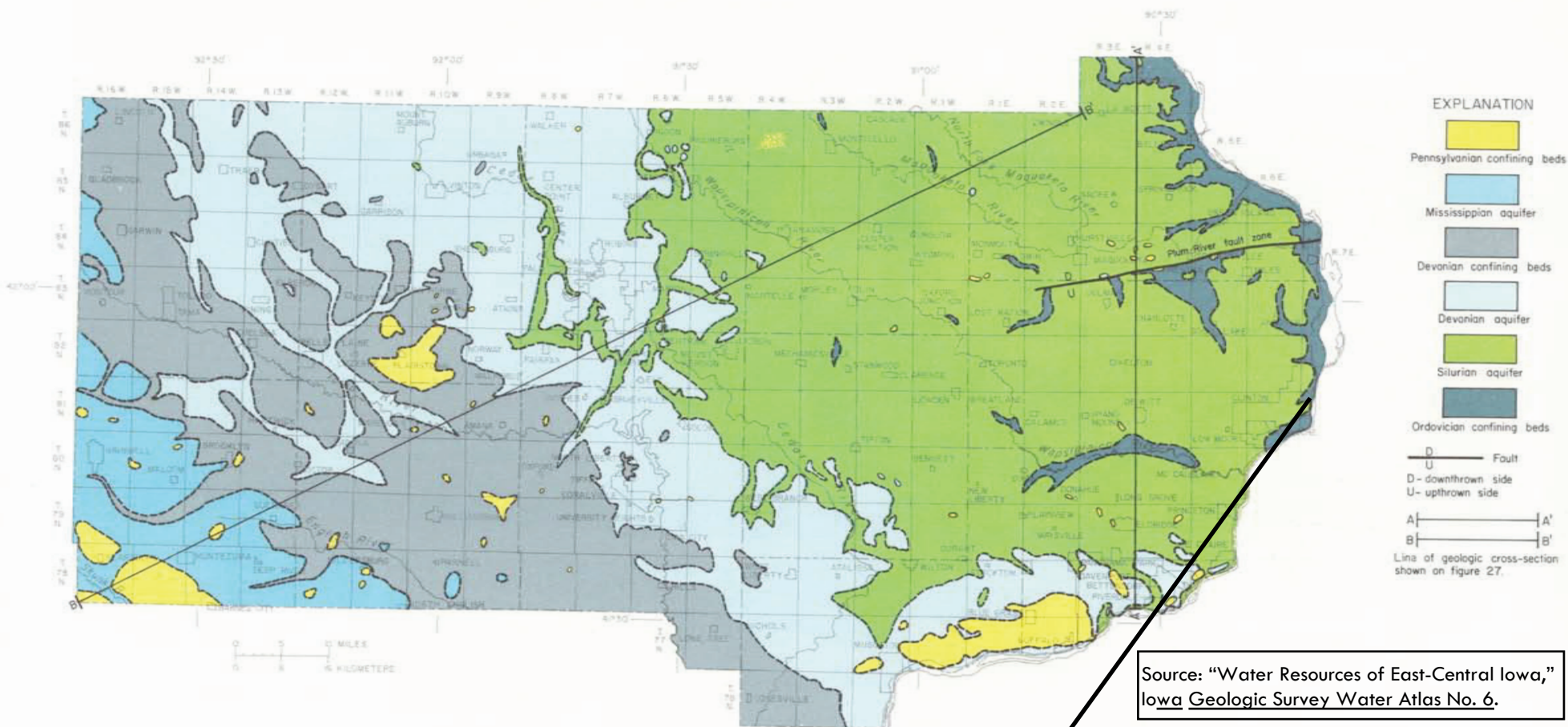



Figure 26.—Bedrock hydrogeologic map

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

Approximate Site Location



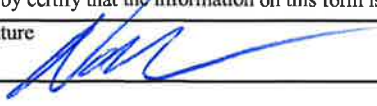
Appendix B
Boring Logs and Well Construction Documentation

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

Facility/Project Name IPL - Alliant M.L. Kapp		SCS#: 25216127.00		License/Permit/Monitoring Number		Boring Number MW-301					
Boring Drilled By: Name of crew chief (first, last) and Firm Patrick Goetz Direct Push Analytical				Date Drilling Started 2/8/2018		Date Drilling Completed 2/8/2018		Drilling Method HSA			
Unique Well No.		DNR Well ID No.		Common Well Name MW-301		Final Static Water Level Feet		Surface Elevation 589.3 Feet		Borehole Diameter 8.3 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>						Local Grid Location					
State Plane 677,257 N, 2,528,287 E S/C/N						Lat _____ " <input type="checkbox"/> N <input type="checkbox"/> E					
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E						Long _____ " <input type="checkbox"/> S <input type="checkbox"/> W					
Facility ID				County Clinton				Civil Town/City/ or Village Clinton			

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	POORLY GRADED SAND, fine to coarse, tan, (fill). Hydrovaced hole to 8 feet. Blind drilled to 8 feet.												
			2													
			3													
			4		SP											
			5													
			6													
			7													
			8													
S1	48		9	LEAN CLAY, dark gray, (10YR 4/1), soft, low plasticity, few organic fibers.												
			10													
			11		CL											
			12													
			13													
S2	42		14													
			15		ML											Depth to water at ~13 feet.

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:

Boring Number MW-301

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	
S3	36		16	SANDY SILT, fine grains, dark yellow-brown, (10YR 4/6), soft. <i>(continued)</i>	ML									
			17	POORLY GRADED SAND, fine to coarse, brown, (10YR 4/3).										
S4	36		18											
			19		SP									
			20											
			21											
			22	LEAN CLAY, dark gray, (10YR 4/1), soft, medium plasticity.	CL									
			23	SILT, dark gray, (10YR 4/1), stiff, trace organic fibers (wood chips).	ML									
			24	End of Boring at 24 feet.										

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

Facility/Project Name IPL - Alliant M.L. Kapp SCS#: 25216127.00		License/Permit/Monitoring Number		Boring Number MW-302	
Boring Drilled By: Name of crew chief (first, last) and Firm Patrick Goetz Direct Push Analytical		Date Drilling Started 2/8/2018		Date Drilling Completed 2/8/2018	
Unique Well No.		DNR Well ID No.		Common Well Name MW-302	
Final Static Water Level Feet		Surface Elevation 588.6 Feet		Borehole Diameter 8.3 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane 676,976 N, 2,529,320 E S/C/N		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E		Lat _____"		Long _____"	

Facility ID	County Clinton	Civil Town/City/ or Village Clinton
-------------	--------------------------	---

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	POORLY GRADED SAND, fine to coarse, tan, (fill). Hydrovaced hole to 8 feet. Bling drilled to 8 feet.										
	96		2-7		SP									
S1	48		8-12	LEAN CLAY, dark yellow brown, (10YR 4/4), medium stiffness, low to medium plasticity.	CL					M				
S2	36		13-14	POORLY GRADED SAND, fine, yellow-brown, (10YR 4/4). LEAN CLAY with fine sand, brown, (7.5YR 4/3), medium plasticity,	SP CL						M/W			Depth to water at ~14 feet.

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:
--	--	-----------------------------

Boring Number MW-302

Page 2 of 2

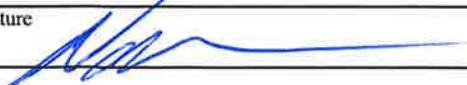
Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
S3	42		16	LEAN CLAY with fine sand, brown, (7.5YR 4/3), medium plasticity, <i>(continued)</i>	CL									
			17											
S4	42		18	SANDY SILT, fine, dark gray, (10YR 4/1), soft, low plasticity.	ML									
			19											
			20											
			21	LEAN CLAY, soft, medium plasticity.	CL									
			22											
			23	POORLY GRADED SAND, fine to coarse.	SP									
			24	End of boring at 24 feet.										

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

Facility/Project Name IPL - Alliant M.L. Kapp		License/Permit/Monitoring Number		Boring Number MW-303	
Boring Drilled By: Name of crew chief (first, last) and Firm Patrick Goetz Direct Push Analytical		Date Drilling Started 2/8/2018		Date Drilling Completed 2/8/2018	
Unique Well No.		DNR Well ID No.		Common Well Name MW-303	
Final Static Water Level Feet		Surface Elevation 589.7 Feet		Borehole Diameter 8.3 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane 676,590 N, 2,529,389 E S/C/N		Local Grid Location	
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E		Lat _____ ° _____ ' _____ "		Long _____ ° _____ ' _____ "	
Facility ID		County Clinton		Civil Town/City/ or Village Clinton	


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	POORLY GRADED SAND, fine to coarse, tan, (fill). Hydrovaced hole to 8 feet. Blind drilled to 8 feet.										
			2											
			3											
			4		SP									
			5											
			6											
			7											
			8											
			9	LEAN CLAY, very dark brown, (10YR 2/2), stiff, medium plasticity.										
S1	48		10							M				
			11											
			12	Same as above but dark gray (5YR 4/1) mottled with reddish brown (5YR 4/4).	CL									
			13											
S2	42		14							M/W				
			15											Depth to water at ~15 feet.

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:

Boring Number MW-303

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	POORLY GRADED SAND with silt, fine to medium sand, dark gray, (7YR 4/1).	SP									
			17											
			18	POORLY GRADED SAND, fine to coarse, brown, (7YR 4/4).	SP									
			19											
			20											
			21											
			22											
			23	LEAN CLAY, very dark gray, (10YR 3/1), soft, medium plasticity, trace organic fibers (wood chips).	CL									
			24											
			25											
				End of Boring at 25.5 feet.										

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

Facility/Project Name IPL - Alliant M.L. Kapp		SCS#: 25216127.00		License/Permit/Monitoring Number		Boring Number MW-304	
Boring Drilled By: Name of crew chief (first, last) and Firm Patrick Goetz Direct Push Analytical				Date Drilling Started 2/7/2018		Date Drilling Completed 2/7/2018	
Unique Well No.		DNR Well ID No.		Common Well Name MW-304		Final Static Water Level Feet	
				Surface Elevation 589.4 Feet		Borehole Diameter 8.3 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>				Local Grid Location			
State Plane 676,306 N, 2,529,104 E S/C/N				Lat _____ " <input type="checkbox"/> N <input type="checkbox"/> E			
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E				Long _____ " <input type="checkbox"/> S <input type="checkbox"/> W			

Facility ID	County Clinton	Civil Town/City/ or Village Clinton
-------------	--------------------------	---

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	POORLY GRADED SAND, fine to coarse, tan, (fill). Hydrovaced hole to 8 feet. Blind drilled to 8 feet.										
			2											
			3											
			4		SP									
			5											
			6											
			7											
			8											
S1	48		9	LEAN CLAY, very dark brown, (7.5YR 2.5/2), stiff, trace organic fibers (wood chips) at 10 feet.	CL						M			
			10											
			11											
			12											
S2	48		13	LEAN CLAY with trace silt, very dark gray, (10YR 3/1), medium stiffness, medium plasticity.	CL						M			
			14											
			15											

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:
---------------	--	-----------------------------

Boring Number **MW-304**

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	
S3	48		16	SANDY SILT, fine sand, brown, (10YR 4/3), soft.	ML								Depth to water at ~16 feet.	
			17	SILT, brown, (7.5YR 4/3), soft, low plasticity.										
S4	12		18											
			19		ML									
			20											
			21											
			22											
			23	POORLY GRADED SAND, fine to coarse, dark grayish/brown, (10YR 4/2).	SP									
			24											
			25	End of Boring at 25.0 feet.										

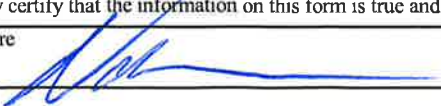
Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name IPL - Alliant M.L. Kapp SCS#: 25216127.00		License/Permit/Monitoring Number		Boring Number MW-305	
Boring Drilled By: Name of crew chief (first, last) and Firm Patrick Goetz Direct Push Analytical			Date Drilling Started 2/7/2018	Date Drilling Completed 2/7/2018	Drilling Method HSA
Unique Well No.	DNR Well ID No.	Common Well Name MW-305	Final Static Water Level Feet	Surface Elevation 589.4 Feet	Borehole Diameter 8.3 in
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Local Grid Location		
State Plane 676,126 N, 2,528,763 E S/C/N			Lat _____"	<input type="checkbox"/> N <input type="checkbox"/> E	
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E			Long _____"	<input type="checkbox"/> S <input type="checkbox"/> W	

Facility ID	County Clinton	Civil Town/City/ or Village Clinton
-------------	-------------------	--

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	POORLY GRADED SAND, fine to coarse, tan, (fill). Hydrovaced hole to 8 feet. Blind drilled to 8 feet.										
			2											
			3											
			4		SP									
			5											
			6											
			7											
			8											
S1	48		9	LEAN CLAY, very dark brown, (7.5YR 2.5/2), soft, low plasticity. Same as above but with trace silt (10-11) and dark brown (7.5YR 3/3).										
			10							M				
			11											
			12		CL									
			13											
S2	48		14							M				
			15											

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:
--	---	-----------------------------

Boring Number MW-305

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	
S3	42		16	SANDY SILT with gravel, fine to medium sand, fine to coarse gravel, dark yellowish-brown, (10YR 4/6), sub-rounded gravel.	CL									
			17		ML									
			18	POORLY GRADED SAND AND GRAVEL, fine to medium sand, fine to coarse gravel, dark yellowish-brown, (10YR 4/4), subrounded grains.	SP									W
			19											
S4	24		20	POORLY GRADED SAND, fine, very pale brown, (10YR 3/3), (sandstone bedrock).										
			21											
			22	SP										W
			23											
			24	End of Boring at 24.5 feet.										

Depth to water at 16 feet.

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

Facility/Project Name IPL - Alliant M.L. Kapp SCS#: 25216127.00		License/Permit/Monitoring Number		Boring Number MW-306	
Boring Drilled By: Name of crew chief (first, last) and Firm Patrick Goetz Direct Push Analytical		Date Drilling Started 2/7/2018		Date Drilling Completed 2/7/2018	
Unique Well No.		DNR Well ID No.		Common Well Name MW-306	
Final Static Water Level Feet		Surface Elevation 588.1 Feet		Borehole Diameter 8.3 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane 675,687 N, 2,527,883 E S/C/N		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E		Lat _____ "		Long _____ "	

Facility ID	County Clinton	Civil Town/City/ or Village Clinton
-------------	-------------------	--


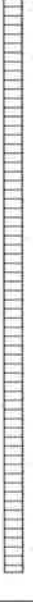
Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties						RQD/ Comments			
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200					
S1	24		1	POORLY GRADED SAND, fine to coarse, tan, (fill). Hydrovaced hole to 8 feet. Blind drilled to 8 feet.	SP													
			2															
			3															
			4															
			5															
			6															
			7															
			8															
			9	SILTY SAND, brownish yellow, (10YR 6/6).	SM													
			10	(Weathered Limestone Bedrock).			LIMESTONE											
			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 	Firm SCS Engineers 2830 Dairy Drive Madison, WI 53711	Tel: (608) 224-2830 Fax:
---------------	---	-----------------------------

Boring Number **MW-306**

Page 2 of 2

Sample			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)	Blow Counts							Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			16	(Weathered Limestone Bedrock). <i>(continued)</i>									Depth to water at ~17 feet.	
			17											
			18											
			19											
			20		LIMESTONE									
			21											
			22											
			23											
			24											
			25		End of Boring at 25 feet.									

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

Facility/Project Name ML-Kapp		SCS#: 25220117.00		License/Permit/Monitoring Number		Boring Number MW-307	
Boring Drilled By: Name of crew chief (first, last) and Firm Scott Zeien Terracon				Date Drilling Started 4/15/2020		Date Drilling Completed 4/15/2020	
Unique Well No.		DNR Well ID No.		Common Well Name		Final Static Water Level 6.63 Feet	
						Surface Elevation 601.69 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 680017.03 N, 2524149.7 E S/C/N				Lat _____ ° _____ ' _____ "		Local Grid Location	
NE 1/4 of SW 1/4 of Section 15, T 81 N, R 6 E				Long _____ ° _____ ' _____ "		Feet <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Clinton		County Code		Civil Town/City/ or Village Clinton, 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	CLAYEY SAND, fine grained, yellowish brown (10YR, 5/6) with some silt and trace gravel, non-cohesive to slightly cohesive, slightly moist, and loose.	SP											
			3	SILTY SAND, fine grained, dark yellowish brown (10YR, 3/4), trace gravel, cohesive, loose.	SM											Collected 2 samples from the sidewall of the hydrovac borhole between 0 and 8 feet bgs.
1	23	00 34	9	SILTY CLAY, dark brown to very dark brown (10YR, 3/3 to 10YR, 2/2) with trace fine sand, cohesive, very soft to soft.	CL											No recovery from 4-8 feet bgs
2	24	02 23	11		CL											
3	24	02 34	13	Same, with more sand, oxidized color.	CL											
			14	SANDY LEAN CLAY, yellowish brown to grayish brown, slight green hue (10YR, 5/4 to 10YR, 5/2),	CL											

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

Signature <i>Meghan Blodgett</i>	Meghan Blodgett for Matthew Cahalan	Firm SCS Engineers	Tel: Fax:
-------------------------------------	--	-----------------------	--------------

SOIL BORING LOG INFORMATION SUPPLEMENT

Boring Number **MW-307** to 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	
4	16	00 23	16	cohesive, very soft to soft.					W					
5	24	00 00	17		CL				W					
6	21	00 03	19						W					
7	19	00 23	20	CLAYEY SAND, dark grayish brown, (10YR, 4/2), fine to medium grained, cohesive, very soft to soft.	SC-SM									
			21	SILTY CLAY with sand, very dark grayish brown (10YR, 3/2), non-cohesive, very loose, sand is fine to medium grained.	CL					W				
			22	POORLY GRADED SAND, fine to medium grained, dark grayish brown (10YR, 4/2), some clay, very loose.	SP									
			22	End of boring at 22' bgs.										

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

Facility/Project Name IPL-Alliant M.L. Kapp		SCS#: 25220117.00		License/Permit/Monitoring Number	Boring Number MW-304A	
Boring Drilled By: Name of crew chief (first, last) and Firm Randy Radke Cascade Drilling				Date Drilling Started 1/8/2021	Date Drilling Completed 1/9/2021	Drilling Method rotary (air or mud)
Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level 17.8 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		
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E			Long _____° _____' _____"			

Facility ID	County Clinton	Civil Town/City/ or Village Clinton, Iowa
-------------	--------------------------	---





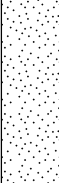
Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			1 2 3 4 5 6 7 8 9	Hydrovaced to ~8' below ground surface										
S1	60		10 11 12 13 14 15	LEAN CLAY, dark gray to black with trace sand.	CL					M				Driller noted starting Depth was ~9'-10 feet bgs.

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-304A

Page 2 of 4

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
S2	60		16	LEAN CLAY, dark gray to black with trace sand. <i>(continued)</i>	CL									
			17	SANDY SILT, fine grain, gray to brown with trace gravel.	ML					M				Switched to water @ 15' bgs.
S3	60		18											
			19											
S4	60		20											
			21	POORLY GRADED SAND, fine to coarse grain, grayish brown with gravel and cobbles.	SP						W			
S5	60		22											
			23											
S6	60		24	SILTY SAND, fine grain, light brown to brown with trace gravel and cobbles.	SM									
			25	Same as above but less silt.							W/M			From 22 to 26' bgs, soil was wet, from 26 to 30'
			26											
			27	Same as above but dense.										
			28											
			29											
			30											
			31											
			32											
			33	POORLY GRADED SAND, fine grain, light brown to brown with lenses of silt and less dense than above.	SP									
			34	Same as above.										
			35											
			36	POORLY GRADED SAND, fine to coarse grain, brown with gravel (36 to 39' bgs).										
			37											
			38											
			39	Same as above but fine grain with cobbles (39 TO 40' bgs).										
			40											

Boring Number MW-304A

Page 3 of 4

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
Number and Type	Length Att. & Recovered (in)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200		
S7	60		41	POORLY GRADED SAND, fine grain, light brown to brown with lenses of silt and less dense than above. <i>(continued)</i> Same as above but fine to coarse grain, brown with lots gravel and cobbles.	SP										
			42												
			43												
S8	60		44	SANDY SILT, fine grain, brown with gravel and cobbles.	ML										
			45	LEAN CLAY, dark brown with trace gravel and sticks, very dense.	CL										
			46												
			47												
			48	POORLY GRADED SAND, fine to medium grain, orangish brown, very trace gravel.	SP										
49															
S9	72		50	SANDY LEAN CLAY, dark brownish gray, very dense with gravel.	CL										
			51												
			52												
			53												
S10	48		54	Same as above but dark gray	CL										
			55												
			56	SILTY SAND, fine grain, light gray to tannish orange, with gravel (possibly weathered limestone bedrock).	SM										
			57												
			58												
			59	SILT, reddish orange.											
			60												
S11	60		61		ML										
			62												
			63												
			64												
			65												

Stronger petroleum odor from 40 to 44' bgs.

Soil from 59 to 60' bgs reacts with HCL.

Boring Number MW-304A

Page 4 of 4

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
S12	60		66	SILT, reddish orange. <i>(continued)</i> SILT, reddish orange.	ML									
			67											
			68											
			69											
			70	End of Boring at 70' below ground surface. Abandoned to 57' below ground surface with bentonite chips. Monitoring well installed to a depth of 55' below ground surface.										


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

Facility/Project Name M.L. Kapp		SCS#: 25220117.00		License/Permit/Monitoring Number		Boring Number MW-308	
Boring Drilled By: Name of crew chief (first, last) and Firm Mike Mueller Cascade Drilling				Date Drilling Started 4/26/2021		Date Drilling Completed 4/27/2021	
Unique Well No.		DNR Well ID No.		Common Well Name MW-308		Final Static Water Level 579.1 Feet MSL	
				Surface Elevation 586.1 Feet MSL		Borehole Diameter 6.0 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane 676,224 N, 2,530,071 E <input checked="" type="checkbox"/> C/N				Lat 41° 48' 36.7"		Local Grid Location	
1/4 of 1/4 of Section , T N, R				Long -90° 14' 9.5"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	

Facility ID	County Clinton	Civil Town/City/ or Village Clinton, IA
-------------	--------------------------	---

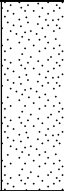
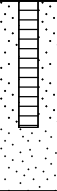
Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200		
			1	Hydrovacced to 8' bgs.											
			2												
			3												
			4												
			5												
S1	48		5	POORLY GRADED SAND, fine to coarse grained, brown, with trace gravel.	SP				2.25	W					Hydrovac hole caved, bottom of hole is at 5 feet
			6												
			7												
			8	LEAN CLAY, dark grayish brown, (2.5Y 4/1), dense, with trace sand, gravel, and roots.	CL										Depth to water at ~7'
			9												
			10												
S2	56		10	POORLY GRADED SAND, fine to coarse grained, brown, (7.5YR 4/3), with lenses of clay, clay is dark grayish brown, (2.Y 4/1).	SP					W					
			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 	Firm SCS Engineers	Tel: Fax:
--	---------------------------	--------------

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	
S3	34		16	POORLY GRADED SAND, fine to coarse grained, brown, (7.5YR 4/3), with lenses of clay, clay is dark grayish brown, (2.Y 4/1). (continued)	SP					W				
			17											
			18	End of Boring at 18' below ground surface. Well set at 17' below ground surface, screened to 7'										

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

Facility/Project Name M.L. Kapp		License/Permit/Monitoring Number SCS#: 25220117.00		Boring Number MW-309	
Boring Drilled By: Name of crew chief (first, last) and Firm Mike Mueller Cascade Drilling			Date Drilling Started 4/27/2021	Date Drilling Completed 4/27/2021	Drilling Method rotasonic
Unique Well No.	DNR Well ID No.	Common Well Name MW-309	Final Static Water Level 575.5 Feet MSL	Surface Elevation 589.0 Feet MSL	Borehole Diameter 6.0 in
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane 674,909 N, 2,530,939 E <input checked="" type="checkbox"/> C/N			Local Grid Location		
1/4 of 1/4 of Section , T N, R			Lat 41° 48' 23.4"	<input type="checkbox"/> N <input type="checkbox"/> E	
			Long -90° 13' 58.7"	<input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Clinton	Civil Town/City/ or Village Clinton, IA		


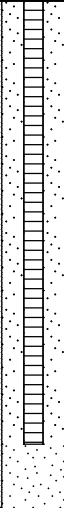




Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200		
S1	50		1	POORLY GRADED SAND AND GRAVEL, fine to coarse grained, brown.	SP										
			2	SILTY SAND, fine grained, yellowish brown, (10YR 5/4).	ML										
S2	60		3	Same as above but with more sand.	ML				2.25	W				Depth to water at ~ 6.5' bgs. Sampled at 5 - 8.5' and 8.5 - 10' bgs.	
			4												
S3	60		5	SANDY LEAN CLAY, black, (2.5Y 2.5/1), trace gravel/rock.	CL									Sampled 10 - 12' bgs and 12 - 15' bgs	
			6												Same as above but with more sand and gravel/rock.
			7												CLAYEY SAND, fine to coarse grained, black, (2.5Y 2.5/1), with trace gravel/rock.

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		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	60		16 17 18 19 20 21 22	CLAYEY SAND, fine to coarse grained, black, (2.5Y 2.5/1), with trace gravel/rock. <i>(continued)</i>	SC												
S5	60		23 24 25	LEAN CLAY, black, (2.5Y 2.5/1), with trace sand and gravel.	CL				1.5	W							
				POORLY GRADED SAND, fine to coarse grained, black, (2.5Y 2.5/1), with trace gravel and clay.	SP												
				End of boring at 25' below ground surface. Set well at 22' Below ground surface and screened to 12'.													
																	Switched to drilling with water at 15' bgs

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

Facility/Project Name M.L. Kapp		SCS#: 25220117.00		License/Permit/Monitoring Number		Boring Number MW-310	
Boring Drilled By: Name of crew chief (first, last) and Firm Todd Schmalfeldt Cascade Drilling				Date Drilling Started 9/27/2021		Date Drilling Completed 9/27/2021	
Unique Well No.		DNR Well ID No.		Common Well Name MW-310		Final Static Water Level 589.08 Feet MSL	
				Surface Elevation 595.1 Feet MSL		Borehole Diameter 6.0 in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane 682,681 N, 2,538,494 E S/C/N				Lat <u> </u> ° <u> </u> ' <u> </u> "		Local Grid Location	
NW 1/4 of NE 1/4 of Section 13, T 81N, R 06E				Long <u> </u> ° <u> </u> ' <u> </u> "		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Clinton		Civil Town/City/ or Village Clinton, IA			

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	0		2.5	Hydrovaced hole to 8 feet below ground surface (bgs) in unconsolidated sediment.											
			5.0												
S2	24		7.5	SILT, light brown, trace gravel.											Depth to water at 8'
S3	60		10.0	Same as above but dark brown with some gray, and with trace fine sand and roots.	ML										
S4	60		12.5												
			15.0												
			17.5												
			20.0	POORLY GRADED SAND, fine to coarse grained, dark brown.	SP										
S5	60		22.5	Limestone bedrock, tan with red and gray mottling, weathered.											
			25.0	Same as above but consolidated with fractures.											
S7	22		27.5												
			30.0												
				End of boring at 31 feet.											

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:
---------------	---------------------------	--------------

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

Facility/Project Name M.L. Kapp		License/Permit/Monitoring Number SCS#: 25220117.00		Boring Number MW-311	
Boring Drilled By: Name of crew chief (first, last) and Firm Eric Wetzel Roberts Environmental Services			Date Drilling Started 12/7/2021	Date Drilling Completed 12/7/2021	Drilling Method Air Rotary
Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level 572.33 Feet	Surface Elevation 585.29 Feet	Borehole Diameter 6" in
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane 675512.71 N, 2,528,391.23 E <input checked="" type="checkbox"/> C/N			Lat 41° 48' 30.2571"	Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
NW 1/4 of SE 1/4 of Section 22,	T 81 N, R 6 E	Long -90° 14' 32.0117"			

Facility ID	County Clinton	Civil Town/City/ or Village Clinton
-------------	--------------------------	---

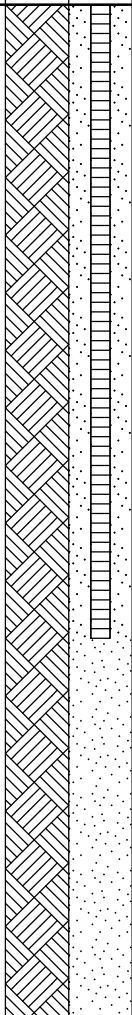
Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
									Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200		
			1 2 3 4 5 6 7	SILT, dark brown (10YR 2/2) with very fine grain sand, some sand is micaceous.	ML										Hydrovaced to 8' below ground surface.
			8 9 10 11 12 13 14 15	LIMESTONE, yellow/gold (10YR 7/6) with pores and thin bedding (less than 1mm) of yellow and rust colored layers. Many dissolution pores.											

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

Signature <i>Zack Watson</i>	Firm SCS Engineers 3900 Kilroy Airport Way Long Beach, CA 90806	Tel: Fax:
---------------------------------	---	--------------

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		
			16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	Same as above.											
			31	End of boring at 31' below ground surface.											

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

Facility/Project Name M.L. Kapp		License/Permit/Monitoring Number		Boring Number MW-311A	
Boring Drilled By: Name of crew chief (first, last) and Firm Eric Wetzel Roberts Environmental Services		Date Drilling Started 12/7/2021		Date Drilling Completed 12/8/2021	
Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level 572.54 Feet		Surface Elevation 585.29 Feet		Borehole Diameter 6" in	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane 675510.55 N, 2528400.63 E <input checked="" type="checkbox"/> C/N		Local Grid Location	
NW 1/4 of SE 1/4 of Section 22, T 81 N, R 6 E		Lat 41° 48' 30.2323"		<input type="checkbox"/> N <input type="checkbox"/> E	
		Long -90° 14' 31.8888"		<input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Clinton		Civil Town/City/ or Village Clinton	

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 2 3 4 5 6 7	SILT, dark brown (10YR 2/2) with flaky fine grain sand.	ML													
			8 9 10 11 12 13 14 15	LIMESTONE, yellow/gold (10YR 7/6) with pores and thin bedding (less than 1mm) of yellow and rust colored layers. Many dissolution pores.														Hydrovaced to 8' below ground surface.

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 3900 Kilroy Airport Way Long Beach, CA 90806	Tel: Fax:
---------------------------------	---	--------------



Boring Number MW-311A

Page 2 of 4

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			16	Same as above.										
			17											
			18											
			19											
			20											
			21											
			22											
			23											
			24											
			25											
			26											
			27											
			28											
			29											
			30											
			31											
			32	Same as above.										
			33											
			34											
			35											
			36											
			37											
			38											
			39											
			40											

Boring Number MW-311A

Page 4 of 4

Sample		Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments
Number and Type	Length Att. & Recovered (in)								Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	
			66	Same as above. End of boring at 66' below ground surface.						W				



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

Disposal Site Name: M.L. Kapp Generating Station - Main Ash Pond Permit No.:

Well or Piezometer No: MW-301

Dates Started: 2/8/2018 Date Completed: 2/8/2018

Table with 2 columns: A. SURVEYED LOCATIONS AND ELEVATIONS, B. SOIL BORING INFORMATION. Includes location coordinates, elevations, and drilling details.

Table with 2 columns: C. MONITORING WELL INSTALLATION. Includes casing material (PVC), screen material (PVC), filter pack details, and seal information.

D. GROUNDWATER MEASUREMENT (± 0.01 ft below top of inner well casing). Includes water level (14.08), stabilization time (48 days), and well development method (N/A).

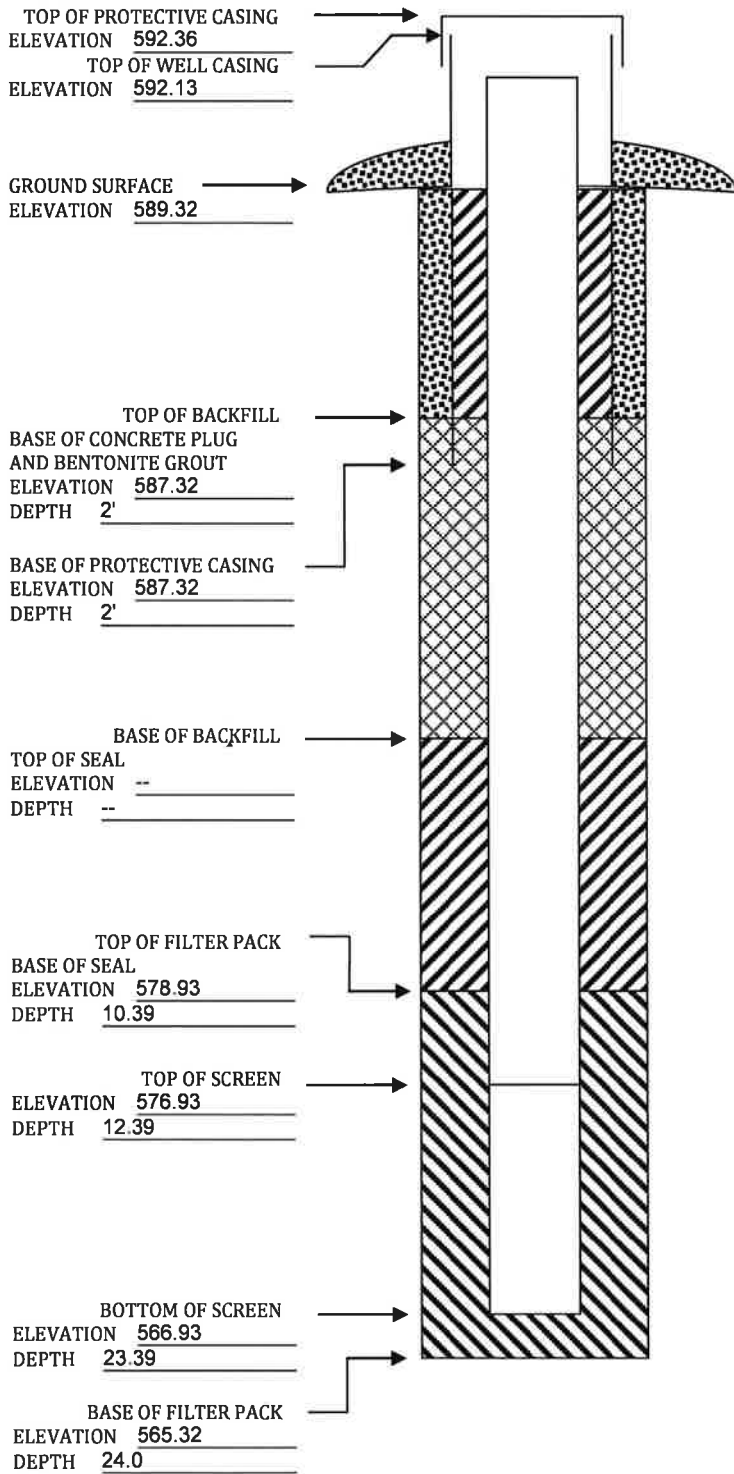
Attachments: Driller's log, Pipe schedules and grouting schedules, 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

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: M.L. Kapp Generating Station - Main Ash Pond Permit No.: _____

Well or Piezometer No: MW-302

Dates Started: 2/8/2018 Date Completed: 2/8/2018

A. SURVEYED LOCATIONS AND ELEVATIONS	B. SOIL BORING INFORMATION
Locations (± 0.5 ft): <u>676976.06 N, 2529320.21 E</u>	Name & Address of Construction Company:
Specify corner of site: <u>NW of parcel 8071930000</u>	<u>Direct Push Analytical</u>
Distance & direction along boundary: <u>700' E</u>	<u>4N969 Old LaFox Road, Unit E</u>
Distance & direction from boundary to wall: <u>329' S</u>	<u>St. Charles, IL 60175</u>
Elevations (± 0.01 ft MSL):	Name of Driller: <u>Patrick Goetz</u>
Ground Surface: <u>588.58</u>	Drilling Method: <u>4.5" Auger</u>
Top of protective casing: <u>591.81</u>	Drilling Fluid: <u>N/A</u>
Top of well casing: <u>591.54</u>	Bore Hole Diameter: <u>8.25"</u>
Benchmark elevation: <u>590.75</u>	Soil Sampling Method: <u>Geoprobe</u>
Benchmark description: <u>BM-1</u>	Depth of Boring: <u>24.0'</u>

C. MONITORING WELL INSTALLATION	
Casing material: <u>PVC</u>	Placement method: <u>Gravity</u>
Length of casing: <u>15.83</u>	Volume: <u>1.86 ft³</u>
Outside casing diameter: <u>2.38"</u>	Backfill (if different from seal): <u>N/A</u>
Inside casing diameter: <u>2"</u>	Material: <u>N/A</u>
Casing joint type: <u>Flush Threaded</u>	Placement method: <u>N/A</u>
Casing/screen joint type: <u>Flush Threaded</u>	Volume: <u>N/A</u>
Screen material: <u>PVC</u>	Surface seal design: <u>0'-2' bgs</u>
Screen opening size: <u>0.010"</u>	Material of protective casing: <u>Steel, 4" diameter</u>
Screen length: <u>10'</u>	Material of grout between protective casing and well casing: <u>sand</u>
Depth of well: <u>23.14</u>	Protective cap: <u>6 inch diameter</u>
Filter Pack: <u>11.14' -23.14' bgs</u>	Material: <u>Steel</u>
Material: <u>R.W. Sidley</u>	Vented: <input type="checkbox"/> Yes <input type="checkbox"/> No Locking: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Grain size: <u>#5</u>	Well Cap: <u>2 inch diameter</u>
Volume: <u>4.2 cu/ft</u>	Material: <u>plastic with rubber gasket</u>
Seal (minimum 3 ft length above filter pack): <u>2'-11.14' bgs</u>	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>16.00</u>	Stabilization Time: <u>48 days</u>
Well development method: <u>N/A</u>	
Average depth of frostline: <u>4 feet</u>	

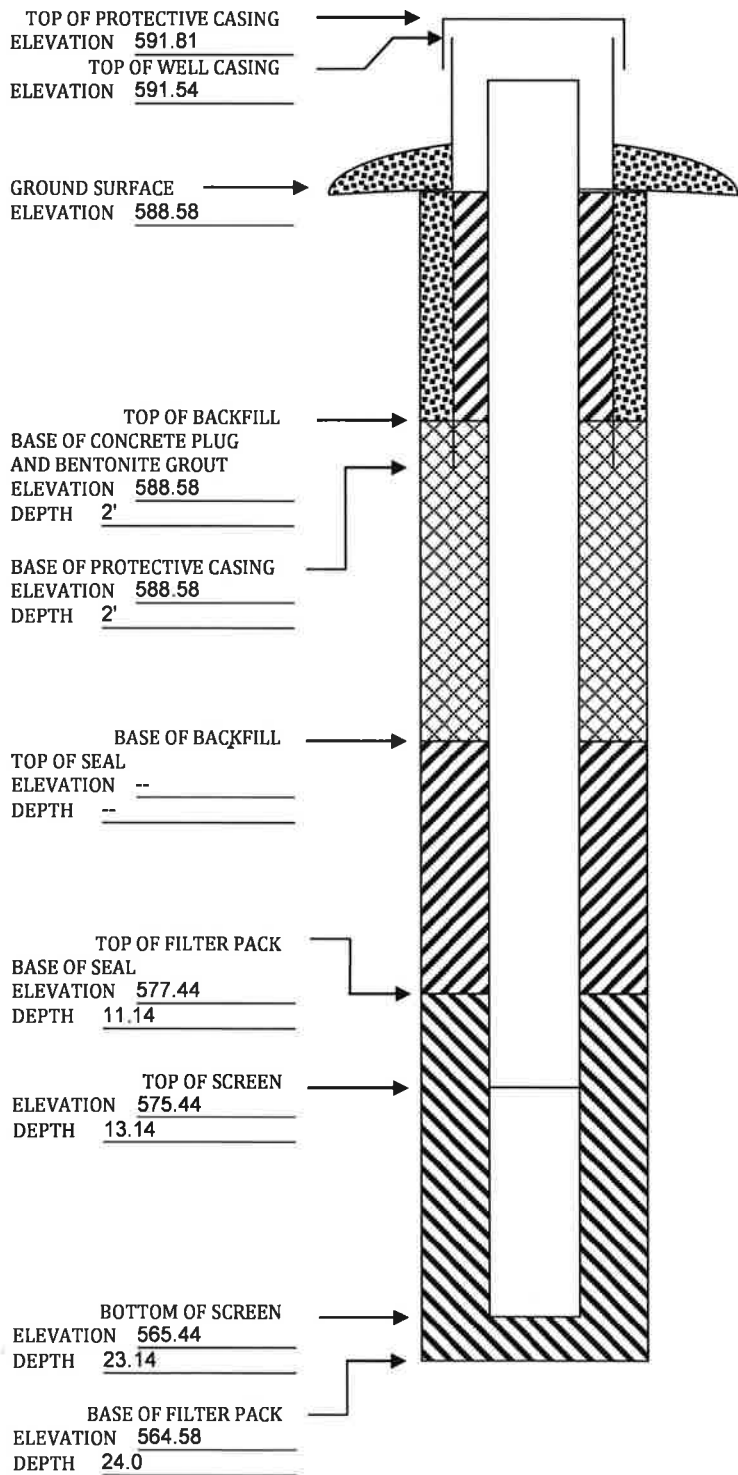
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

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: M.L. Kapp Generating Station - Main Ash Pond Permit No.: _____
 Well or Piezometer No: MW-303
 Dates Started: 2/8/2018 Date Completed: 2/8/2018

A. SURVEYED LOCATIONS AND ELEVATIONS	B. SOIL BORING INFORMATION
Locations (± 0.5 ft): <u>676590.31 N, 2529388.67 E</u>	Name & Address of Construction Company:
Specify corner of site: <u>NW of parcel 8071930000</u>	<u>Direct Push Analytical</u>
Distance & direction along boundary: <u>687' E</u>	<u>4N969 Old LaFox Road, Unit E</u>
Distance & direction from boundary to wall: <u>730' S</u>	<u>St. Charles, IL 60175</u>
Elevations (± 0.01 ft MSL):	Name of Driller: <u>Patrick Goetz</u>
Ground Surface: <u>589.73</u>	Drilling Method: <u>4.5" Auger</u>
Top of protective casing: <u>592.69</u>	Drilling Fluid: <u>N/A</u>
Top of well casing: <u>592.40</u>	Bore Hole Diameter: <u>8.25"</u>
Benchmark elevation: <u>590.75</u>	Soil Sampling Method: <u>Geoprobe</u>
Benchmark description: <u>BM-1</u>	Depth of Boring: <u>25.5'</u>

C. MONITORING WELL INSTALLATION	
Casing material: <u>PVC</u>	Placement method: <u>Gravity</u>
Length of casing: <u>15.11'</u>	Volume: <u>2.43 cubic feet</u>
Outside casing diameter: <u>2.38"</u>	Backfill (if different from seal): <u>N/A</u>
Inside casing diameter: <u>2"</u>	Material: <u>N/A</u>
Casing joint type: <u>Flush Threaded</u>	Placement method: <u>N/A</u>
Casing/screen joint type: <u>Flush Threaded</u>	Volume: <u>N/A</u>
Screen material: <u>PVC</u>	Surface seal design: <u>0'-2' bgs</u>
Screen opening size: <u>0.010"</u>	Material of protective casing: <u>Steel, 4" diameter</u>
Screen length: <u>10'</u>	Material of grout between protective casing and well casing: <u>sand</u>
Depth of well: <u>25.11'</u>	Protective cap: <u>6 inch diameter</u>
Filter Pack: <u>13.11'-25.11' bgs</u>	Material: <u>Plastic</u>
Material: <u>R.W. Sidley</u>	Vented: <input type="checkbox"/> Yes <input type="checkbox"/> No Locking: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Grain size: <u>#5</u>	Well Cap: <u>2 inch diameter</u>
Volume: <u>4.2 cu/ft</u>	Material: <u>plastic with rubber gasket</u>
Seal (minimum 3 ft length above filter pack): <u>2'-13.11' bgs</u>	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>15.47</u>	Stabilization Time: <u>47 days</u>
Well development method: <u>N/A</u>	
Average depth of frostline: <u>4 feet</u>	

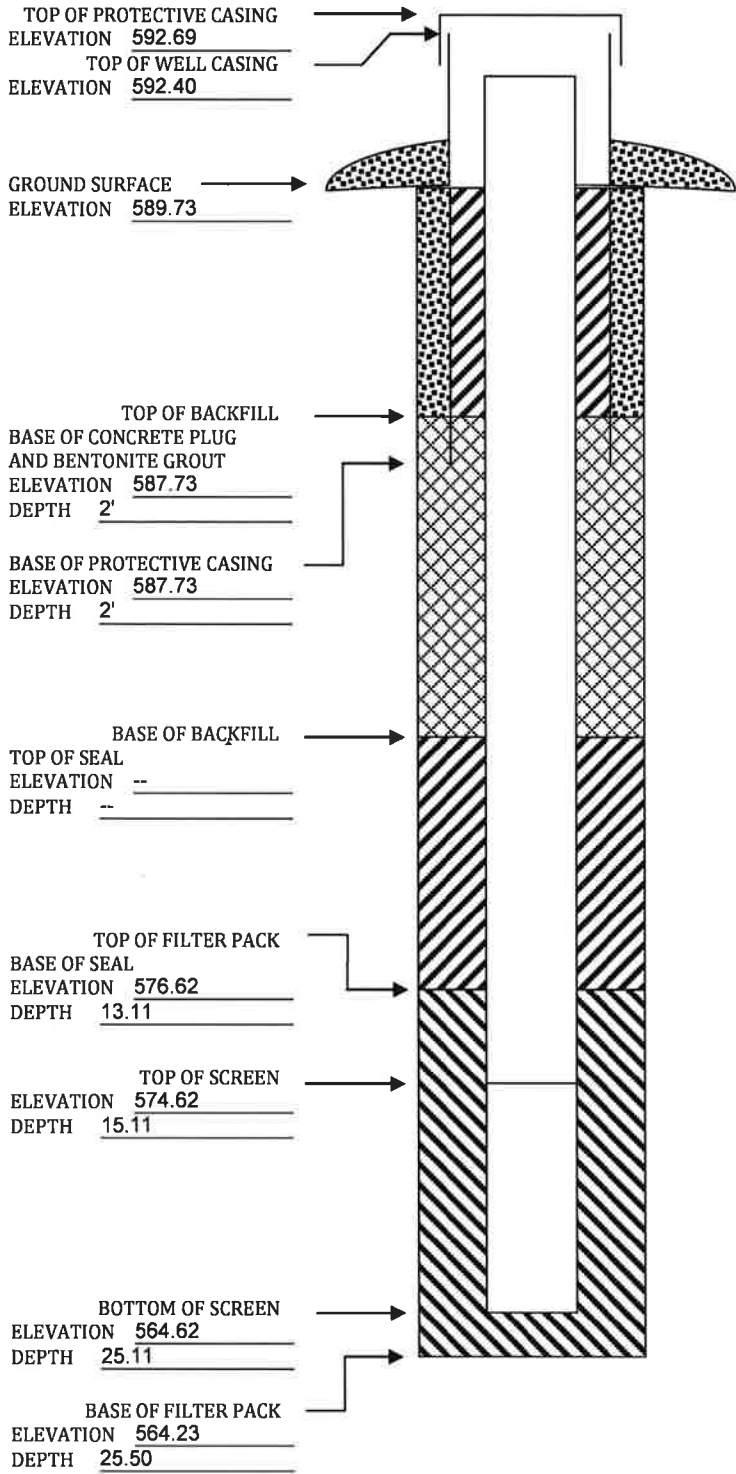
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

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: M.L. Kapp Generating Station - Main Ash Pond Permit No.: _____

Well or Piezometer No: MW-304

Dates Started: 2/7/2018 Date Completed: 2/7/2018

A. SURVEYED LOCATIONS AND ELEVATIONS	B. SOIL BORING INFORMATION
Locations (± 0.5 ft): <u>676305.68 N, 2529103.87 E</u>	Name & Address of Construction Company: <u>Direct Push Analytical</u>
Specify corner of site: <u>SW of parcel 8071930000</u>	<u>4N969 Old LaFox Road, Unit E</u>
Distance & direction along boundary: <u>152' N</u>	<u>St. Charles, IL 60175</u>
Distance & direction from boundary to wall: <u>1,487' E</u>	Name of Driller: <u>Patrick Goetz</u>
Elevations (± 0.01 ft MSL):	Drilling Method: <u>4.5" Auger</u>
Ground Surface: <u>589.42</u>	Drilling Fluid: <u>N/A</u>
Top of protective casing: <u>592.35</u>	Bore Hole Diameter: <u>8.5"</u>
Top of well casing: <u>592.12</u>	Soil Sampling Method: <u>Geoprobe</u>
Benchmark elevation: <u>590.75</u>	Depth of Boring: <u>25.0'</u>
Benchmark description: <u>BM-1</u>	

C. MONITORING WELL INSTALLATION	
Casing material: <u>PVC</u>	Placement method: <u>Gravity</u>
Length of casing: <u>14.54'</u>	Volume: <u>2.0 ft³</u>
Outside casing diameter: <u>2.38"</u>	Backfill (if different from seal): <u>N/A</u>
Inside casing diameter: <u>2"</u>	Material: <u>N/A</u>
Casing joint type: <u>Flush Threaded</u>	Placement method: <u>N/A</u>
Casing/screen joint type: <u>Flush Threaded</u>	Volume: <u>N/A</u>
Screen material: <u>PVC</u>	Surface seal design: <u>0'-2' bgs</u>
Screen opening size: <u>0.010"</u>	Material of protective casing: <u>Steel, 4" diameter</u>
Screen length: <u>10'</u>	Material of grout between protective casing and well casing: <u>sand</u>
Depth of well: <u>24.0'</u>	Protective cap: <u>6 inch diameter</u>
Filter Pack: <u>12.54'-24.54' bgs</u>	Material: <u>Plastic</u>
Material: <u>R.W. Sidley</u>	Vented: <input type="checkbox"/> Yes <input type="checkbox"/> No Locking: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Grain size: <u>#5</u>	Well Cap: <u>2 inch diameter</u>
Volume: <u>4.2 cu/ft</u>	Material: <u>plastic with rubber gasket</u>
Seal (minimum 3 ft length above filter pack): <u>2'-12.54' bgs</u>	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>15.35</u>	Stabilization Time: <u>48 days</u>
Well development method: <u>N/A</u>	
Average depth of frostline: <u>4 feet</u>	

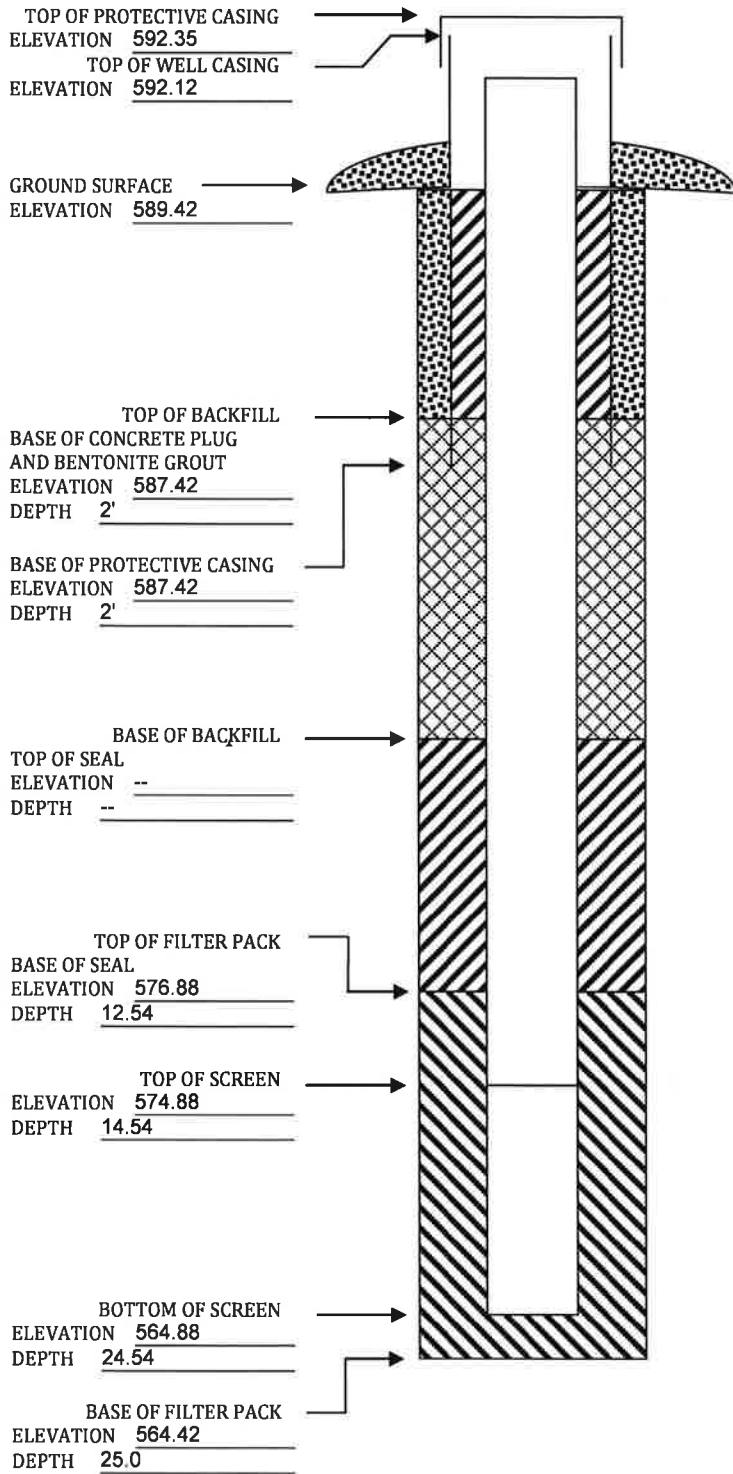
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

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: M.L. Kapp Generating Station - Main Ash Pond Permit No.: _____

Well or Piezometer No: MW-305

Dates Started: 2/7/2018 Date Completed: 2/7/2018

A. SURVEYED LOCATIONS AND ELEVATIONS	B. SOIL BORING INFORMATION
Locations (± 0.5 ft): <u>676125.82 N, 2528762.6 E</u>	Name & Address of Construction Company: <u>Direct Push Analytical</u>
Specify corner of site: <u>SW of parcel 8071930000</u>	<u>4N969 Old LaFox Road, Unit E</u>
Distance & direction along boundary: <u>137' N</u>	<u>St. Charles, IL 60175</u>
Distance & direction from boundary to wall: <u>1,084' E</u>	Name of Driller: <u>Patrick Goetz</u>
Elevations (± 0.01 ft MSL):	Drilling Method: <u>4.5" Auger</u>
Ground Surface: <u>589.39</u>	Drilling Fluid: <u>N/A</u>
Top of protective casing: <u>592.86</u>	Bore Hole Diameter: <u>8.25"</u>
Top of well casing: <u>592.60</u>	Soil Sampling Method: <u>Geoprobe</u>
Benchmark elevation: <u>590.75</u>	Depth of Boring: <u>24.5'</u>
Benchmark description: <u>BM-1</u>	

C. MONITORING WELL INSTALLATION	
Casing material: <u>PVC</u>	Placement method: <u>Gravity</u>
Length of casing: <u>17.30</u>	Volume: <u>2.21 ft³</u>
Outside casing diameter: <u>2.38"</u>	Backfill (if different from seal): <u>N/A</u>
Inside casing diameter: <u>2"</u>	Material: <u>N/A</u>
Casing joint type: <u>Flush Threaded</u>	Placement method: <u>N/A</u>
Casing/screen joint type: <u>Flush Threaded</u>	Volume: <u>N/A</u>
Screen material: <u>PVC</u>	Surface seal design: <u>0'-2' bgs</u>
Screen opening size: <u>0.010"</u>	Material of protective casing: <u>Steel, 4" diameter</u>
Screen length: <u>10'</u>	Material of grout between protective casing and well casing: <u>sand</u>
Depth of well: <u>24.09</u>	Protective cap: <u>6 inch diameter</u>
Filter Pack: <u>12.09' -24.09' bgs</u>	Material: <u>Steel</u>
Material: <u>R.W. Sidley</u>	Vented: <input type="checkbox"/> Yes <input type="checkbox"/> No Locking: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Grain size: <u>#5</u>	Well Cap: <u>2 inch diameter</u>
Volume: <u>4.2 cu/ft</u>	Material: <u>plastic with rubber gasket</u>
Seal (minimum 3 ft length above filter pack): <u>2'-12.09' bgs</u>	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>16.24</u>	Stabilization Time: <u>48 days</u>
Well development method: <u>N/A</u>	
Average depth of frostline: <u>4 feet</u>	

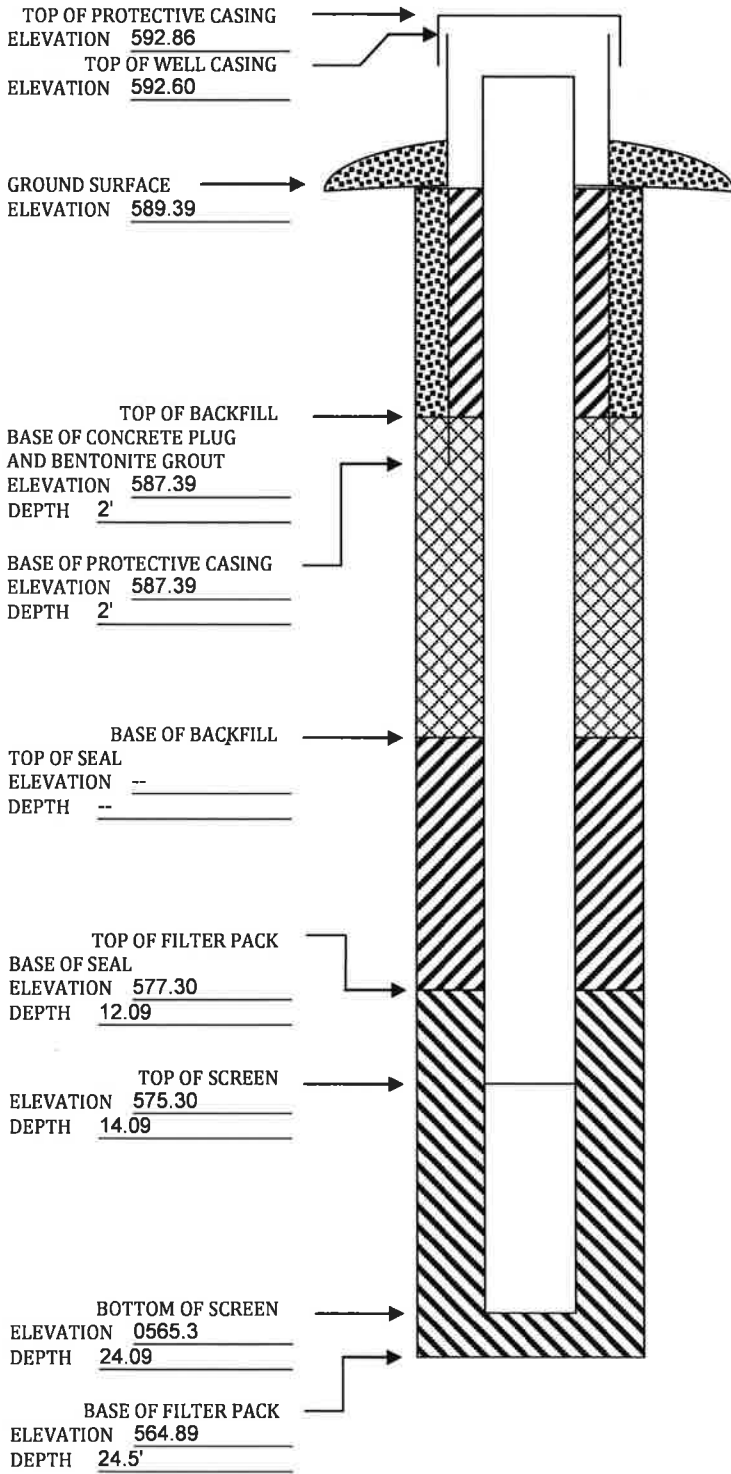
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

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: M.L. Kapp Generating Station - Main Ash Pond Permit No.: _____

Well or Piezometer No: MW-306

Dates Started: 2/7/2018

Date Completed: 2/7/2018

A. SURVEYED LOCATIONS AND ELEVATIONS	B. SOIL BORING INFORMATION
Locations (± 0.5 ft): <u>675686.88 N, 2527883.15 E</u>	Name & Address of Construction Company:
Specify corner of site: <u>SW of Parcel 8071930000</u>	<u>Direct Push Analytical</u>
Distance & direction along boundary: <u>130' N</u>	<u>4N969 Old LaFox Road, Unit E</u>
Distance & direction from boundary to wall: <u>81' E</u>	<u>St. Charles, IL 60175</u>
Elevations (± 0.01 ft MSL):	Name of Driller: <u>Patrick Goetz</u>
Ground Surface: <u>588.14</u>	Drilling Method: <u>4.5" Auger</u>
Top of protective casing: <u>591.09</u>	Drilling Fluid: <u>N/A</u>
Top of well casing: <u>590.83</u>	Bore Hole Diameter: <u>8.25"</u>
Benchmark elevation: <u>590.75</u>	Soil Sampling Method: <u>Geoprobe</u>
Benchmark description: <u>BM-1</u>	Depth of Boring: <u>25.0'</u>

C. MONITORING WELL INSTALLATION	
Casing material: <u>PVC</u>	Placement method: <u>Gravity</u>
Length of casing: <u>17.20</u>	Volume: <u>2.30 ft3</u>
Outside casing diameter: <u>2.38"</u>	Backfill (if different from seal): <u>N/A</u>
Inside casing diameter: <u>2"</u>	Material: <u>N/A</u>
Casing joint type: <u>Flush Threaded</u>	Placement method: <u>N/A</u>
Casing/screen joint type: <u>Flush Threaded</u>	Volume: <u>N/A</u>
Screen material: <u>PVC</u>	Surface seal design: <u>0'-2'</u>
Screen opening size: <u>0.010"</u>	Material of protective casing: <u>Steel, 4" diameter</u>
Screen length: <u>10'</u>	Material of grout between protective casing and well casing: <u>sand</u>
Depth of well: <u>24.51'</u>	Protective cap: <u>6 inch diameter</u>
Filter Pack: <u>12.51'-24.51' bgs</u>	Material: <u>Steel</u>
Material: <u>Native (slough)</u>	Vented: <input type="checkbox"/> Yes <input type="checkbox"/> No Locking: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Grain size: <u>R.W. Sidley #5</u>	Well Cap: <u>2 inch diameter</u>
Volume: <u>4.2 cu/ft</u>	Material: <u>plastic with rubber gasket</u>
Seal (minimum 3 ft length above filter pack): <u>2'-12.51' bgs</u>	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>13.26</u>	Stabilization Time: <u>48 days</u>
Well development method: <u>N/A</u>	
Average depth of frostline: <u>4 feet</u>	

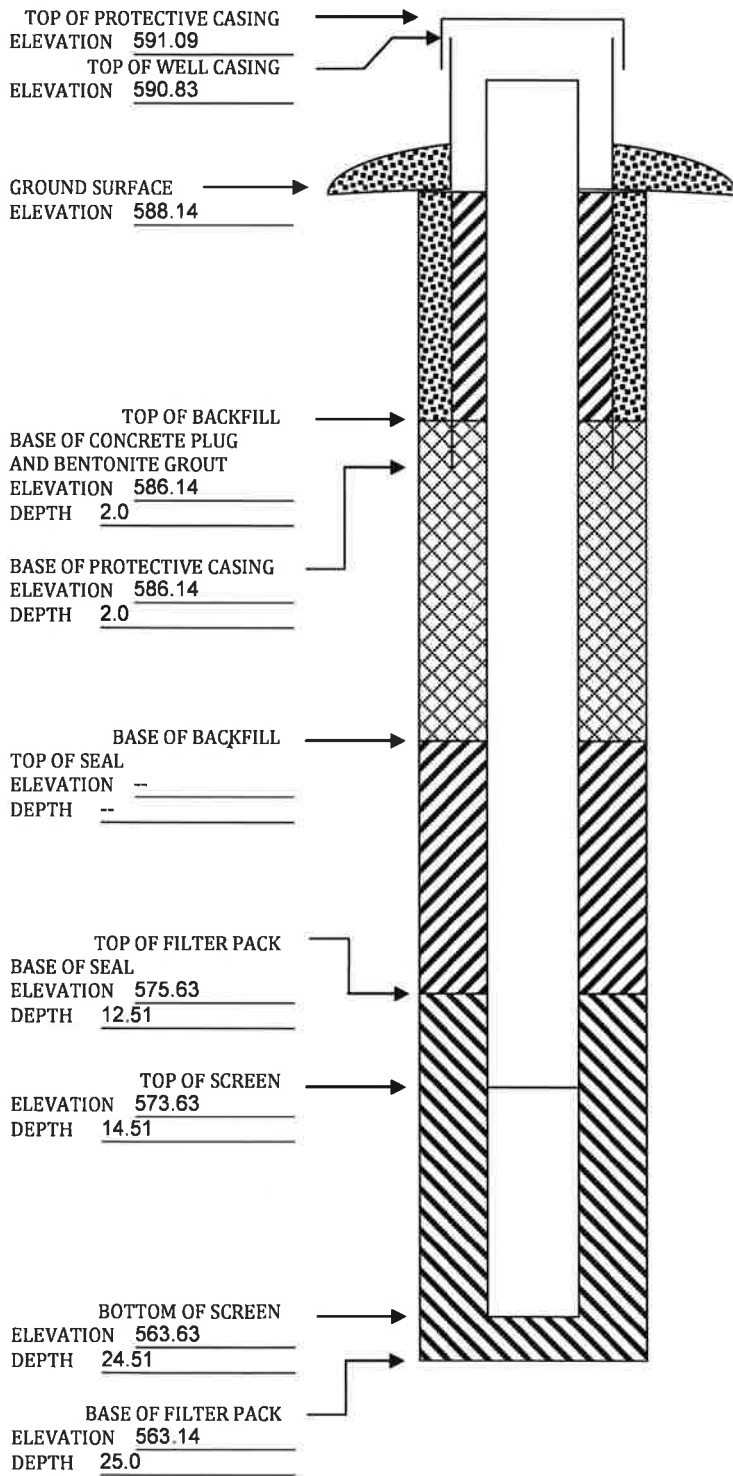
Attachments: Driller's log, Pipe schedules and grouting schedules. 8 1/2x11 inch map showing locations of all monitoring wells and piezometers.

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 M.L. Kapp Substation Permit No. _____
Well or Piezometer No. MW-307 Dates Started 4/15/2020 Date Completed 4/15/2020

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

Specify corner of site SW Distance and direction along boundary _____
Distance and direction from boundary to surface monitoring well 268' NW from SE corner
Elevation (+0.01 ft. MSL) _____
Ground Surface 601.69' Top of protective casing 603.80'
Top of well casing 603.39' Benchmark elevation 599.04'
Benchmark description Benchmark is in the north east corner of the property, named Top Conc structure.

B. SOIL BORING INFORMATION

Construction Company Name Terracon Consultants Inc.
Address 2640 12th St. SW City, State, Zip Code Cedar Rapids, IA 52404
Name of driller Scott Zeien
Drilling method Hollow Stem Auger Drilling fluid none Bore Hole diameter 8.5"
Soil sampling method Continuous split-spoon Depth of boring 22'

C. MONITORING WELL INSTALLATION

Casing material <u>Sch. 40 PVC</u>	Placement method <u>Poured</u>
Length of casing <u>9.46'</u>	Volume <u>~0.6 ft³</u>
Outside casing diameter <u>2.4</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>Sch. 40 PVC</u>	Surface seal design: _____
Screen opening size <u>0.01"</u>	Material of protective casing: <u>Steel</u>
Screen length <u>10'</u>	Material of grout between protective casing and well casing: <u>Coarse Sand</u>
Depth of Well <u>17.76' below ground surface</u>	Protective cap: _____
Filter Pack: _____	Material <u>Steel</u>
Material <u>sand</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Grain Size <u>coarse</u>	Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Volume <u>~5.23 ft³</u>	Well cap: _____
Seal (minimum 3 ft. length above filter pack): _____	Material <u>PVC</u>
Material <u>3/8" hydrated bentonite chips</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

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

Water level 8.33 Stabilization time 2.5 hours
Well development method Surged & bailed to remove turbidity
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 Scott Zeien Certification # 5978 Date 9-21-2020

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.

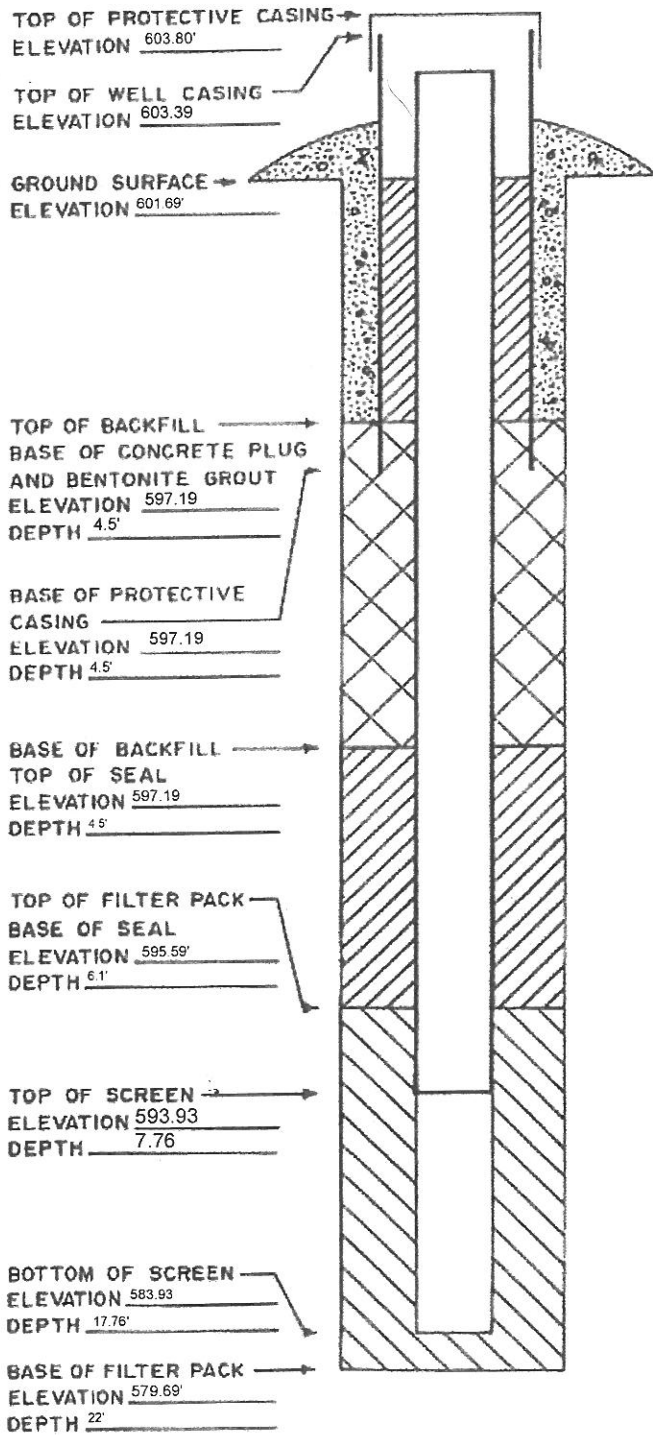
Questions? Call or Email: Nina Booker Environmental Engineer Sr., 515-725-8309, nina.booker@dnr.iowa.gov

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 IPL - Alliant M.L. Kapp Permit No. _____
Well or Piezometer No. MW - 304A Dates Started 2/8/2021 Date Completed 2/8/2021

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

Specify corner of site SW of Parcel 8071930000 Distance and direction along boundary 152' N
Distance and direction from boundary to surface monitoring well 1,474' E
Elevation (+0.01 ft. MSL) _____
Ground Surface 589.527 Top of protective casing 592.134
Top of well casing 591.89 Benchmark elevation 592.124
Benchmark description MW-304

B. SOIL BORING INFORMATION

Construction Company Name Cascade Drilling
Address 301 Alderson St. City, State, Zip Code Schofield, WI 54776
Name of driller Michael Mueller
Drilling method Rotosonic Drilling fluid Water Bore Hole diameter 6"
Soil sampling method Bagged Depth of boring 70'

C. MONITORING WELL INSTALLATION

Casing material Sch. 40 PVC Placement method Poured
Length of casing 52.61' Volume 0.67 cu. ft
Outside casing diameter 2.4" Backfill (if different from seal): _____
Inside casing diameter 2" Material Bentonite grout & Bentonite chips
Casing joint type Threaded Placement method Pumped & Poured
Casing/screen joint type Threaded Volume 55 gallons grout & 2 cu. ft chips
Screen material Sch. 40 PVC Surface seal design: _____
Screen opening size 0.01" Material of protective casing: Steel
Material of grout between
protective casing and well casing: Sand
Screen length 5' Protective cap: _____
Depth of Well 55' Material Aluminum
Filter Pack: _____ Vented?: Y N Locking?: Y N
Material Red Flint Sand Well cap: _____
Grain Size # 40 Material Plastic
Volume 1.5 cu. ft Vented?: Y N
Seal (minimum 3 ft. length above filter pack): _____
Material Bentonite chips

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

Water level 17.8' Stabilization time < 5 minutes
Well development method Surge and purge with bailer and pump
Average depth of frost line 4' bgs

DRILLER'S CERTIFICATION

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

Signature  Certification # 9362 Date 2-8-2021

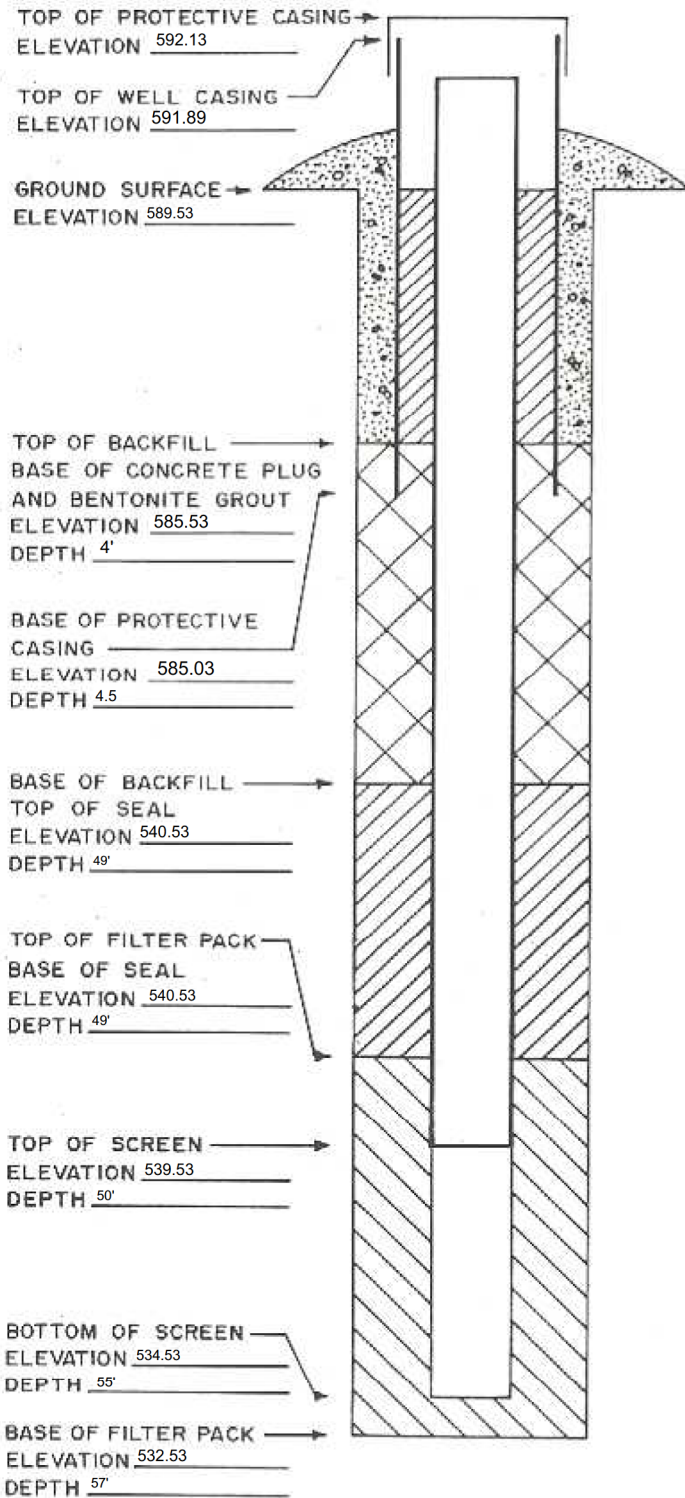
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

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).



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name IPL M.L. Kapp Permit No. IDNR #56263, County #1647
Well or Piezometer No. MW-308 Dates Started 4/26/2021 Date Completed 4/27/2021

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

Specify corner of site NW Distance and direction along boundary 300' SE
Distance and direction from boundary to surface monitoring well 40' NE
Elevation (+0.01 ft. MSL) _____
Ground Surface 586.10 Top of protective casing 589.01
Top of well casing 588.378 Benchmark elevation 588.78
Benchmark description Cut "x" in top of dock wall

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 Roto-Sonic Drilling fluid Water Bore Hole diameter 6"
Soil sampling method Bagged Depth of boring 18'

C. MONITORING WELL INSTALLATION


Casing material Sch 40 PVC Placement method Poured
Length of casing 19.5' Volume 0.3 cu. ft.
Outside casing diameter 2.4" Backfill (if different from seal): _____
Inside casing diameter 2.05" Material _____
Casing joint type Threaded Placement method _____
Casing/screen joint type Threaded Volume _____
Screen material Sch. 40 PVC Surface seal design: _____
Screen opening size 0.01" Material of protective casing: Steel
Screen length 10' Material of grout between
Depth of Well 17' protective casing and well casing: Bentonite chips and sand
Filter Pack: _____ Protective cap: _____
Material Red Flint Filter Sand Material Aluminum
Grain Size #40 Vented?: Y N Locking?: Y N
Volume 1.5 cu. ft. Well cap: _____
Seal (minimum 3 ft. length above filter pack): _____ Material Plastic
Material Bentonite chips Vented?: Y N

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

Water level 9.68 Stabilization time <5 min
Well development method Purged and surged with pump
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 4-27-2021

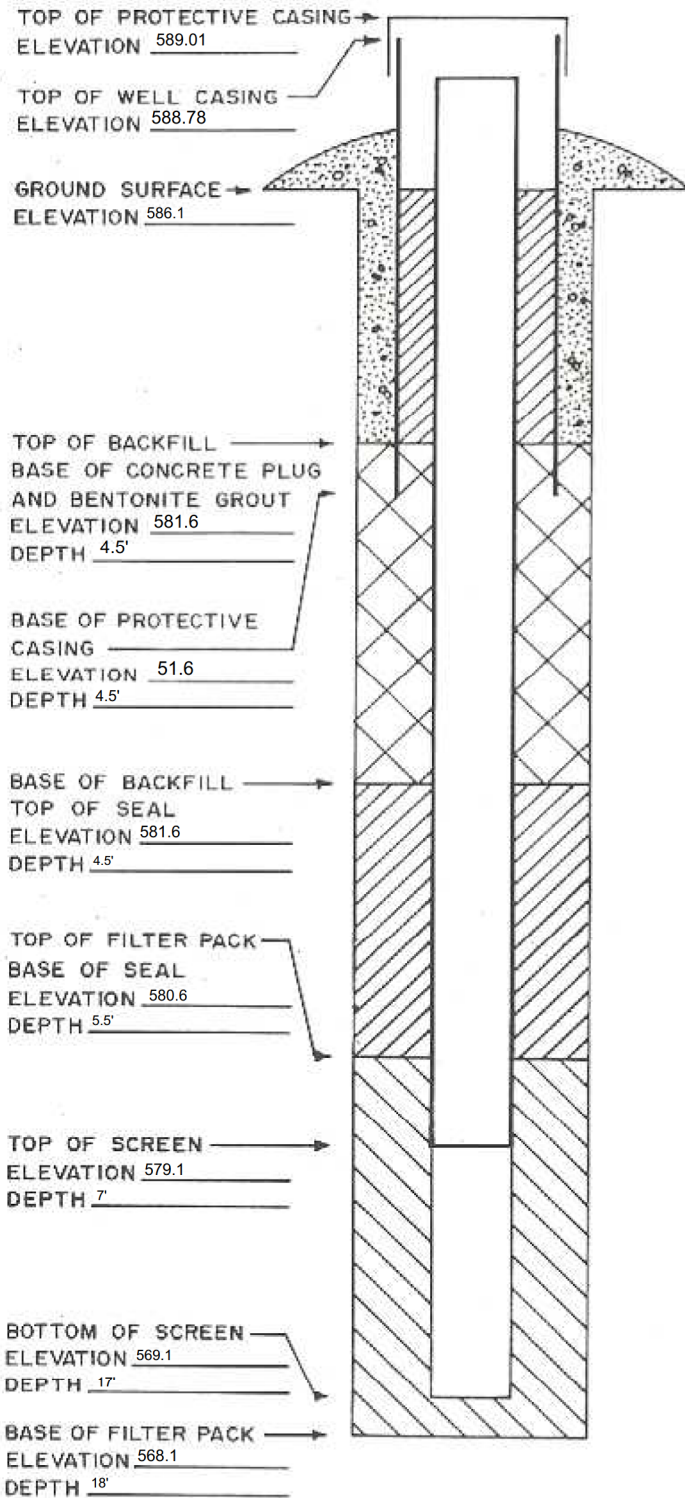
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

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).



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name IPL M.L. Kapp Permit No. IDNR #56263, County #1647
Well or Piezometer No. MW-309 Dates Started 4/27/2021 Date Completed 4/27/2021

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

Specify corner of site SW Distance and direction along boundary 150' NW
Distance and direction from boundary to surface monitoring well 50' NE
Elevation (+0.01 ft. MSL) _____
Ground Surface 589.00 Top of protective casing 591.45
Top of well casing 591.24 Benchmark elevation 588.78
Benchmark description Cut "x" in top of PCC Dock Wall

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 Roto-Sonic Drilling fluid Water Bore Hole diameter 6"
Soil sampling method Bagged Depth of boring 25'

C. MONITORING WELL INSTALLATION


Casing material Sch 40 PVC Placement method Poured
Length of casing 24.5' Volume 1 cu. ft.
Outside casing diameter 2.4" Backfill (if different from seal): _____
Inside casing diameter 2.05" Material _____
Casing joint type Threaded Placement method _____
Casing/screen joint type Threaded Volume _____
Screen material Sch. 40 PVC Surface seal design: _____
Screen opening size 0.01" Material of protective casing: Steel
Screen length 10' Material of grout between
Depth of Well 22' protective casing and well casing: Bentonite chips and sand
Protective cap: _____
Filter Pack: _____ Material Aluminum
Material Red Flint Filter Sand Vented?: Y N Locking?: Y N
Grain Size #40 Well cap: _____
Volume 2 cu. ft. Material Plastic
Seal (minimum 3 ft. length above filter pack): _____ Vented?: Y N
Material Bentonite chips

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

Water level 15.75 Stabilization time < 5 min
Well development method Purged and surged with pump
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 4-27-2021

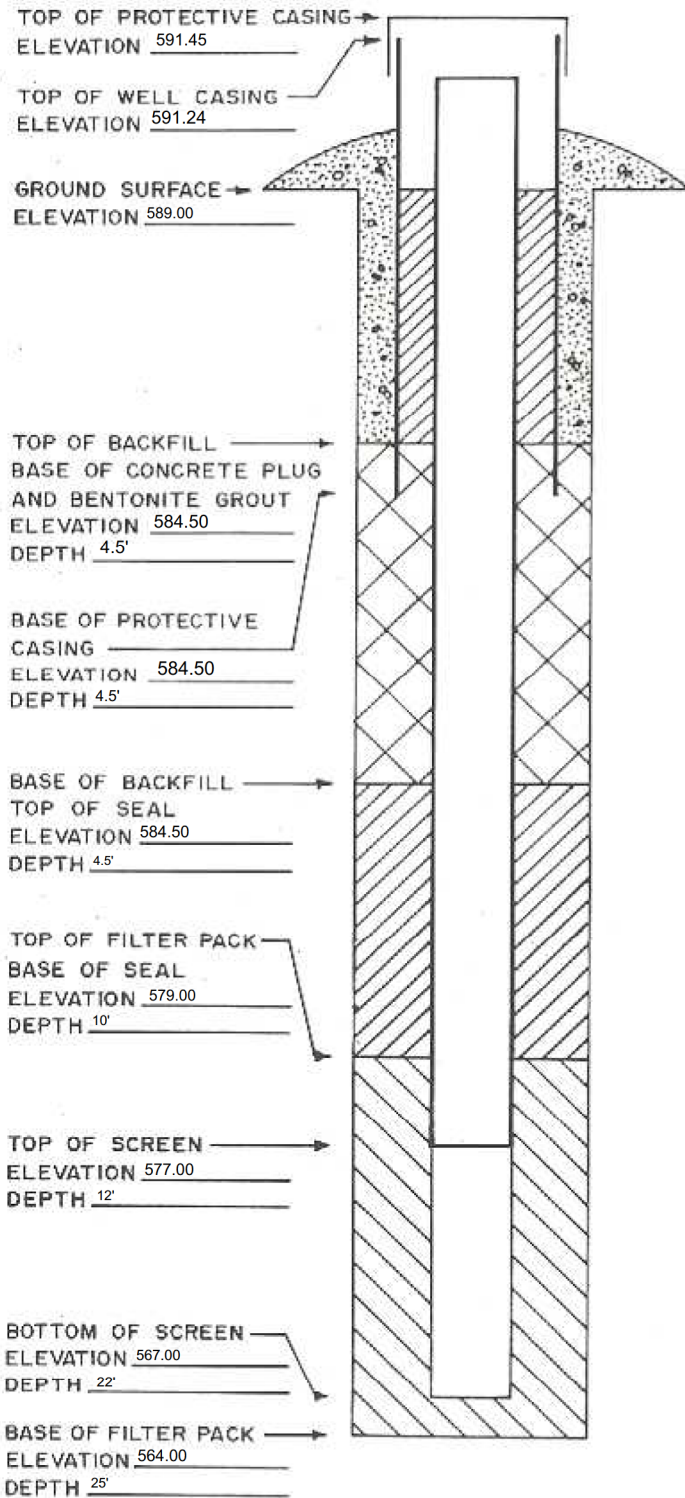
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

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).



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name IPL M.L. Kapp Permit No. IDNR #56263, County #1647
Well or Piezometer No. MW-310 Dates Started 9/27/2021 Date Completed 9/27/2021

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

Specify corner of site Southern Distance and direction along boundary 90' northwest
Distance and direction from boundary to surface monitoring well 50' northeast perpendicular from boundary
Elevation (+0.01 ft. MSL) _____
Ground Surface 595.14' Top of protective casing 597.91'
Top of well casing 597.58' Benchmark elevation _____
Benchmark description _____

B. SOIL BORING INFORMATION

Construction Company Name Cascade Drilling
Address 301 Alderson St. City, State, Zip Code Schofield, WI 54476
Name of driller Todd Schmalfeldt
Drilling method Sonic Drilling fluid Water Bore Hole diameter 6"
Soil sampling method Grab Depth of boring 31'

C. MONITORING WELL INSTALLATION

Casing material <u>PVC</u>	Placement method <u>Gravity</u>
Length of casing <u>27'</u>	Volume <u>7 bags</u>
Outside casing diameter <u>2.38"</u>	Backfill (if different from seal): <u>Same as seal</u>
Inside casing diameter <u>2.01"</u>	Material _____
Casing joint type <u>Flush threaded</u>	Placement method _____
Casing/screen joint type <u>Flush threaded</u>	Volume _____
Screen material <u>PVC</u>	Surface seal design: _____
Screen opening size <u>0.010" Factory slotted</u>	Material of protective casing: <u>Steel</u>
Screen length <u>5'</u>	Material of grout between protective casing and well casing: <u>Concrete</u>
Depth of Well <u>30'</u>	Protective cap: _____
Filter Pack: _____	Material <u>Steel</u>
Material <u>Sand</u>	Vented?: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Grain Size <u>#40</u>	Well cap: <u>Plastic with expandable rubber gasket</u>
Volume <u>3 bags (1.5 cubic feet)</u>	Material _____
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 8.93' Stabilization time <20 minutes
Well development method Surged and purged. Total of 55 gallons removed during well development
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 9-27-2021

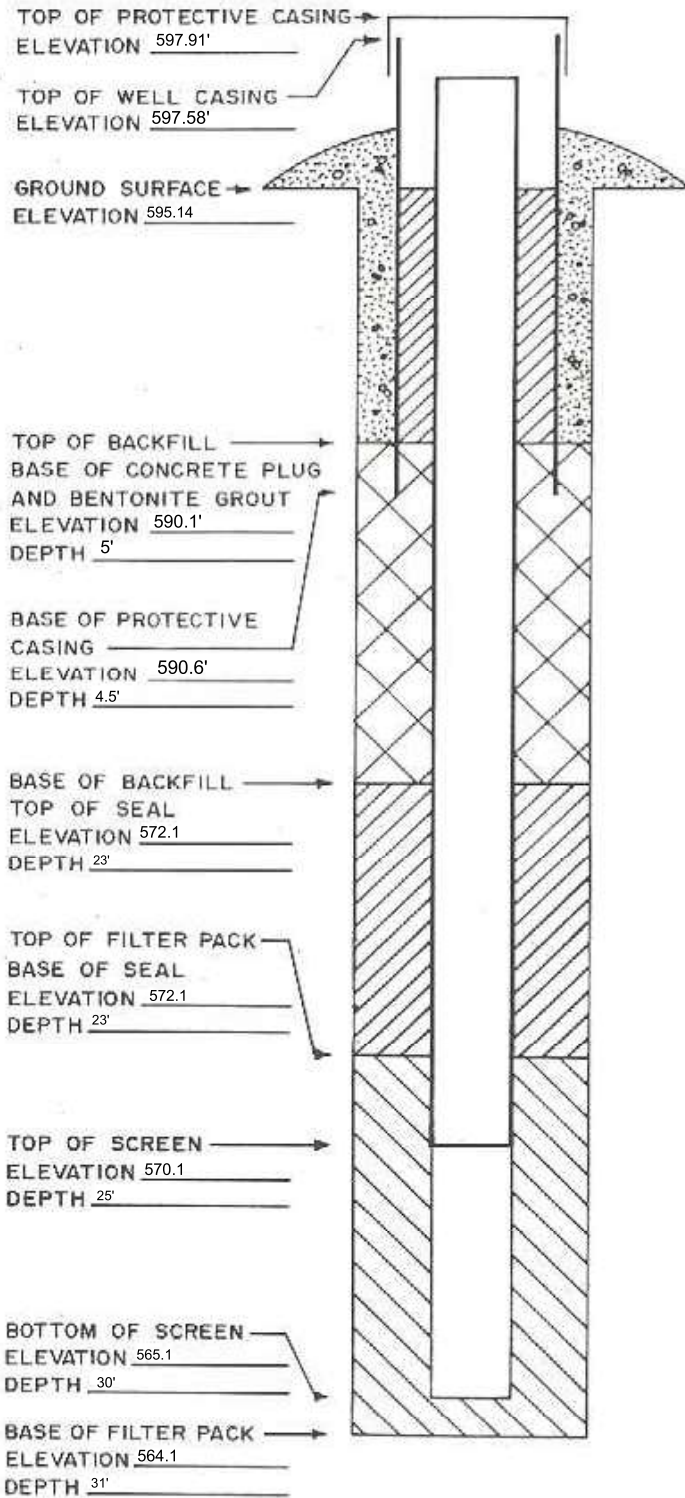
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

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).



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name M.L. Kapp Permit No. IDNR #56263, County #1647
Well or Piezometer No. MW-311 Dates Started 12/6/2021 Date Completed 12/7/2021

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

Specify corner of site NE Distance and direction along boundary 75' WNW
Distance and direction from boundary to surface monitoring well 35' WSW
Elevation (+0.01 ft. MSL) _____
Ground Surface 585.29 Top of protective casing 587.89
Top of well casing 587.59 Benchmark elevation 585.29
Benchmark description Benchmark "A," cut X in concrete

B. SOIL BORING INFORMATION

Construction Company Name Roberts Environmental Drilling
Address 1107 S Mulberry St City, State, Zip Code Millstadt IL, 62260
Name of driller Eric Wetzel
Drilling method Air Rotary Drilling fluid Air Bore Hole diameter 6"
Soil sampling method Screened Depth of boring 31'

C. MONITORING WELL INSTALLATION

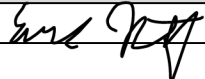
Casing material <u>Sch 40 PVC</u>	Placement method <u>Poured</u>
Length of casing <u>27.8'</u>	Volume <u>0.8 cu. ft.</u>
Outside casing diameter <u>2.4"</u>	Backfill (if different from seal): <u>Bentonite Chips</u>
Inside casing diameter <u>2.05"</u>	Material <u>Bentonite Chips</u>
Casing joint type <u>Threaded</u>	Placement method <u>Poured</u>
Casing/screen joint type <u>Threaded</u>	Volume <u>0.2 cu. ft.</u>
Screen material <u>Sch. 40 PVC</u>	Surface seal design: <u>Cement</u>
Screen opening size <u>0.01"</u>	Material of protective casing: <u>Steel</u>
Screen length <u>15'</u>	Material of grout between protective casing and well casing: <u>Bentonite chips and sand</u>
Depth of Well <u>25'</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>#40</u>	Well cap: _____
Volume <u>3.6 cu. ft.</u>	Material <u>Plastic</u>
Seal (minimum 3 ft. length above filter pack): _____	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Material <u>Bentonite chips</u>	

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

Water level 15.68' Stabilization time < 5 min
Well development method Purged and surged by Roberts
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 # 11509 Date 2.7.22

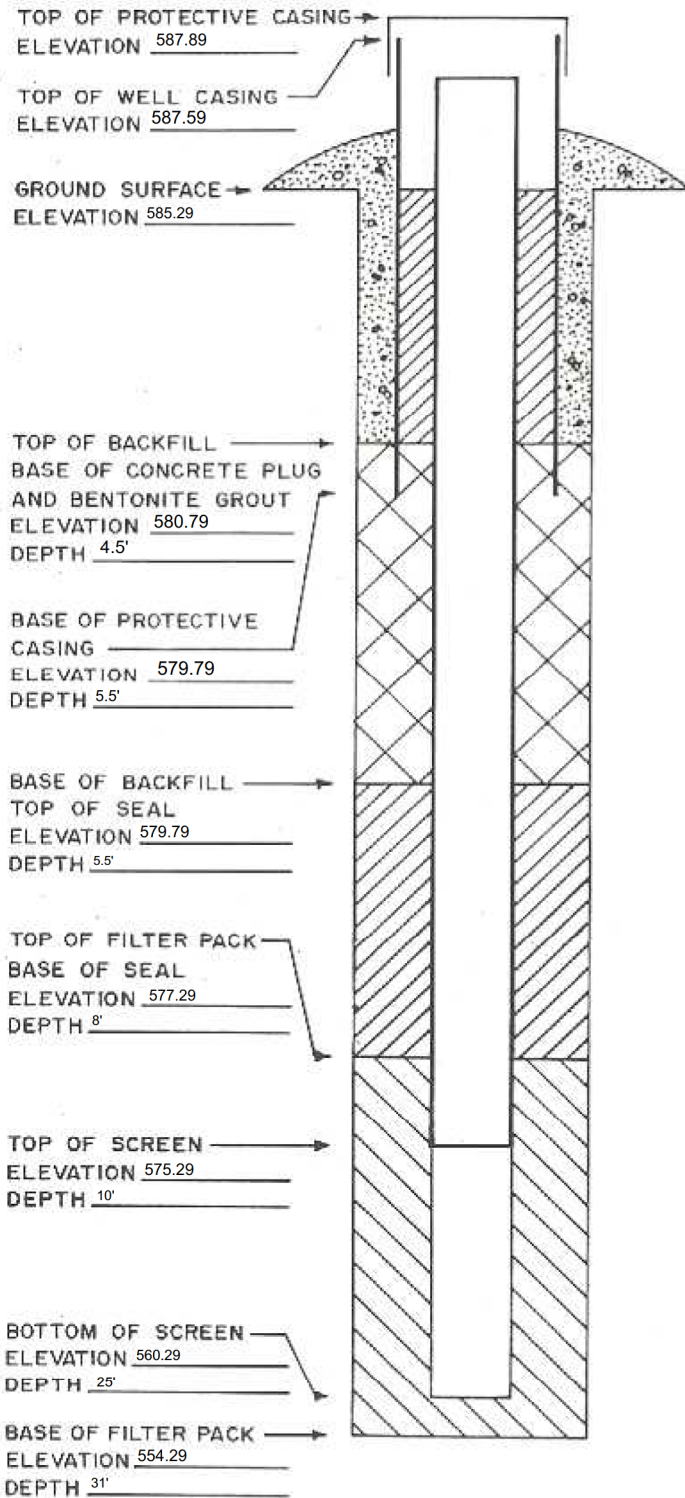
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.

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).



MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name IPL M.L. Kapp Permit No. IDNR #56263, County #1647
Well or Piezometer No. MW-311A Dates Started 12/7/2021 Date Completed 12/8/2021

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

Specify corner of site NE Distance and direction along boundary 75' WNW
Distance and direction from boundary to surface monitoring well 35' WSW
Elevation (+0.01 ft. MSL) _____
Ground Surface 585.29 Top of protective casing 588.09
Top of well casing 587.82 Benchmark elevation 585.29
Benchmark description Benchmark "B," cut X in concrete

B. SOIL BORING INFORMATION

Construction Company Name Roberts Environmental Drilling
Address 1107 S Mulberry St City, State, Zip Code Millstadt IL, 62260
Name of driller Eric Wetzel
Drilling method Air Rotary Drilling fluid Air Bore Hole diameter 6"
Soil sampling method Screened rock cuttings Depth of boring 66'

C. MONITORING WELL INSTALLATION

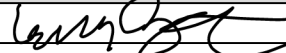
Casing material <u>Sch 40 PVC</u>	Placement method <u>Tremie Pumped</u>
Length of casing <u>67.65'</u>	Volume <u>9.0 cu. ft.</u>
Outside casing diameter <u>2.4"</u>	Backfill (if different from seal): <u>Filter Sand</u>
Inside casing diameter <u>2.05"</u>	Material <u>Filter Sand</u>
Casing joint type <u>Threaded</u>	Placement method <u>Poured</u>
Casing/screen joint type <u>Threaded</u>	Volume <u>0.2 cu. ft.</u>
Screen material <u>Sch. 40 PVC</u>	Surface seal design: <u>Concrete</u>
Screen opening size <u>0.01"</u>	Material of protective casing: <u>Steel</u>
Screen length <u>5'</u>	Material of grout between protective casing and well casing: <u>Bentonite chips and sand</u>
Depth of Well <u>65'</u>	Protective cap: _____
Filter Pack: _____	Material <u>Steel</u>
Material <u>Filter Sand</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Grain Size <u>#40</u>	Locking?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Volume <u>1.3 cu. ft.</u>	Well cap: _____
Seal (minimum 3 ft. length above filter pack): _____	Material <u>Plastic</u>
Material <u>Bentonite grout</u>	Vented?: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

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

Water level 18.62' Stabilization time < 5 min
Well development method Purged and surged by Roberts
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 # 11509 Date 2.7.22

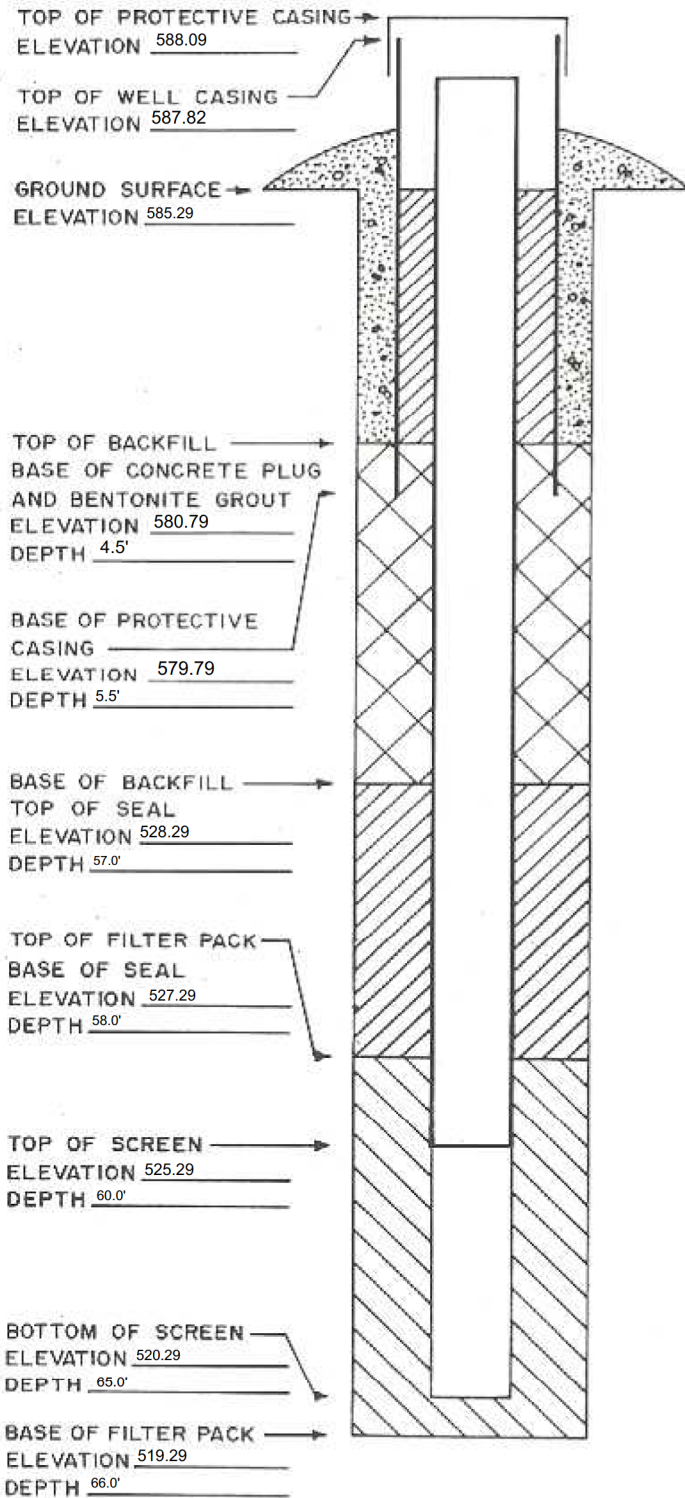
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 1/2 inch x 11 inch map showing locations of all monitoring wells and piezometers.


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 February 2022 Supplemental Assessment Monitoring

ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-225669-1
Client Project/Site: ML Kapp. 25222077
Revision: 1

For:
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Attn: Meghan Blodgett



Authorized for release by:
3/16/2022 5:31:48 PM
Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@Eurofinset.com

Designee for
Sandie Fredrick, Project Manager II
(920)261-1660
sandra.fredrick@eurofinset.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Detection Summary	5
Client Sample Results	7
Definitions	11
QC Sample Results	12
QC Association	15
Chronicle	17
Certification Summary	19
Method Summary	20
Chain of Custody	21
Receipt Checklists	24
Field Data Sheets	25

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Job ID: 310-225669-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-225669-1

Comments

No additional comments.

Revision

The report being provided is a revision of the original report sent on 3/9/2022. The report (revision 1) is being revised due to: The report and EDD have been revised to report the re-analysis for thallium as it was discovered the original reported result had carryover issues.

Receipt

The samples were received on 2/22/2022 4:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.9° C.

HPLC/IC

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

Metals

Method 6020A: Samples reran for Thallium analysis due to carryover in the original results.

MW-311 (310-225669-1), Field Blank (310-225669-2), MW-311A (310-225669-3) and MW-310 (310-225669-4)

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

General Chemistry

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

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-225669-1	MW-311	Water	02/21/22 14:30	02/22/22 16:00
310-225669-2	Field Blank	Water	02/21/22 14:55	02/22/22 16:00
310-225669-3	MW-311A	Water	02/21/22 13:31	02/22/22 16:00
310-225669-4	MW-310	Water	02/21/22 12:00	02/22/22 16:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Client Sample ID: MW-311

Lab Sample ID: 310-225669-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16		5.0	2.3	mg/L	5		9056A	Total/NA
Fluoride	0.34	J	0.50	0.22	mg/L	5		9056A	Total/NA
Sulfate	110		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	49		2.0	0.88	ug/L	1		6020A	Total/NA
Boron	4600		400	230	ug/L	4		6020A	Total/NA
Calcium	110		0.50	0.19	mg/L	1		6020A	Total/NA
Lithium	34		10	2.5	ug/L	1		6020A	Total/NA
Molybdenum	31		2.0	1.2	ug/L	1		6020A	Total/NA
Selenium	3.7	J	5.0	0.96	ug/L	1		6020A	Total/NA
Total Dissolved Solids	440		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	572.14				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	100.9				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	3.39				mg/L	1		Field Sampling	Total/NA
pH, Field	7.27				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	785				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	12.0				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	3.00				NTU	1		Field Sampling	Total/NA

Client Sample ID: Field Blank

Lab Sample ID: 310-225669-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.050	J	0.10	0.044	mg/L	1		9056A	Total/NA
Sulfate	2.4		1.0	0.40	mg/L	1		9056A	Total/NA
pH	7.1	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-311A

Lab Sample ID: 310-225669-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	23		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	300		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	24		2.0	0.88	ug/L	1		6020A	Total/NA
Boron	10000		400	230	ug/L	4		6020A	Total/NA
Cadmium	0.067	J	0.10	0.055	ug/L	1		6020A	Total/NA
Calcium	110		0.50	0.19	mg/L	1		6020A	Total/NA
Lithium	19		10	2.5	ug/L	1		6020A	Total/NA
Molybdenum	210		2.0	1.2	ug/L	1		6020A	Total/NA
Selenium	1.2	J	5.0	0.96	ug/L	1		6020A	Total/NA
Total Dissolved Solids	520		50	26	mg/L	1		SM 2540C	Total/NA
pH	6.5	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	572.34				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	80.7				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.10				mg/L	1		Field Sampling	Total/NA
pH, Field	7.63				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	830				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	12.3				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.00				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-310

Lab Sample ID: 310-225669-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	78		5.0	2.3	mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Client Sample ID: MW-310 (Continued)

Lab Sample ID: 310-225669-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	120		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	55		2.0	0.88	ug/L	1		6020A	Total/NA
Boron	1000		100	58	ug/L	1		6020A	Total/NA
Calcium	100		0.50	0.19	mg/L	1		6020A	Total/NA
Cobalt	0.43	J	0.50	0.19	ug/L	1		6020A	Total/NA
Lithium	2.8	J	10	2.5	ug/L	1		6020A	Total/NA
Total Dissolved Solids	590		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	589.10				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	48.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.30				mg/L	1		Field Sampling	Total/NA
pH, Field	7.21				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1060				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	12.4				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	2.00				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Client Sample ID: MW-311

Lab Sample ID: 310-225669-1

Date Collected: 02/21/22 14:30

Matrix: Water

Date Received: 02/22/22 16:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16		5.0	2.3	mg/L			02/24/22 17:01	5
Fluoride	0.34	J	0.50	0.22	mg/L			02/24/22 17:01	5
Sulfate	110		5.0	2.0	mg/L			02/24/22 17:01	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		02/24/22 08:15	03/08/22 17:48	1
Arsenic	<0.75		2.0	0.75	ug/L		02/24/22 08:15	03/08/22 17:48	1
Barium	49		2.0	0.88	ug/L		02/24/22 08:15	03/08/22 17:48	1
Beryllium	<0.27		1.0	0.27	ug/L		02/24/22 08:15	03/08/22 17:48	1
Boron	4600		400	230	ug/L		02/24/22 08:15	03/09/22 13:33	4
Cadmium	<0.055		0.10	0.055	ug/L		02/24/22 08:15	03/08/22 17:48	1
Calcium	110		0.50	0.19	mg/L		02/24/22 08:15	03/08/22 17:48	1
Chromium	<1.1		5.0	1.1	ug/L		02/24/22 08:15	03/08/22 17:48	1
Cobalt	<0.19		0.50	0.19	ug/L		02/24/22 08:15	03/08/22 17:48	1
Lead	<0.24		0.50	0.24	ug/L		02/24/22 08:15	03/08/22 17:48	1
Lithium	34		10	2.5	ug/L		02/24/22 08:15	03/08/22 17:48	1
Molybdenum	31		2.0	1.2	ug/L		02/24/22 08:15	03/08/22 17:48	1
Selenium	3.7	J	5.0	0.96	ug/L		02/24/22 08:15	03/08/22 17:48	1
Thallium	<0.26		1.0	0.26	ug/L		02/24/22 08:15	03/16/22 14:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		03/02/22 13:08	03/03/22 17:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	440		50	26	mg/L			02/25/22 14:22	1
pH	7.3	HF	0.1	0.1	SU			02/23/22 13:55	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	572.14				ft			02/21/22 14:30	1
Oxidation Reduction Potential	100.9				millivolts			02/21/22 14:30	1
Oxygen, Dissolved, Client Supplied	3.39				mg/L			02/21/22 14:30	1
pH, Field	7.27				SU			02/21/22 14:30	1
Specific Conductance, Field	785				umhos/cm			02/21/22 14:30	1
Temperature, Field	12.0				Degrees C			02/21/22 14:30	1
Turbidity, Field	3.00				NTU			02/21/22 14:30	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Client Sample ID: Field Blank

Lab Sample ID: 310-225669-2

Date Collected: 02/21/22 14:55

Matrix: Water

Date Received: 02/22/22 16:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.45		1.0	0.45	mg/L			02/24/22 17:17	1
Fluoride	0.050	J	0.10	0.044	mg/L			02/24/22 17:17	1
Sulfate	2.4		1.0	0.40	mg/L			02/24/22 17:17	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		02/24/22 08:15	03/08/22 18:01	1
Arsenic	<0.75		2.0	0.75	ug/L		02/24/22 08:15	03/08/22 18:01	1
Barium	<0.88		2.0	0.88	ug/L		02/24/22 08:15	03/08/22 18:01	1
Beryllium	<0.27		1.0	0.27	ug/L		02/24/22 08:15	03/08/22 18:01	1
Boron	<58		100	58	ug/L		02/24/22 08:15	03/08/22 18:01	1
Cadmium	<0.055		0.10	0.055	ug/L		02/24/22 08:15	03/08/22 18:01	1
Calcium	<0.19		0.50	0.19	mg/L		02/24/22 08:15	03/08/22 18:01	1
Chromium	<1.1		5.0	1.1	ug/L		02/24/22 08:15	03/08/22 18:01	1
Cobalt	<0.19		0.50	0.19	ug/L		02/24/22 08:15	03/08/22 18:01	1
Lead	<0.24		0.50	0.24	ug/L		02/24/22 08:15	03/08/22 18:01	1
Lithium	<2.5		10	2.5	ug/L		02/24/22 08:15	03/08/22 18:01	1
Molybdenum	<1.2		2.0	1.2	ug/L		02/24/22 08:15	03/08/22 18:01	1
Selenium	<0.96		5.0	0.96	ug/L		02/24/22 08:15	03/08/22 18:01	1
Thallium	<0.26		1.0	0.26	ug/L		02/24/22 08:15	03/16/22 14:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		03/02/22 13:08	03/03/22 17:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<26		50	26	mg/L			02/25/22 14:22	1
pH	7.1	HF	0.1	0.1	SU			02/23/22 13:56	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Client Sample ID: MW-311A

Lab Sample ID: 310-225669-3

Date Collected: 02/21/22 13:31

Matrix: Water

Date Received: 02/22/22 16:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23		5.0	2.3	mg/L			02/24/22 17:32	5
Fluoride	<0.22		0.50	0.22	mg/L			02/24/22 17:32	5
Sulfate	300		5.0	2.0	mg/L			02/24/22 17:32	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		02/24/22 08:15	03/08/22 18:07	1
Arsenic	<0.75		2.0	0.75	ug/L		02/24/22 08:15	03/08/22 18:07	1
Barium	24		2.0	0.88	ug/L		02/24/22 08:15	03/08/22 18:07	1
Beryllium	<0.27		1.0	0.27	ug/L		02/24/22 08:15	03/08/22 18:07	1
Boron	10000		400	230	ug/L		02/24/22 08:15	03/09/22 13:43	4
Cadmium	0.067	J	0.10	0.055	ug/L		02/24/22 08:15	03/08/22 18:07	1
Calcium	110		0.50	0.19	mg/L		02/24/22 08:15	03/08/22 18:07	1
Chromium	<1.1		5.0	1.1	ug/L		02/24/22 08:15	03/08/22 18:07	1
Cobalt	<0.19		0.50	0.19	ug/L		02/24/22 08:15	03/08/22 18:07	1
Lead	<0.24		0.50	0.24	ug/L		02/24/22 08:15	03/08/22 18:07	1
Lithium	19		10	2.5	ug/L		02/24/22 08:15	03/08/22 18:07	1
Molybdenum	210		2.0	1.2	ug/L		02/24/22 08:15	03/08/22 18:07	1
Selenium	1.2	J	5.0	0.96	ug/L		02/24/22 08:15	03/08/22 18:07	1
Thallium	<0.26		1.0	0.26	ug/L		02/24/22 08:15	03/16/22 14:23	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		03/02/22 13:08	03/03/22 17:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	520		50	26	mg/L			02/25/22 14:22	1
pH	6.5	HF	0.1	0.1	SU			02/23/22 13:57	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	572.34				ft			02/21/22 13:31	1
Oxidation Reduction Potential	80.7				millivolts			02/21/22 13:31	1
Oxygen, Dissolved, Client Supplied	0.10				mg/L			02/21/22 13:31	1
pH, Field	7.63				SU			02/21/22 13:31	1
Specific Conductance, Field	830				umhos/cm			02/21/22 13:31	1
Temperature, Field	12.3				Degrees C			02/21/22 13:31	1
Turbidity, Field	1.00				NTU			02/21/22 13:31	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Client Sample ID: MW-310

Lab Sample ID: 310-225669-4

Date Collected: 02/21/22 12:00

Matrix: Water

Date Received: 02/22/22 16:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	78		5.0	2.3	mg/L			02/24/22 17:48	5
Fluoride	<0.22		0.50	0.22	mg/L			02/24/22 17:48	5
Sulfate	120		5.0	2.0	mg/L			02/24/22 17:48	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		02/24/22 08:15	03/08/22 18:04	1
Arsenic	<0.75		2.0	0.75	ug/L		02/24/22 08:15	03/08/22 18:04	1
Barium	55		2.0	0.88	ug/L		02/24/22 08:15	03/08/22 18:04	1
Beryllium	<0.27		1.0	0.27	ug/L		02/24/22 08:15	03/08/22 18:04	1
Boron	1000		100	58	ug/L		02/24/22 08:15	03/08/22 18:04	1
Cadmium	<0.055		0.10	0.055	ug/L		02/24/22 08:15	03/08/22 18:04	1
Calcium	100		0.50	0.19	mg/L		02/24/22 08:15	03/08/22 18:04	1
Chromium	<1.1		5.0	1.1	ug/L		02/24/22 08:15	03/08/22 18:04	1
Cobalt	0.43	J	0.50	0.19	ug/L		02/24/22 08:15	03/08/22 18:04	1
Lead	<0.24		0.50	0.24	ug/L		02/24/22 08:15	03/08/22 18:04	1
Lithium	2.8	J	10	2.5	ug/L		02/24/22 08:15	03/08/22 18:04	1
Molybdenum	<1.2		2.0	1.2	ug/L		02/24/22 08:15	03/08/22 18:04	1
Selenium	<0.96		5.0	0.96	ug/L		02/24/22 08:15	03/08/22 18:04	1
Thallium	<0.26		1.0	0.26	ug/L		02/24/22 08:15	03/16/22 14:20	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		03/02/22 13:08	03/03/22 17:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	590		50	26	mg/L			02/25/22 14:22	1
pH	7.2	HF	0.1	0.1	SU			02/23/22 13:58	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	589.10				ft			02/21/22 12:00	1
Oxidation Reduction Potential	48.8				millivolts			02/21/22 12:00	1
Oxygen, Dissolved, Client Supplied	0.30				mg/L			02/21/22 12:00	1
pH, Field	7.21				SU			02/21/22 12:00	1
Specific Conductance, Field	1060				umhos/cm			02/21/22 12:00	1
Temperature, Field	12.4				Degrees C			02/21/22 12:00	1
Turbidity, Field	2.00				NTU			02/21/22 12:00	1

Eurofins Cedar Falls

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

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
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.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-345208/3
Matrix: Water
Analysis Batch: 345208

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			02/24/22 10:47	1
Fluoride	<0.044		0.10	0.044	mg/L			02/24/22 10:47	1
Sulfate	<0.40		1.0	0.40	mg/L			02/24/22 10:47	1

Lab Sample ID: LCS 310-345208/4
Matrix: Water
Analysis Batch: 345208

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	10.4		mg/L		104	90 - 110
Fluoride	2.00	2.08		mg/L		104	90 - 110
Sulfate	10.0	10.7		mg/L		107	90 - 110

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-344751/1-A
Matrix: Water
Analysis Batch: 346038

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344751

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		02/24/22 08:15	03/08/22 17:42	1
Arsenic	<0.75		2.0	0.75	ug/L		02/24/22 08:15	03/08/22 17:42	1
Barium	<0.88		2.0	0.88	ug/L		02/24/22 08:15	03/08/22 17:42	1
Beryllium	<0.27		1.0	0.27	ug/L		02/24/22 08:15	03/08/22 17:42	1
Boron	<58		100	58	ug/L		02/24/22 08:15	03/08/22 17:42	1
Cadmium	<0.055		0.10	0.055	ug/L		02/24/22 08:15	03/08/22 17:42	1
Calcium	<0.19		0.50	0.19	mg/L		02/24/22 08:15	03/08/22 17:42	1
Chromium	<1.1		5.0	1.1	ug/L		02/24/22 08:15	03/08/22 17:42	1
Cobalt	<0.19		0.50	0.19	ug/L		02/24/22 08:15	03/08/22 17:42	1
Lead	<0.24		0.50	0.24	ug/L		02/24/22 08:15	03/08/22 17:42	1
Lithium	<2.5		10	2.5	ug/L		02/24/22 08:15	03/08/22 17:42	1
Molybdenum	<1.2		2.0	1.2	ug/L		02/24/22 08:15	03/08/22 17:42	1
Selenium	<0.96		5.0	0.96	ug/L		02/24/22 08:15	03/08/22 17:42	1
Thallium	<0.26		1.0	0.26	ug/L		02/24/22 08:15	03/08/22 17:42	1

Lab Sample ID: LCS 310-344751/2-A
Matrix: Water
Analysis Batch: 346038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344751

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	200	222		ug/L		111	80 - 120
Arsenic	200	198		ug/L		99	80 - 120
Barium	100	101		ug/L		101	80 - 120
Beryllium	100	98.2		ug/L		98	80 - 120
Boron	200	179		ug/L		89	80 - 120
Cadmium	100	99.3		ug/L		99	80 - 120
Calcium	2.00	1.84		mg/L		92	80 - 120
Chromium	100	95.9		ug/L		96	80 - 120
Cobalt	100	99.8		ug/L		100	80 - 120

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

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

Lab Sample ID: LCS 310-344751/2-A
Matrix: Water
Analysis Batch: 346038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344751

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	200	202		ug/L		101	80 - 120
Lithium	200	195		ug/L		98	80 - 120
Molybdenum	200	195		ug/L		98	80 - 120
Selenium	400	381		ug/L		95	80 - 120
Thallium	200	194		ug/L		97	80 - 120

Lab Sample ID: 310-225669-1 MS
Matrix: Water
Analysis Batch: 346038

Client Sample ID: MW-311
Prep Type: Total/NA
Prep Batch: 344751

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	<0.69		200	237		ug/L		118	75 - 125
Arsenic	<0.75		200	209		ug/L		105	75 - 125
Barium	49		100	148		ug/L		99	75 - 125
Beryllium	<0.27		100	104		ug/L		104	75 - 125
Cadmium	<0.055		100	102		ug/L		102	75 - 125
Calcium	110		2.00	114	4	mg/L		27	75 - 125
Chromium	<1.1		100	97.4		ug/L		97	75 - 125
Cobalt	<0.19		100	99.2		ug/L		99	75 - 125
Lead	<0.24		200	200		ug/L		100	75 - 125
Lithium	34		200	231		ug/L		98	75 - 125
Molybdenum	31		200	238		ug/L		104	75 - 125
Selenium	3.7	J	400	411		ug/L		102	75 - 125
Thallium	2.9		200	188		ug/L		92	75 - 125

Lab Sample ID: 310-225669-1 MS
Matrix: Water
Analysis Batch: 346096

Client Sample ID: MW-311
Prep Type: Total/NA
Prep Batch: 344751

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	4600		200	4690	4	ug/L		64	75 - 125

Lab Sample ID: 310-225669-1 MSD
Matrix: Water
Analysis Batch: 346038

Client Sample ID: MW-311
Prep Type: Total/NA
Prep Batch: 344751

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	<0.69		200	229		ug/L		114	75 - 125	3	20
Arsenic	<0.75		200	205		ug/L		103	75 - 125	2	20
Barium	49		100	147		ug/L		98	75 - 125	1	20
Beryllium	<0.27		100	101		ug/L		101	75 - 125	3	20
Cadmium	<0.055		100	101		ug/L		101	75 - 125	1	20
Calcium	110		2.00	111	4	mg/L		-140	75 - 125	3	20
Chromium	<1.1		100	96.7		ug/L		97	75 - 125	1	20
Cobalt	<0.19		100	98.2		ug/L		98	75 - 125	1	20
Lead	<0.24		200	198		ug/L		99	75 - 125	1	20
Lithium	34		200	231		ug/L		98	75 - 125	0	20
Molybdenum	31		200	235		ug/L		102	75 - 125	1	20
Selenium	3.7	J	400	408		ug/L		101	75 - 125	1	20

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

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

Lab Sample ID: 310-225669-1 MSD
Matrix: Water
Analysis Batch: 346038

Client Sample ID: MW-311
Prep Type: Total/NA
Prep Batch: 344751

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Thallium	2.9		200	194		ug/L		96	75 - 125	3	20

Lab Sample ID: 310-225669-1 MSD
Matrix: Water
Analysis Batch: 346096

Client Sample ID: MW-311
Prep Type: Total/NA
Prep Batch: 344751

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	4600		200	4830	4	ug/L		133	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-345343/1-A
Matrix: Water
Analysis Batch: 345518

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 345343

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		03/02/22 13:08	03/03/22 16:46	1

Lab Sample ID: LCS 310-345343/2-A
Matrix: Water
Analysis Batch: 345518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 345343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	1.67	1.49		ug/L		90	80 - 120

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

Lab Sample ID: MB 310-344963/1
Matrix: Water
Analysis Batch: 344963

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	<26		50	26	mg/L			02/25/22 14:22	1

Lab Sample ID: LCS 310-344963/2
Matrix: Water
Analysis Batch: 344963

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	916		mg/L		92	90 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-344736/1
Matrix: Water
Analysis Batch: 344736

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	7.1		SU		101	98 - 102

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

HPLC/IC

Analysis Batch: 345208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	9056A	
310-225669-2	Field Blank	Total/NA	Water	9056A	
310-225669-3	MW-311A	Total/NA	Water	9056A	
310-225669-4	MW-310	Total/NA	Water	9056A	
MB 310-345208/3	Method Blank	Total/NA	Water	9056A	
LCS 310-345208/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 344751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	3005A	
310-225669-2	Field Blank	Total/NA	Water	3005A	
310-225669-3	MW-311A	Total/NA	Water	3005A	
310-225669-4	MW-310	Total/NA	Water	3005A	
MB 310-344751/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-344751/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-225669-1 MS	MW-311	Total/NA	Water	3005A	
310-225669-1 MSD	MW-311	Total/NA	Water	3005A	

Prep Batch: 345343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	7470A	
310-225669-2	Field Blank	Total/NA	Water	7470A	
310-225669-3	MW-311A	Total/NA	Water	7470A	
310-225669-4	MW-310	Total/NA	Water	7470A	
MB 310-345343/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-345343/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 345518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	7470A	345343
310-225669-2	Field Blank	Total/NA	Water	7470A	345343
310-225669-3	MW-311A	Total/NA	Water	7470A	345343
310-225669-4	MW-310	Total/NA	Water	7470A	345343
MB 310-345343/1-A	Method Blank	Total/NA	Water	7470A	345343
LCS 310-345343/2-A	Lab Control Sample	Total/NA	Water	7470A	345343

Analysis Batch: 346038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	6020A	344751
310-225669-2	Field Blank	Total/NA	Water	6020A	344751
310-225669-3	MW-311A	Total/NA	Water	6020A	344751
310-225669-4	MW-310	Total/NA	Water	6020A	344751
MB 310-344751/1-A	Method Blank	Total/NA	Water	6020A	344751
LCS 310-344751/2-A	Lab Control Sample	Total/NA	Water	6020A	344751
310-225669-1 MS	MW-311	Total/NA	Water	6020A	344751
310-225669-1 MSD	MW-311	Total/NA	Water	6020A	344751

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Metals

Analysis Batch: 346096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	6020A	344751
310-225669-3	MW-311A	Total/NA	Water	6020A	344751
310-225669-1 MS	MW-311	Total/NA	Water	6020A	344751
310-225669-1 MSD	MW-311	Total/NA	Water	6020A	344751

Analysis Batch: 346818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	6020A	344751
310-225669-2	Field Blank	Total/NA	Water	6020A	344751
310-225669-3	MW-311A	Total/NA	Water	6020A	344751
310-225669-4	MW-310	Total/NA	Water	6020A	344751

General Chemistry

Analysis Batch: 344736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	SM 4500 H+ B	
310-225669-2	Field Blank	Total/NA	Water	SM 4500 H+ B	
310-225669-3	MW-311A	Total/NA	Water	SM 4500 H+ B	
310-225669-4	MW-310	Total/NA	Water	SM 4500 H+ B	
LCS 310-344736/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 344963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	SM 2540C	
310-225669-2	Field Blank	Total/NA	Water	SM 2540C	
310-225669-3	MW-311A	Total/NA	Water	SM 2540C	
310-225669-4	MW-310	Total/NA	Water	SM 2540C	
MB 310-344963/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-344963/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 345842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	Field Sampling	
310-225669-3	MW-311A	Total/NA	Water	Field Sampling	
310-225669-4	MW-310	Total/NA	Water	Field Sampling	

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Client Sample ID: MW-311
Date Collected: 02/21/22 14:30
Date Received: 02/22/22 16:00

Lab Sample ID: 310-225669-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	345208	02/24/22 17:01	JNR	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346038	03/08/22 17:48	SAP	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		4	346096	03/09/22 13:33	SAP	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346818	03/16/22 14:01	SAP	TAL CF
Total/NA	Prep	7470A			345343	03/02/22 13:08	EAM	TAL CF
Total/NA	Analysis	7470A		1	345518	03/03/22 17:12	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	344963	02/25/22 14:22	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	344736	02/23/22 13:55	JAJ	TAL CF
Total/NA	Analysis	Field Sampling		1	345842	02/21/22 14:30	SLD	TAL CF

Client Sample ID: Field Blank
Date Collected: 02/21/22 14:55
Date Received: 02/22/22 16:00

Lab Sample ID: 310-225669-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	345208	02/24/22 17:17	JNR	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346038	03/08/22 18:01	SAP	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346818	03/16/22 14:04	SAP	TAL CF
Total/NA	Prep	7470A			345343	03/02/22 13:08	EAM	TAL CF
Total/NA	Analysis	7470A		1	345518	03/03/22 17:14	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	344963	02/25/22 14:22	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	344736	02/23/22 13:56	JAJ	TAL CF

Client Sample ID: MW-311A
Date Collected: 02/21/22 13:31
Date Received: 02/22/22 16:00

Lab Sample ID: 310-225669-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	345208	02/24/22 17:32	JNR	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346038	03/08/22 18:07	SAP	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		4	346096	03/09/22 13:43	SAP	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346818	03/16/22 14:23	SAP	TAL CF
Total/NA	Prep	7470A			345343	03/02/22 13:08	EAM	TAL CF
Total/NA	Analysis	7470A		1	345518	03/03/22 17:16	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	344963	02/25/22 14:22	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	344736	02/23/22 13:57	JAJ	TAL CF

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Client Sample ID: MW-311A

Lab Sample ID: 310-225669-3

Date Collected: 02/21/22 13:31

Matrix: Water

Date Received: 02/22/22 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	345842	02/21/22 13:31	SLD	TAL CF

Client Sample ID: MW-310

Lab Sample ID: 310-225669-4

Date Collected: 02/21/22 12:00

Matrix: Water

Date Received: 02/22/22 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	345208	02/24/22 17:48	JNR	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346038	03/08/22 18:04	SAP	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346818	03/16/22 14:20	SAP	TAL CF
Total/NA	Prep	7470A			345343	03/02/22 13:08	EAM	TAL CF
Total/NA	Analysis	7470A		1	345518	03/03/22 17:18	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	344963	02/25/22 14:22	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	344736	02/23/22 13:58	JAJ	TAL CF
Total/NA	Analysis	Field Sampling		1	345842	02/21/22 12:00	SLD	TAL CF

Laboratory References:

TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-21 *

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CF
SM 4500 H+ B	pH	SM	TAL CF
Field Sampling	Field Sampling	EPA	TAL CF
3005A	Preparation, Total Metals	SW846	TAL CF
7470A	Preparation, Mercury	SW846	TAL CF

Protocol References:

EPA = US Environmental Protection Agency

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.

Laboratory References:

TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



310-225669 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS engineers</u>			
City/State:	<u>Clive</u>	<u>IA</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>2-22-22</u>	TIME <u>1600</u>	Received By: <u>TB</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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____	
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>N</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>0.9</u>	Corrected Temp (°C): <u>0.9</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			

Document: CED-P-SAM-FRM45521

Revision: 26

Date: 27 Jan 2022

Eurofins Cedar Falls

General temperature criteria is 0 to 6°C

Bacteria temperature criteria is 0 to 10°C

Chain of Custody Record

Client Information		Sampler: <u>POJG L VUZ</u>		Lab PM: <u>Fredrick, Sandie</u>		Carrier Tracking No(s):		COC No: <u>310-68105-18812.1</u>	
Client Contact: <u>Meghan Blodgett</u>		Phone: <u>688-509-8245</u>		E-Mail: <u>sandra.fredrick@eurofins.com</u>		State of Origin:		Page: <u>Page 1 of 1</u>	
Company: <u>SCS Engineers</u>		PWSID:		Analysis Requested		Total Number of Containers		Job #:	
Address: <u>2830 Dairy Drive</u>		Due Date Requested:		Field Filtered Sample (Yes or No)		Form MS/MSD (Yes or No)		Preservation Codes:	
City: <u>Madison</u>		TAT Requested (days):		N		D		A - HCL	
State, Zip: <u>WI, 53718</u>		Compliance Project: <u>Δ Yes Δ No</u>		X		X		B - NaOH	
Phone: <u>25222077</u>		PO #: <u>25222077</u>		X		X		C - Zn Acetate	
Email: <u>mbloggett@scsengineers.com</u>		WO #: <u>31011020</u>		X		X		D - Nitric Acid	
Project Name: <u>ML Kapp. 2522077</u>		Sample Date		X		X		E - NaHSO4	
Site: <u>31011020</u>		Sample Time		X		X		F - MeOH	
		Sample Type (C=Comp, G=grab)		X		X		G - Amchlor	
		Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		X		X		H - Ascorbic Acid	
		Preservation Code		X		X		I - Ice	
		Sample Date		X		X		J - DI Water	
		Sample Time		X		X		K - EDTA	
		Sample Type		X		X		L - EDA	
		Sample Date		X		X		Other:	
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X		X			
		Sample Date		X		X			
		Sample Time		X		X			
		Sample Type		X</					

Table 1 Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - M L Kapp Ash Pond/ SCS Engineers Project #25221077.00

	Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	River Elevation Point	Field Blank	TOTAL	
Appendix III Parameters (total/unfiltered)	Boron												X	X	X		X	4
	Calcium												X	X	X		X	4
	Chloride												X	X	X		X	4
	Fluoride												X	X	X		X	4
	pH												X	X	X		X	4
	Sulfate												X	X	X		X	4
	TDS												X	X	X		X	4
Appendix IV Parameters (total/unfiltered)	Antimony												X	X	X		X	4
	Arsenic												X	X	X		X	4
	Barium												X	X	X		X	4
	Beryllium												X	X	X		X	4
	Cadmium												X	X	X		X	4
	Chromium												X	X	X		X	4
	Cobalt												X	X	X		X	4
	Fluoride												X	X	X		X	4
	Lead												X	X	X		X	4
	Lithium												X	X	X		X	4
	Mercury												X	X	X		X	4
	Molybdenum												X	X	X		X	4
	Selenium												X	X	X		X	4
	Thallium												X	X	X		X	4
	Radium												X	X	X		X	4
Field Parameters	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X			13	
	Surface Water Elevation														X		1	
	pH (field)												X	X	X			3
	Well Depth												X	X	X			3
	Specific Conductance												X	X	X			3
	Dissolved Oxygen												X	X	X			3
	ORP												X	X	X			3
	Temperature												X	X	X			3
	Turbidity												X	X	X			3
	Color												X	X	X			3
	Odor												X	X	X			3
	Additional Lab Parameters - REPORT SEPARATELY	Bicarbonate Alkalinity (total)												X	X	X		
Carbonate Alkalinity (total)													X	X	X			3
Iron (total)													X	X	X			3
Magnesium (total)													X	X	X			3
Manganese (total)													X	X	X			3
Potassium (total)													X	X	X			3
Sodium (total)													X	X	X			3
Iron (filtered)																		0
Lithium (filtered)														X	X			2
Manganese (filtered)																		0
Molybdenum (filtered)														X	X			2



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-225669-1

Login Number: 225669

List Number: 1

Creator: Bindert, Zach T

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.	True	
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	



Groundwater Monitoring Results - Field Parameters
M.L. Kapp Generating Station / SCS Engineers Project #25222077.00
February 2022

Sample	Sample Date/Time	GW Elevation (ft amsl)	Temperature (Deg. C)	pH (Std. Units)	Dissolved Oxygen (mg/L)	Specific Conductivity (µs/cm)	ORP (mV)	Turbidity
MW-310	2/21/2022 1200	589.10	12.4	7.21	0.30	1,060	48.8	2.00
MW-311	2/21/2022 1430	572.14	12.0	7.27	3.39	785	100.9	3.00
MW-311A	2/21/2022 1331	572.34	12.3	7.63	0.10	830	80.7	1.00

Abbreviations:

mg/L = milligrams per liter

mV = millivolts

amsl = above mean sea level

Notes:

None

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

Date: 10/6/2021
 Date: 3/7/2022
 Date: 3/7/2022

C:\Users\FredrickS\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\D8427408\[2202_M.L. Kapp_CCR_Field.xlsx]GW Field Parameters

ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-225669-2
Client Project/Site: ML Kapp. 25222077

For:
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Attn: Meghan Blodgett



Authorized for release by:
3/23/2022 1:01:27 PM

Sandie Fredrick, Project Manager II
(920)261-1660
sandra.fredrick@eurofinset.com

LINKS

Review your project
results through
Total Access

Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Detection Summary	5
Client Sample Results	6
Definitions	10
QC Sample Results	11
QC Association	13
Chronicle	14
Certification Summary	15
Method Summary	16
Chain of Custody	17
Receipt Checklists	21
Tracer Carrier Summary	23

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Job ID: 310-225669-2

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-225669-2

Comments

No additional comments.

Receipt

The samples were received on 2/22/2022 4:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.9° C.

RAD

Methods 903.0, RA-06-RC: Radium 226 batch 552717

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-311 (310-225669-1), Field Blank (310-225669-2), MW-311A (310-225669-3), MW-310 (310-225669-4), (LCS 160-552717/1-A), (LCSD 160-552717/2-A) and (MB 160-552717/23-A)

Methods 904.0, RA-06-RC: Radium 228 batch 552721

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-311 (310-225669-1), Field Blank (310-225669-2), MW-311A (310-225669-3), MW-310 (310-225669-4), (LCS 160-552721/1-A), (LCSD 160-552721/2-A) and (MB 160-552721/23-A)

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

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-225669-1	MW-311	Water	02/21/22 14:30	02/22/22 16:00
310-225669-2	Field Blank	Water	02/21/22 14:55	02/22/22 16:00
310-225669-3	MW-311A	Water	02/21/22 13:31	02/22/22 16:00
310-225669-4	MW-310	Water	02/21/22 12:00	02/22/22 16:00

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Client Sample ID: MW-311

Lab Sample ID: 310-225669-1

No Detections.

Client Sample ID: Field Blank

Lab Sample ID: 310-225669-2

No Detections.

Client Sample ID: MW-311A

Lab Sample ID: 310-225669-3

No Detections.

Client Sample ID: MW-310

Lab Sample ID: 310-225669-4

No Detections.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Client Sample ID: MW-311
 Date Collected: 02/21/22 14:30
 Date Received: 02/22/22 16:00

Lab Sample ID: 310-225669-1
 Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	-0.0299	U	0.185	0.185	1.00	0.380	pCi/L	02/28/22 09:27	03/23/22 07:30	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	74.6		40 - 110					02/28/22 09:27	03/23/22 07:30	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.00283	U	0.238	0.238	1.00	0.433	pCi/L	02/28/22 09:52	03/22/22 13:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	74.6		40 - 110					02/28/22 09:52	03/22/22 13:40	1
Y Carrier	87.9		40 - 110					02/28/22 09:52	03/22/22 13:40	1

Method: 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	0.00283	U	0.301	0.301	5.00	0.433	pCi/L		03/23/22 11:16	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Client Sample ID: Field Blank

Lab Sample ID: 310-225669-2

Date Collected: 02/21/22 14:55

Matrix: Water

Date Received: 02/22/22 16:00

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0178	U	0.192	0.192	1.00	0.384	pCi/L	02/28/22 09:27	03/23/22 07:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.1		40 - 110					02/28/22 09:27	03/23/22 07:31	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.357	U	0.332	0.334	1.00	0.533	pCi/L	02/28/22 09:52	03/22/22 13:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	62.1		40 - 110					02/28/22 09:52	03/22/22 13:40	1
Y Carrier	88.2		40 - 110					02/28/22 09:52	03/22/22 13:40	1

Method: 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	0.375	U	0.384	0.385	5.00	0.533	pCi/L		03/23/22 11:16	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Client Sample ID: MW-311A

Lab Sample ID: 310-225669-3

Date Collected: 02/21/22 13:31

Matrix: Water

Date Received: 02/22/22 16:00

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0302	U	0.166	0.166	1.00	0.315	pCi/L	02/28/22 09:27	03/23/22 07:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.1		40 - 110					02/28/22 09:27	03/23/22 07:31	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.163	U	0.201	0.202	1.00	0.333	pCi/L	02/28/22 09:52	03/22/22 13:40	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	93.1		40 - 110					02/28/22 09:52	03/22/22 13:40	1
Y Carrier	88.6		40 - 110					02/28/22 09:52	03/22/22 13:40	1

Method: 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	0.193	U	0.261	0.261	5.00	0.333	pCi/L		03/23/22 11:16	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Client Sample ID: MW-310
 Date Collected: 02/21/22 12:00
 Date Received: 02/22/22 16:00

Lab Sample ID: 310-225669-4
 Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.213	U	0.188	0.189	1.00	0.289	pCi/L	02/28/22 09:27	03/23/22 07:31	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110					02/28/22 09:27	03/23/22 07:31	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	-0.0116	U	0.209	0.209	1.00	0.381	pCi/L	02/28/22 09:52	03/22/22 13:41	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	91.6		40 - 110					02/28/22 09:52	03/22/22 13:41	1
Y Carrier	87.9		40 - 110					02/28/22 09:52	03/22/22 13:41	1

Method: 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	0.213	U	0.281	0.282	5.00	0.381	pCi/L		03/23/22 11:16	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Qualifiers

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: ML Kapp. 25222077

Job ID: 310-225669-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-552717/23-A
Matrix: Water
Analysis Batch: 556674

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 552717

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium 226	0.07881	U	0.152	0.152	1.00	0.271	pCi/L	02/28/22 09:27	03/23/22 07:27	1
Carrier	MB	MB	Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba Carrier	88.7		40 - 110			02/28/22 09:27	03/23/22 07:27	1		

Lab Sample ID: LCS 160-552717/1-A
Matrix: Water
Analysis Batch: 556677

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 552717

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits
				Uncert. (2σ+/-)					
Radium 226	11.3	10.45		1.29	1.00	0.340	pCi/L	92	75 - 125
Carrier	LCS	LCS	Limits			Prepared	Analyzed	Dil Fac	
	%Yield	Qualifier							
Ba Carrier	92.4		40 - 110						

Lab Sample ID: LCSD 160-552717/2-A
Matrix: Water
Analysis Batch: 556677

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 552717

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec. Limits	RER	Limit
				Uncert. (2σ+/-)							
Radium 226	11.3	9.330		1.20	1.00	0.346	pCi/L	82	75 - 125	0.45	1
Carrier	LCSD	LCSD	Limits			Prepared	Analyzed	Dil Fac			
	%Yield	Qualifier									
Ba Carrier	90.6		40 - 110								

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-552721/23-A
Matrix: Water
Analysis Batch: 556465

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 552721

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium 228	0.06947	U	0.250	0.250	1.00	0.435	pCi/L	02/28/22 09:52	03/22/22 13:42	1
Carrier	MB	MB	Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba	88.7		40 - 110			02/28/22 09:52	03/22/22 13:42	1		
Y Carrier	90.8		40 - 110			02/28/22 09:52	03/22/22 13:42	1		

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-552721/1-A
Matrix: Water
Analysis Batch: 556443

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 552721

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	
									75	125
Radium 228	8.77	9.365		1.10	1.00	0.403	pCi/L	107	75	125
LCS LCS										
Carrier	%Yield	Qualifier	Limits							
Ba	92.4		40 - 110							
Y Carrier	89.3		40 - 110							

Lab Sample ID: LCSD 160-552721/2-A
Matrix: Water
Analysis Batch: 556443

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 552721

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		RER	Limit
									75	125	0.89	1
Radium 228	8.77	7.551		0.943	1.00	0.411	pCi/L	86	75	125	0.89	1
LCSD LCSD												
Carrier	%Yield	Qualifier	Limits									
Ba	90.6		40 - 110									
Y Carrier	84.5		40 - 110									

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Rad

Prep Batch: 552717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	PrecSep-21	
310-225669-2	Field Blank	Total/NA	Water	PrecSep-21	
310-225669-3	MW-311A	Total/NA	Water	PrecSep-21	
310-225669-4	MW-310	Total/NA	Water	PrecSep-21	
MB 160-552717/23-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-552717/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-552717/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 552721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225669-1	MW-311	Total/NA	Water	PrecSep_0	
310-225669-2	Field Blank	Total/NA	Water	PrecSep_0	
310-225669-3	MW-311A	Total/NA	Water	PrecSep_0	
310-225669-4	MW-310	Total/NA	Water	PrecSep_0	
MB 160-552721/23-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-552721/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-552721/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Client Sample ID: MW-311
Date Collected: 02/21/22 14:30
Date Received: 02/22/22 16:00

Lab Sample ID: 310-225669-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			552717	02/28/22 09:27	LPS	TAL SL
Total/NA	Analysis	903.0		1	556676	03/23/22 07:30	FLC	TAL SL
Total/NA	Prep	PrecSep_0			552721	02/28/22 09:52	LPS	TAL SL
Total/NA	Analysis	904.0		1	556465	03/22/22 13:40	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	556688	03/23/22 11:16	CAH	TAL SL

Client Sample ID: Field Blank
Date Collected: 02/21/22 14:55
Date Received: 02/22/22 16:00

Lab Sample ID: 310-225669-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			552717	02/28/22 09:27	LPS	TAL SL
Total/NA	Analysis	903.0		1	556676	03/23/22 07:31	FLC	TAL SL
Total/NA	Prep	PrecSep_0			552721	02/28/22 09:52	LPS	TAL SL
Total/NA	Analysis	904.0		1	556465	03/22/22 13:40	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	556688	03/23/22 11:16	CAH	TAL SL

Client Sample ID: MW-311A
Date Collected: 02/21/22 13:31
Date Received: 02/22/22 16:00

Lab Sample ID: 310-225669-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			552717	02/28/22 09:27	LPS	TAL SL
Total/NA	Analysis	903.0		1	556676	03/23/22 07:31	FLC	TAL SL
Total/NA	Prep	PrecSep_0			552721	02/28/22 09:52	LPS	TAL SL
Total/NA	Analysis	904.0		1	556465	03/22/22 13:40	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	556688	03/23/22 11:16	CAH	TAL SL

Client Sample ID: MW-310
Date Collected: 02/21/22 12:00
Date Received: 02/22/22 16:00

Lab Sample ID: 310-225669-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			552717	02/28/22 09:27	LPS	TAL SL
Total/NA	Analysis	903.0		1	556676	03/23/22 07:31	FLC	TAL SL
Total/NA	Prep	PrecSep_0			552721	02/28/22 09:52	LPS	TAL SL
Total/NA	Analysis	904.0		1	556465	03/22/22 13:41	FLC	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	556688	03/23/22 11:16	CAH	TAL SL

Laboratory References:

TAL SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: SCS Engineers
 Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

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	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-07-23
Arizona	State	AZ0813	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	07-01-22
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-22
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22



Method Summary

Client: SCS Engineers
Project/Site: ML Kapp. 25222077

Job ID: 310-225669-2

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	TAL SL
904.0	Radium-228 (GFPC)	EPA	TAL SL
Ra226_Ra228 Pos	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15



Environment Testing
America



310-225669 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS engineers</u>			
City/State:	<u>Clive</u>	<u>IA</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>2-22-22</u>	TIME <u>1600</u>	Received By: <u>TB</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 <i>If yes: Cooler ID:</i>			
Multiple Coolers? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Cooler # _____ of _____</i>			
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No</i>			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes: Which VOA samples are in cooler? ↓</i>			
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>N</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>0.9</u>		Corrected Temp (°C): <u>0.9</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) <i>If yes: Is there evidence that the chilling process began?</i> <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			

Document: CED-P-SAM-FRM45521

Revision: 26

Date: 27 Jan 2022

Eurofins Cedar Falls

General temperature criteria is 0 to 6°C

Bacteria temperature criteria is 0 to 10°C

Table 1 Sampling Points and Parameters - CCR Rule Sampling Program
 Groundwater Monitoring - M L Kapp Ash Pond/ SCS Engineers Project #25221077.00

	Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	River Elevation Point	Field Blank	TOTAL	
Appendix III Parameters (total/unfiltered)	Boron												X	X	X		X	4
	Calcium												X	X	X		X	4
	Chloride												X	X	X		X	4
	Fluoride												X	X	X		X	4
	pH												X	X	X		X	4
	Sulfate												X	X	X		X	4
	TDS												X	X	X		X	4
Appendix IV Parameters (total/unfiltered)	Antimony												X	X	X		X	4
	Arsenic												X	X	X		X	4
	Barium												X	X	X		X	4
	Beryllium												X	X	X		X	4
	Cadmium												X	X	X		X	4
	Chromium												X	X	X		X	4
	Cobalt												X	X	X		X	4
	Fluoride												X	X	X		X	4
	Lead												X	X	X		X	4
	Lithium												X	X	X		X	4
	Mercury												X	X	X		X	4
	Molybdenum												X	X	X		X	4
	Selenium												X	X	X		X	4
	Thallium												X	X	X		X	4
	Radium												X	X	X		X	4
Field Parameters	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X			13	
	Surface Water Elevation														X		1	
	pH (field)												X	X	X			3
	Well Depth												X	X	X			3
	Specific Conductance												X	X	X			3
	Dissolved Oxygen												X	X	X			3
	ORP												X	X	X			3
	Temperature												X	X	X			3
	Turbidity												X	X	X			3
	Color												X	X	X			3
	Odor												X	X	X			3
	Additional Lab Parameters - REPORT SEPARATELY	Bicarbonate Alkalinity (total)												X	X	X		
Carbonate Alkalinity (total)													X	X	X			3
Iron (total)													X	X	X			3
Magnesium (total)													X	X	X			3
Manganese (total)													X	X	X			3
Potassium (total)													X	X	X			3
Sodium (total)													X	X	X			3
Iron (filtered)																		0
Lithium (filtered)														X	X			2
Manganese (filtered)																		0
Molybdenum (filtered)														X	X			2





Client Information (Sub Contract Lab)		Lab PM: Fredrick, Sandie		Carrier Tracking No(s): 310-46869-1		
Client Contact: Fredrick, Sandie		E-Mail: sandra.fredrick@eurofinset.com		Page: Page 1 of 1		
Shipping/Receiving Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Iowa		Job #: 310-225669-2		
Address: 13715 Rider Trail North, Earth City, MO, 63045		Due Date Requested: 3/23/2022		Preservation Codes: 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: 314-298-8566(Tel) 314-298-8757(Fax)		TAT Requested (days):		Analysis Requested:		
Email:		PO #:		Total Number of Containers:		
Project #: 31011020		WO #:		DO NOT SHIP ON ICE TO ST. LOUIS		
Site: ML Kapp. 25222077		SOW#:		DO NOT SHIP ON ICE TO ST. LOUIS		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code:	Special Instructions/Note:
MW-311 (310-225669-1)	2/21/22	14:30 Central	Water	Water		DO NOT SHIP ON ICE TO ST. LOUIS
Field Blank (310-225669-2)	2/21/22	14:55 Central	Water	Water		DO NOT SHIP ON ICE TO ST. LOUIS
MW-311A (310-225669-3)	2/21/22	13:31 Central	Water	Water		DO NOT SHIP ON ICE TO ST. LOUIS
MW-310 (310-225669-4)	2/21/22	12:00 Central	Water	Water		DO NOT SHIP ON ICE TO ST. LOUIS
<p>Possible Hazard Identification</p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p>Special Instructions/QC Requirements:</p>						
Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		Time:		
Empty Kit Relinquished by:		Date:		Method of Shipment:		
Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/22 1400		Received by: <i>[Signature]</i> Company:		
Relinquished by: <i>[Signature]</i>		Date/Time:		Received by: <i>[Signature]</i> Company: <i>[Signature]</i>		
Relinquished by:		Date/Time:		Received by:		
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-225669-2

Login Number: 225669

List Number: 1

Creator: Bindert, Zach T

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.	True	
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: 310-225669-2

Login Number: 225669

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 02/25/22 10:14 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?	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: ML Kapp. 25222077

Job ID: 310-225669-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)
310-225669-1	MW-311	74.6
310-225669-2	Field Blank	62.1
310-225669-3	MW-311A	93.1
310-225669-4	MW-310	91.6
LCS 160-552717/1-A	Lab Control Sample	92.4
LCSD 160-552717/2-A	Lab Control Sample Dup	90.6
MB 160-552717/23-A	Method Blank	88.7

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-225669-1	MW-311	74.6	87.9
310-225669-2	Field Blank	62.1	88.2
310-225669-3	MW-311A	93.1	88.6
310-225669-4	MW-310	91.6	87.9
LCS 160-552721/1-A	Lab Control Sample	92.4	89.3
LCSD 160-552721/2-A	Lab Control Sample Dup	90.6	84.5
MB 160-552721/23-A	Method Blank	88.7	90.8

Tracer/Carrier Legend

Ba = Ba

Y = Y Carrier

ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-225676-1
Client Project/Site: ML Kapp 25222077 MNA

For:
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Attn: Meghan Blodgett



Authorized for release by:
3/9/2022 5:42:40 PM

Sandie Fredrick, Project Manager II
(920)261-1660
sandra.fredrick@eurofinset.com

LINKS

Review your project
results through
Total Access

Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Detection Summary	5
Client Sample Results	6
QC Sample Results	10
QC Association	12
Chronicle	13
Certification Summary	14
Method Summary	15
Chain of Custody	16
Receipt Checklists	19

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-225676-1

Job ID: 310-225676-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-225676-1

Comments

No additional comments.

Receipt

The samples were received on 2/22/2022 4:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.9° C.

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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-225676-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-225676-1	MW-311	Water	02/21/22 14:30	02/22/22 16:00
310-225676-2	Field Blank	Water	02/21/22 14:55	02/22/22 16:00
310-225676-3	MW-311A	Water	02/21/22 14:31	02/22/22 16:00
310-225676-4	MW-310	Water	02/21/22 12:00	02/22/22 16:00

1

2

3

4

5

6

7

8

9

10

11

12

13

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 2522077 MNA

Job ID: 310-225676-1

Client Sample ID: MW-311

Lab Sample ID: 310-225676-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	26000		500	150	ug/L	1		6020A	Total/NA
Potassium	6200		500	150	ug/L	1		6020A	Total/NA
Sodium	30000		1000	610	ug/L	1		6020A	Total/NA
Lithium	33		10	2.5	ug/L	1		6020A	Dissolved
Molybdenum	29		2.0	1.2	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	320		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	320		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: Field Blank

Lab Sample ID: 310-225676-2

No Detections.

Client Sample ID: MW-311A

Lab Sample ID: 310-225676-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	21000		500	150	ug/L	1		6020A	Total/NA
Manganese	4.0	J	10	3.6	ug/L	1		6020A	Total/NA
Potassium	7300		500	150	ug/L	1		6020A	Total/NA
Sodium	45000		1000	610	ug/L	1		6020A	Total/NA
Lithium	18		10	2.5	ug/L	1		6020A	Dissolved
Molybdenum	190		2.0	1.2	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	150		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	150		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-310

Lab Sample ID: 310-225676-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	44000		500	150	ug/L	1		6020A	Total/NA
Manganese	210		10	3.6	ug/L	1		6020A	Total/NA
Potassium	1100		500	150	ug/L	1		6020A	Total/NA
Sodium	67000		1000	610	ug/L	1		6020A	Total/NA
Bicarbonate Alkalinity as CaCO3	410		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	410		10	4.6	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-225676-1

Client Sample ID: MW-311

Lab Sample ID: 310-225676-1

Date Collected: 02/21/22 14:30

Matrix: Water

Date Received: 02/22/22 16:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		02/24/22 08:15	03/08/22 18:10	1
Magnesium	26000		500	150	ug/L		02/24/22 08:15	03/08/22 18:10	1
Manganese	<3.6		10	3.6	ug/L		02/24/22 08:15	03/08/22 18:10	1
Potassium	6200		500	150	ug/L		02/24/22 08:15	03/08/22 18:10	1
Sodium	30000		1000	610	ug/L		02/24/22 08:15	03/08/22 18:10	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	33		10	2.5	ug/L		02/25/22 09:00	03/08/22 19:16	1
Molybdenum	29		2.0	1.2	ug/L		02/25/22 09:00	03/08/22 19:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	320		10	4.6	mg/L			02/25/22 09:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			02/25/22 09:14	1
Total Alkalinity as CaCO3	320		10	4.6	mg/L			02/25/22 09:14	1



Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-225676-1

Client Sample ID: Field Blank

Lab Sample ID: 310-225676-2

Date Collected: 02/21/22 14:55

Matrix: Water

Date Received: 02/22/22 16:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		02/24/22 08:15	03/08/22 18:26	1
Magnesium	<150		500	150	ug/L		02/24/22 08:15	03/08/22 18:26	1
Manganese	<3.6		10	3.6	ug/L		02/24/22 08:15	03/08/22 18:26	1
Potassium	<150		500	150	ug/L		02/24/22 08:15	03/08/22 18:26	1
Sodium	<610		1000	610	ug/L		02/24/22 08:15	03/08/22 18:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			02/25/22 11:44	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			02/25/22 11:44	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			02/25/22 11:44	1

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-225676-1

Client Sample ID: MW-311A

Lab Sample ID: 310-225676-3

Date Collected: 02/21/22 14:31

Matrix: Water

Date Received: 02/22/22 16:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		02/24/22 08:15	03/08/22 18:29	1
Magnesium	21000		500	150	ug/L		02/24/22 08:15	03/08/22 18:29	1
Manganese	4.0	J	10	3.6	ug/L		02/24/22 08:15	03/08/22 18:29	1
Potassium	7300		500	150	ug/L		02/24/22 08:15	03/08/22 18:29	1
Sodium	45000		1000	610	ug/L		02/24/22 08:15	03/08/22 18:29	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	18		10	2.5	ug/L		02/25/22 09:00	03/08/22 19:20	1
Molybdenum	190		2.0	1.2	ug/L		02/25/22 09:00	03/08/22 19:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	150		10	4.6	mg/L			02/25/22 09:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			02/25/22 09:14	1
Total Alkalinity as CaCO3	150		10	4.6	mg/L			02/25/22 09:14	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-225676-1

Client Sample ID: MW-310
 Date Collected: 02/21/22 12:00
 Date Received: 02/22/22 16:00

Lab Sample ID: 310-225676-4
 Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		02/24/22 08:15	03/08/22 18:33	1
Magnesium	44000		500	150	ug/L		02/24/22 08:15	03/08/22 18:33	1
Manganese	210		10	3.6	ug/L		02/24/22 08:15	03/08/22 18:33	1
Potassium	1100		500	150	ug/L		02/24/22 08:15	03/08/22 18:33	1
Sodium	67000		1000	610	ug/L		02/24/22 08:15	03/08/22 18:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	410		10	4.6	mg/L			02/25/22 09:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			02/25/22 09:14	1
Total Alkalinity as CaCO3	410		10	4.6	mg/L			02/25/22 09:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-225676-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-344751/1-A
Matrix: Water
Analysis Batch: 346038

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344751

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Iron	<36		100	36	ug/L		02/24/22 08:15	03/08/22 17:42	1
Magnesium	<150		500	150	ug/L		02/24/22 08:15	03/08/22 17:42	1
Manganese	<3.6		10	3.6	ug/L		02/24/22 08:15	03/08/22 17:42	1
Potassium	<150		500	150	ug/L		02/24/22 08:15	03/08/22 17:42	1
Sodium	<610		1000	610	ug/L		02/24/22 08:15	03/08/22 17:42	1

Lab Sample ID: LCS 310-344751/2-A
Matrix: Water
Analysis Batch: 346038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344751

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Magnesium	2000	2020		ug/L	101	80 - 120	
Manganese	100	103		ug/L	103	80 - 120	
Potassium	2000	2050		ug/L	103	80 - 120	
Sodium	2000	1990		ug/L	100	80 - 120	

Lab Sample ID: MB 310-344845/1-A
Matrix: Water
Analysis Batch: 346038

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 344845

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<2.5		10	2.5	ug/L		02/25/22 09:00	03/08/22 18:42	1
Molybdenum	<1.2		2.0	1.2	ug/L		02/25/22 09:00	03/08/22 18:42	1

Lab Sample ID: LCS 310-344845/2-A
Matrix: Water
Analysis Batch: 346038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 344845

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	200	186		ug/L	93	80 - 120	

Method: 2320B - Alkalinity (Low Level)

Lab Sample ID: MB 310-344938/1
Matrix: Water
Analysis Batch: 344938

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L		02/25/22 11:33	02/25/22 11:33	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L		02/25/22 11:33	02/25/22 11:33	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L		02/25/22 11:33	02/25/22 11:33	1

Lab Sample ID: LCS 310-344938/2
Matrix: Water
Analysis Batch: 344938

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-225676-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 310-344922/1
Matrix: Water
Analysis Batch: 344922

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			02/25/22 09:14	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			02/25/22 09:14	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			02/25/22 09:14	1

Lab Sample ID: LCS 310-344922/2
Matrix: Water
Analysis Batch: 344922

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3	1000	1030		mg/L		103	90 - 110

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 2522077 MNA

Job ID: 310-225676-1

Metals

Prep Batch: 344751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225676-1	MW-311	Total/NA	Water	3005A	
310-225676-2	Field Blank	Total/NA	Water	3005A	
310-225676-3	MW-311A	Total/NA	Water	3005A	
310-225676-4	MW-310	Total/NA	Water	3005A	
MB 310-344751/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-344751/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 344845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225676-1	MW-311	Dissolved	Water	3005A	
310-225676-3	MW-311A	Dissolved	Water	3005A	
MB 310-344845/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-344845/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 346038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225676-1	MW-311	Dissolved	Water	6020A	344845
310-225676-1	MW-311	Total/NA	Water	6020A	344751
310-225676-2	Field Blank	Total/NA	Water	6020A	344751
310-225676-3	MW-311A	Dissolved	Water	6020A	344845
310-225676-3	MW-311A	Total/NA	Water	6020A	344751
310-225676-4	MW-310	Total/NA	Water	6020A	344751
MB 310-344751/1-A	Method Blank	Total/NA	Water	6020A	344751
MB 310-344845/1-A	Method Blank	Total/NA	Water	6020A	344845
LCS 310-344751/2-A	Lab Control Sample	Total/NA	Water	6020A	344751
LCS 310-344845/2-A	Lab Control Sample	Total/NA	Water	6020A	344845

General Chemistry

Analysis Batch: 344922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225676-1	MW-311	Total/NA	Water	SM 2320B	
310-225676-3	MW-311A	Total/NA	Water	SM 2320B	
310-225676-4	MW-310	Total/NA	Water	SM 2320B	
MB 310-344922/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-344922/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 344938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-225676-2	Field Blank	Total/NA	Water	2320B	
MB 310-344938/1	Method Blank	Total/NA	Water	2320B	
LCS 310-344938/2	Lab Control Sample	Total/NA	Water	2320B	

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: ML Kapp 2522077 MNA

Job ID: 310-225676-1

Client Sample ID: MW-311

Lab Sample ID: 310-225676-1

Date Collected: 02/21/22 14:30

Matrix: Water

Date Received: 02/22/22 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			344845	02/25/22 09:00	ACM2	TAL CF
Dissolved	Analysis	6020A		1	346038	03/08/22 19:16	SAP	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346038	03/08/22 18:10	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	344922	02/25/22 09:14	JMH2	TAL CF

Client Sample ID: Field Blank

Lab Sample ID: 310-225676-2

Date Collected: 02/21/22 14:55

Matrix: Water

Date Received: 02/22/22 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346038	03/08/22 18:26	SAP	TAL CF
Total/NA	Analysis	2320B		1	344938	02/25/22 11:44	JMH2	TAL CF

Client Sample ID: MW-311A

Lab Sample ID: 310-225676-3

Date Collected: 02/21/22 14:31

Matrix: Water

Date Received: 02/22/22 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			344845	02/25/22 09:00	ACM2	TAL CF
Dissolved	Analysis	6020A		1	346038	03/08/22 19:20	SAP	TAL CF
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346038	03/08/22 18:29	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	344922	02/25/22 09:14	JMH2	TAL CF

Client Sample ID: MW-310

Lab Sample ID: 310-225676-4

Date Collected: 02/21/22 12:00

Matrix: Water

Date Received: 02/22/22 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			344751	02/24/22 08:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	346038	03/08/22 18:33	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	344922	02/25/22 09:14	JMH2	TAL CF

Laboratory References:

TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-225676-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-21 *

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-225676-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CF
2320B	Alkalinity (Low Level)	SM	TAL CF
SM 2320B	Alkalinity	SM	TAL CF
3005A	Preparation, Total Metals	SW846	TAL CF

Protocol References:

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.

Laboratory References:

TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



310-225676 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS engineers</u>			
City/State:	<u>Clive</u>	STATE: <u>IA</u>	Project:
Receipt Information			
Date/Time Received:	DATE: <u>2-22-22</u>	TIME: <u>1600</u>	Received By: <u>TB</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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____	
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>N</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>0.9</u>	Corrected Temp (°C): <u>0.9</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			

Document: CED-P-SAM-FRM45521
Revision: 26
Date: 27 Jan 2022

Eurofins Cedar Falls

General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C

Table 1 - Sampling Points and Parameters - CCR Rule Sampling Program
 Groundwater Monitoring - M L Kapp Ash Pond/ SCS Engineers Project #25221077 00

	Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	River Elevation Point	Field Blank	TOTAL	
Appendix III Parameters (total/unfiltered)	Boron											X	X	X		X	4	
	Calcium											X	X	X		X	4	
	Chloride											X	X	X		X	4	
	Fluoride											X	X	X		X	4	
	pH											X	X	X		X	4	
	Sulfate											X	X	X		X	4	
	TDS											X	X	X		X	4	
	Antimony											X	X	X		X	4	
Appendix IV Parameters (total/unfiltered)	Arsenic										X	X	X		X	4		
	Barium										X	X	X		X	4		
	Beryllium										X	X	X		X	4		
	Cadmium										X	X	X		X	4		
	Chromium										X	X	X		X	4		
	Cobalt										X	X	X		X	4		
	Fluoride										X	X	X		X	4		
	Lead										X	X	X		X	4		
	Lithium										X	X	X		X	4		
	Mercury										X	X	X		X	4		
	Molybdenum										X	X	X		X	4		
	Selenium										X	X	X		X	4		
	Thallium										X	X	X		X	4		
	Radium										X	X	X		X	4		
	Field Parameters	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X			13
		Surface Water Elevation														X		1
pH (field)												X	X	X			3	
Well Depth												X	X	X			3	
Specific Conductance												X	X	X			3	
Dissolved Oxygen												X	X	X			3	
ORP												X	X	X			3	
Temperature												X	X	X			3	
Turbidity												X	X	X			3	
Color												X	X	X			3	
Odor												X	X	X			3	
Additional Lab Parameters - REPORT SEPARATELY		Bicarbonate Alkalinity (total)											X	X	X			3
	Carbonate Alkalinity (total)											X	X	X			3	
	Iron (total)											X	X	X			3	
	Magnesium (total)											X	X	X			3	
	Manganese (total)											X	X	X			3	
	Potassium (total)											X	X	X			3	
	Sodium (total)											X	X	X			3	
	Iron (filtered)																	0
	Lithium (filtered)												X	X				2
	Manganese (filtered)																	0
	Molybdenum (filtered)												X	X				2

RUSH

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-225676-1

Login Number: 225676

List Number: 1

Creator: Bindert, Zach T

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.	True	
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	



C2 April 2022 Assessment Monitoring

ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-229565-1
Client Project/Site: ML Kapp MNA 25222077

For:
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Attn: Meghan Blodgett



Authorized for release by:
5/18/2022 5:44:30 PM

Sandie Fredrick, Project Manager II
(920)261-1660
Sandra.Fredrick@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Detection Summary	5
Client Sample Results	9
Definitions	23
QC Sample Results	24
QC Association	27
Chronicle	30
Certification Summary	34
Method Summary	35
Chain of Custody	36
Receipt Checklists	43

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Job ID: 310-229565-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-229565-1

Comments

No additional comments.

Receipt

The samples were received on 4/20/2022 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.6° C, 0.9° C, 1.2° C and 4.5° C.

Metals

Methods 200.8, 6020A, 6020B: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample: MW-306 (310-229565-8).

Method 6020A: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: MW-311A (310-229565-6), MW-311 (310-229565-7), MW-306 (310-229565-8) and MW-302 (310-229565-14).

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

General Chemistry

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



Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-229565-1	MW-307	Water	04/19/22 17:33	04/20/22 17:00
310-229565-2	MW-310	Water	04/19/22 15:36	04/20/22 17:00
310-229565-3	MW-309	Water	04/19/22 14:13	04/20/22 17:00
310-229565-4	Field Blank	Water	04/19/22 13:50	04/20/22 17:00
310-229565-5	MW-308	Water	04/19/22 12:48	04/20/22 17:00
310-229565-6	MW-311A	Water	04/19/22 13:18	04/20/22 17:00
310-229565-7	MW-311	Water	04/19/22 10:26	04/20/22 17:00
310-229565-8	MW-306	Water	04/19/22 08:56	04/20/22 17:00
310-229565-9	MW-301	Water	04/18/22 18:50	04/20/22 17:00
310-229565-10	MW-305	Water	04/18/22 17:20	04/20/22 17:00
310-229565-11	MW-304	Water	04/18/22 15:28	04/20/22 17:00
310-229565-12	MW-304A	Water	04/18/22 14:23	04/20/22 17:00
310-229565-13	MW-303	Water	04/18/22 12:47	04/20/22 17:00
310-229565-14	MW-302	Water	04/18/22 11:21	04/20/22 17:00



Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-307

Lab Sample ID: 310-229565-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	1600		100	36	ug/L	1		6020A	Total/NA
Magnesium	69000		500	150	ug/L	1		6020A	Total/NA
Manganese	3200		10	3.6	ug/L	1		6020A	Total/NA
Potassium	700		500	150	ug/L	1		6020A	Total/NA
Sodium	13000		1000	610	ug/L	1		6020A	Total/NA
Iron	1900		100	36	ug/L	1		6020A	Dissolved
Manganese	3400		10	3.6	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	690		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	690		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-310

Lab Sample ID: 310-229565-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	44000		500	150	ug/L	1		6020A	Total/NA
Manganese	150		10	3.6	ug/L	1		6020A	Total/NA
Potassium	1000		500	150	ug/L	1		6020A	Total/NA
Sodium	67000		1000	610	ug/L	1		6020A	Total/NA
Manganese	160		10	3.6	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	390		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	390		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-309

Lab Sample ID: 310-229565-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	31000		100	36	ug/L	1		6020A	Total/NA
Magnesium	43000		500	150	ug/L	1		6020A	Total/NA
Manganese	4900		40	14	ug/L	4		6020A	Total/NA
Potassium	2700		500	150	ug/L	1		6020A	Total/NA
Sodium	26000		1000	610	ug/L	1		6020A	Total/NA
Iron	34000		100	36	ug/L	1		6020A	Dissolved
Manganese	4800		40	14	ug/L	4		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	660		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	660		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: Field Blank

Lab Sample ID: 310-229565-4

No Detections.

Client Sample ID: MW-308

Lab Sample ID: 310-229565-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	270		100	36	ug/L	1		6020A	Total/NA
Magnesium	45000		500	150	ug/L	1		6020A	Total/NA
Manganese	590		10	3.6	ug/L	1		6020A	Total/NA
Potassium	1100		500	150	ug/L	1		6020A	Total/NA
Sodium	46000		1000	610	ug/L	1		6020A	Total/NA
Iron	190		100	36	ug/L	1		6020A	Dissolved
Manganese	690		10	3.6	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	390		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	390		10	4.6	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-311A

Lab Sample ID: 310-229565-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	18000		2000	600	ug/L	4		6020A	Total/NA
Potassium	7000		2000	600	ug/L	4		6020A	Total/NA
Sodium	33000		4000	2400	ug/L	4		6020A	Total/NA
Molybdenum	160		2.0	1.2	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	200		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	200		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-311

Lab Sample ID: 310-229565-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	24000		2000	600	ug/L	4		6020A	Total/NA
Potassium	6400		2000	600	ug/L	4		6020A	Total/NA
Sodium	31000		4000	2400	ug/L	4		6020A	Total/NA
Lithium	45		10	2.5	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	320		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	320		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-306

Lab Sample ID: 310-229565-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	35000		2000	600	ug/L	4		6020A	Total/NA
Potassium	11000		2000	600	ug/L	4		6020A	Total/NA
Sodium	110000		4000	2400	ug/L	4		6020A	Total/NA
Lithium	57		10	2.5	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	510		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	510		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-301

Lab Sample ID: 310-229565-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	2600		400	140	ug/L	4		6020A	Total/NA
Magnesium	30000		2000	600	ug/L	4		6020A	Total/NA
Manganese	780		40	14	ug/L	4		6020A	Total/NA
Potassium	2500		2000	600	ug/L	4		6020A	Total/NA
Sodium	44000		4000	2400	ug/L	4		6020A	Total/NA
Iron	200		100	36	ug/L	1		6020A	Dissolved
Manganese	900		10	3.6	ug/L	1		6020A	Dissolved
Molybdenum	460		2.0	1.2	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	240		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	240		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-305

Lab Sample ID: 310-229565-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	1200		400	140	ug/L	4		6020A	Total/NA
Magnesium	28000		2000	600	ug/L	4		6020A	Total/NA
Manganese	3100		40	14	ug/L	4		6020A	Total/NA
Potassium	12000		2000	600	ug/L	4		6020A	Total/NA
Sodium	130000		4000	2400	ug/L	4		6020A	Total/NA
Iron	1200		100	36	ug/L	1		6020A	Dissolved
Manganese	3600		10	3.6	ug/L	1		6020A	Dissolved
Molybdenum	700		2.0	1.2	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	250		10	4.6	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-305 (Continued)

Lab Sample ID: 310-229565-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Alkalinity as CaCO3	250		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-304

Lab Sample ID: 310-229565-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	330	J	400	140	ug/L	4		6020A	Total/NA
Magnesium	18000		2000	600	ug/L	4		6020A	Total/NA
Manganese	1600		40	14	ug/L	4		6020A	Total/NA
Potassium	21000		2000	600	ug/L	4		6020A	Total/NA
Sodium	90000		4000	2400	ug/L	4		6020A	Total/NA
Arsenic	3.7		2.0	0.75	ug/L	1		6020A	Dissolved
Manganese	1600		10	3.6	ug/L	1		6020A	Dissolved
Molybdenum	640		2.0	1.2	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	250		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	250		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-304A

Lab Sample ID: 310-229565-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	400		100	36	ug/L	1		6020A	Total/NA
Magnesium	28000		500	150	ug/L	1		6020A	Total/NA
Manganese	680		10	3.6	ug/L	1		6020A	Total/NA
Potassium	1900		500	150	ug/L	1		6020A	Total/NA
Sodium	19000		1000	610	ug/L	1		6020A	Total/NA
Iron	420		100	36	ug/L	1		6020A	Dissolved
Manganese	700		10	3.6	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	290		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	290		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-303

Lab Sample ID: 310-229565-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	16000		400	140	ug/L	4		6020A	Total/NA
Magnesium	24000		2000	600	ug/L	4		6020A	Total/NA
Manganese	9800		40	14	ug/L	4		6020A	Total/NA
Potassium	22000		2000	600	ug/L	4		6020A	Total/NA
Sodium	110000		4000	2400	ug/L	4		6020A	Total/NA
Arsenic	2.9		2.0	0.75	ug/L	1		6020A	Dissolved
Iron	810		100	36	ug/L	1		6020A	Dissolved
Lithium	67		10	2.5	ug/L	1		6020A	Dissolved
Manganese	9800		40	14	ug/L	4		6020A	Dissolved
Molybdenum	110		2.0	1.2	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	320		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	320		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-302

Lab Sample ID: 310-229565-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	9800		2000	600	ug/L	4		6020A	Total/NA
Manganese	130		40	14	ug/L	4		6020A	Total/NA
Potassium	11000		2000	600	ug/L	4		6020A	Total/NA
Sodium	52000		4000	2400	ug/L	4		6020A	Total/NA
Manganese	140		10	3.6	ug/L	1		6020A	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-302 (Continued)

Lab Sample ID: 310-229565-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	150		2.0	1.2	ug/L	1		6020A	Dissolved
Bicarbonate Alkalinity as CaCO3	250		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	250		10	4.6	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-307

Lab Sample ID: 310-229565-1

Date Collected: 04/19/22 17:33

Matrix: Water

Date Received: 04/20/22 17:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1600		100	36	ug/L		04/28/22 09:30	05/17/22 18:54	1
Magnesium	69000		500	150	ug/L		04/28/22 09:30	05/17/22 18:54	1
Manganese	3200		10	3.6	ug/L		04/28/22 09:30	05/17/22 18:54	1
Potassium	700		500	150	ug/L		04/28/22 09:30	05/17/22 18:54	1
Sodium	13000		1000	610	ug/L		04/28/22 09:30	05/17/22 18:54	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1900		100	36	ug/L		04/28/22 09:30	05/10/22 14:36	1
Manganese	3400		10	3.6	ug/L		04/28/22 09:30	05/10/22 14:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	690		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	690		10	4.6	mg/L			04/29/22 08:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-310
 Date Collected: 04/19/22 15:36
 Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-2
 Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		04/28/22 09:30	05/17/22 19:05	1
Magnesium	44000		500	150	ug/L		04/28/22 09:30	05/17/22 19:05	1
Manganese	150		10	3.6	ug/L		04/28/22 09:30	05/17/22 19:05	1
Potassium	1000		500	150	ug/L		04/28/22 09:30	05/17/22 19:05	1
Sodium	67000		1000	610	ug/L		04/28/22 09:30	05/17/22 19:05	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		04/28/22 09:30	05/10/22 14:40	1
Manganese	160		10	3.6	ug/L		04/28/22 09:30	05/10/22 14:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	390		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	390		10	4.6	mg/L			04/29/22 08:14	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-309

Lab Sample ID: 310-229565-3

Date Collected: 04/19/22 14:13

Matrix: Water

Date Received: 04/20/22 17:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	31000		100	36	ug/L		04/28/22 09:30	05/17/22 19:24	1
Magnesium	43000		500	150	ug/L		04/28/22 09:30	05/17/22 19:24	1
Manganese	4900		40	14	ug/L		04/28/22 09:30	05/18/22 15:59	4
Potassium	2700		500	150	ug/L		04/28/22 09:30	05/17/22 19:24	1
Sodium	26000		1000	610	ug/L		04/28/22 09:30	05/17/22 19:24	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	34000		100	36	ug/L		04/28/22 09:30	05/10/22 15:00	1
Manganese	4800		40	14	ug/L		04/28/22 09:30	05/10/22 16:17	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	660		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	660		10	4.6	mg/L			04/29/22 08:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: Field Blank

Lab Sample ID: 310-229565-4

Date Collected: 04/19/22 13:50

Matrix: Water

Date Received: 04/20/22 17:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		04/28/22 09:30	05/17/22 19:28	1
Magnesium	<150		500	150	ug/L		04/28/22 09:30	05/17/22 19:28	1
Manganese	<3.6		10	3.6	ug/L		04/28/22 09:30	05/17/22 19:28	1
Potassium	<150		500	150	ug/L		04/28/22 09:30	05/17/22 19:28	1
Sodium	<610		1000	610	ug/L		04/28/22 09:30	05/17/22 19:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/25/22 10:59	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/25/22 10:59	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/25/22 10:59	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-308
 Date Collected: 04/19/22 12:48
 Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-5
 Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	270		100	36	ug/L		04/28/22 09:30	05/17/22 19:32	1
Magnesium	45000		500	150	ug/L		04/28/22 09:30	05/17/22 19:32	1
Manganese	590		10	3.6	ug/L		04/28/22 09:30	05/17/22 19:32	1
Potassium	1100		500	150	ug/L		04/28/22 09:30	05/17/22 19:32	1
Sodium	46000		1000	610	ug/L		04/28/22 09:30	05/17/22 19:32	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	190		100	36	ug/L		04/28/22 09:30	05/10/22 15:03	1
Manganese	690		10	3.6	ug/L		04/28/22 09:30	05/10/22 15:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	390		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	390		10	4.6	mg/L			04/29/22 08:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-311A

Lab Sample ID: 310-229565-6

Date Collected: 04/19/22 13:18

Matrix: Water

Date Received: 04/20/22 17:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<140		400	140	ug/L		04/28/22 09:30	05/17/22 19:36	4
Magnesium	18000		2000	600	ug/L		04/28/22 09:30	05/17/22 19:36	4
Manganese	<14		40	14	ug/L		04/28/22 09:30	05/17/22 19:36	4
Potassium	7000		2000	600	ug/L		04/28/22 09:30	05/17/22 19:36	4
Sodium	33000		4000	2400	ug/L		04/28/22 09:30	05/17/22 19:36	4

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		04/28/22 09:30	05/10/22 15:07	1
Manganese	<3.6		10	3.6	ug/L		04/28/22 09:30	05/10/22 15:07	1
Molybdenum	160		2.0	1.2	ug/L		04/28/22 09:30	05/10/22 15:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	200		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	200		10	4.6	mg/L			04/29/22 08:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-311
Date Collected: 04/19/22 10:26
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-7
Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<140		400	140	ug/L		04/28/22 09:30	05/17/22 19:40	4
Magnesium	24000		2000	600	ug/L		04/28/22 09:30	05/17/22 19:40	4
Manganese	<14		40	14	ug/L		04/28/22 09:30	05/17/22 19:40	4
Potassium	6400		2000	600	ug/L		04/28/22 09:30	05/17/22 19:40	4
Sodium	31000		4000	2400	ug/L		04/28/22 09:30	05/17/22 19:40	4

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		04/28/22 09:30	05/10/22 15:11	1
Lithium	45		10	2.5	ug/L		04/28/22 09:30	05/10/22 15:11	1
Manganese	<3.6		10	3.6	ug/L		04/28/22 09:30	05/10/22 15:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	320		10	4.6	mg/L			04/29/22 10:34	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 10:34	1
Total Alkalinity as CaCO3	320		10	4.6	mg/L			04/29/22 10:34	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-306
 Date Collected: 04/19/22 08:56
 Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-8
 Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<140		400	140	ug/L		04/28/22 09:30	05/17/22 19:43	4
Magnesium	35000		2000	600	ug/L		04/28/22 09:30	05/17/22 19:43	4
Manganese	<14		40	14	ug/L		04/28/22 09:30	05/17/22 19:43	4
Potassium	11000		2000	600	ug/L		04/28/22 09:30	05/17/22 19:43	4
Sodium	110000		4000	2400	ug/L		04/28/22 09:30	05/17/22 19:43	4

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<140		400	140	ug/L		04/28/22 09:30	05/11/22 17:59	4
Lithium	57		10	2.5	ug/L		04/28/22 09:30	05/10/22 15:15	1
Manganese	<3.6		10	3.6	ug/L		04/28/22 09:30	05/10/22 15:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	510		10	4.6	mg/L			04/29/22 10:34	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 10:34	1
Total Alkalinity as CaCO3	510		10	4.6	mg/L			04/29/22 10:34	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-301
 Date Collected: 04/18/22 18:50
 Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-9
 Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	2600		400	140	ug/L		04/28/22 09:30	05/17/22 19:47	4
Magnesium	30000		2000	600	ug/L		04/28/22 09:30	05/17/22 19:47	4
Manganese	780		40	14	ug/L		04/28/22 09:30	05/17/22 19:47	4
Potassium	2500		2000	600	ug/L		04/28/22 09:30	05/17/22 19:47	4
Sodium	44000		4000	2400	ug/L		04/28/22 09:30	05/17/22 19:47	4

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	200		100	36	ug/L		04/28/22 09:30	05/10/22 15:19	1
Manganese	900		10	3.6	ug/L		04/28/22 09:30	05/10/22 15:19	1
Molybdenum	460		2.0	1.2	ug/L		04/28/22 09:30	05/10/22 15:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	240		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	240		10	4.6	mg/L			04/29/22 08:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-305

Lab Sample ID: 310-229565-10

Date Collected: 04/18/22 17:20

Matrix: Water

Date Received: 04/20/22 17:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1200		400	140	ug/L		04/28/22 09:30	05/17/22 19:51	4
Magnesium	28000		2000	600	ug/L		04/28/22 09:30	05/17/22 19:51	4
Manganese	3100		40	14	ug/L		04/28/22 09:30	05/17/22 19:51	4
Potassium	12000		2000	600	ug/L		04/28/22 09:30	05/17/22 19:51	4
Sodium	130000		4000	2400	ug/L		04/28/22 09:30	05/17/22 19:51	4

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1200		100	36	ug/L		04/28/22 09:30	05/10/22 15:23	1
Manganese	3600		10	3.6	ug/L		04/28/22 09:30	05/10/22 15:23	1
Molybdenum	700		2.0	1.2	ug/L		04/28/22 09:30	05/10/22 15:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	250		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	250		10	4.6	mg/L			04/29/22 08:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-304

Lab Sample ID: 310-229565-11

Date Collected: 04/18/22 15:28

Matrix: Water

Date Received: 04/20/22 17:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	330	J	400	140	ug/L		04/28/22 09:30	05/17/22 19:55	4
Magnesium	18000		2000	600	ug/L		04/28/22 09:30	05/17/22 19:55	4
Manganese	1600		40	14	ug/L		04/28/22 09:30	05/17/22 19:55	4
Potassium	21000		2000	600	ug/L		04/28/22 09:30	05/17/22 19:55	4
Sodium	90000		4000	2400	ug/L		04/28/22 09:30	05/17/22 19:55	4

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.7		2.0	0.75	ug/L		04/28/22 09:30	05/10/22 15:31	1
Iron	<36		100	36	ug/L		04/28/22 09:30	05/10/22 15:31	1
Manganese	1600		10	3.6	ug/L		04/28/22 09:30	05/10/22 15:31	1
Molybdenum	640		2.0	1.2	ug/L		04/28/22 09:30	05/10/22 15:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	250		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	250		10	4.6	mg/L			04/29/22 08:14	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-304A

Lab Sample ID: 310-229565-12

Date Collected: 04/18/22 14:23

Matrix: Water

Date Received: 04/20/22 17:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	400		100	36	ug/L		04/28/22 09:30	05/17/22 20:18	1
Magnesium	28000		500	150	ug/L		04/28/22 09:30	05/17/22 20:18	1
Manganese	680		10	3.6	ug/L		04/28/22 09:30	05/17/22 20:18	1
Potassium	1900		500	150	ug/L		04/28/22 09:30	05/17/22 20:18	1
Sodium	19000		1000	610	ug/L		04/28/22 09:30	05/17/22 20:18	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	420		100	36	ug/L		04/28/22 09:30	05/10/22 15:34	1
Manganese	700		10	3.6	ug/L		04/28/22 09:30	05/10/22 15:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	290		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	290		10	4.6	mg/L			04/29/22 08:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-303

Lab Sample ID: 310-229565-13

Date Collected: 04/18/22 12:47

Matrix: Water

Date Received: 04/20/22 17:00

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	16000		400	140	ug/L		04/28/22 09:30	05/17/22 20:22	4
Magnesium	24000		2000	600	ug/L		04/28/22 09:30	05/17/22 20:22	4
Manganese	9800		40	14	ug/L		04/28/22 09:30	05/17/22 20:22	4
Potassium	22000		2000	600	ug/L		04/28/22 09:30	05/17/22 20:22	4
Sodium	110000		4000	2400	ug/L		04/28/22 09:30	05/17/22 20:22	4

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.9		2.0	0.75	ug/L		04/28/22 09:30	05/10/22 15:54	1
Iron	810		100	36	ug/L		04/28/22 09:30	05/10/22 15:54	1
Lithium	67		10	2.5	ug/L		04/28/22 09:30	05/10/22 15:54	1
Manganese	9800		40	14	ug/L		04/28/22 09:30	05/10/22 16:21	4
Molybdenum	110		2.0	1.2	ug/L		04/28/22 09:30	05/10/22 15:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	320		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	320		10	4.6	mg/L			04/29/22 08:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-302
 Date Collected: 04/18/22 11:21
 Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-14
 Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<140		400	140	ug/L		04/28/22 09:30	05/17/22 20:26	4
Magnesium	9800		2000	600	ug/L		04/28/22 09:30	05/17/22 20:26	4
Manganese	130		40	14	ug/L		04/28/22 09:30	05/17/22 20:26	4
Potassium	11000		2000	600	ug/L		04/28/22 09:30	05/17/22 20:26	4
Sodium	52000		4000	2400	ug/L		04/28/22 09:30	05/17/22 20:26	4

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		04/28/22 09:30	05/10/22 15:58	1
Manganese	140		10	3.6	ug/L		04/28/22 09:30	05/10/22 15:58	1
Molybdenum	150		2.0	1.2	ug/L		04/28/22 09:30	05/10/22 15:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	250		10	4.6	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<4.6		10	4.6	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	250		10	4.6	mg/L			04/29/22 08:14	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Qualifiers

Metals

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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	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: ML Kapp MNA 25222077

Job ID: 310-229565-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-351122/1-A
Matrix: Water
Analysis Batch: 353445

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351122

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Iron	<36		100	36	ug/L		04/28/22 09:30	05/17/22 18:46	1
Magnesium	<150		500	150	ug/L		04/28/22 09:30	05/17/22 18:46	1
Manganese	<3.6		10	3.6	ug/L		04/28/22 09:30	05/17/22 18:46	1
Potassium	<150		500	150	ug/L		04/28/22 09:30	05/17/22 18:46	1
Sodium	<610		1000	610	ug/L		04/28/22 09:30	05/17/22 18:46	1

Lab Sample ID: LCS 310-351122/2-A
Matrix: Water
Analysis Batch: 353445

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	2000	1940		ug/L		97	80 - 120
Manganese	100	97.1		ug/L		97	80 - 120
Potassium	2000	1980		ug/L		99	80 - 120
Sodium	2000	1930		ug/L		96	80 - 120

Lab Sample ID: 310-229565-1 MS
Matrix: Water
Analysis Batch: 353445

Client Sample ID: MW-307
Prep Type: Total/NA
Prep Batch: 351122

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	69000		2000	71900	4	ug/L		128	75 - 125
Manganese	3200		100	3300	4	ug/L		135	75 - 125
Potassium	700		2000	2800		ug/L		105	75 - 125
Sodium	13000		2000	15600	4	ug/L		108	75 - 125

Lab Sample ID: 310-229565-1 MSD
Matrix: Water
Analysis Batch: 353445

Client Sample ID: MW-307
Prep Type: Total/NA
Prep Batch: 351122

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Magnesium	69000		2000	69700	4	ug/L		20	75 - 125	3	20
Manganese	3200		100	3190	4	ug/L		28	75 - 125	3	20
Potassium	700		2000	2740		ug/L		102	75 - 125	2	20
Sodium	13000		2000	15200	4	ug/L		84	75 - 125	3	20

Lab Sample ID: 310-229565-11 DU
Matrix: Water
Analysis Batch: 353445

Client Sample ID: MW-304
Prep Type: Total/NA
Prep Batch: 351122

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Magnesium	18000		18600		ug/L		3	20
Manganese	1600		1620		ug/L		4	20
Potassium	21000		21300		ug/L		3	20
Sodium	90000		93300		ug/L		3	20

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

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

Lab Sample ID: MB 310-351132/1-A
Matrix: Water
Analysis Batch: 352631

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351132

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.75		2.0	0.75	ug/L		04/28/22 09:30	05/10/22 14:05	1
Iron	<36		100	36	ug/L		04/28/22 09:30	05/10/22 14:05	1
Lithium	<2.5		10	2.5	ug/L		04/28/22 09:30	05/10/22 14:05	1
Manganese	<3.6		10	3.6	ug/L		04/28/22 09:30	05/10/22 14:05	1
Molybdenum	<1.2		2.0	1.2	ug/L		04/28/22 09:30	05/10/22 14:05	1

Lab Sample ID: LCS 310-351132/2-A
Matrix: Water
Analysis Batch: 352631

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351132

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	200	207		ug/L		103	80 - 120
Iron	200	223		ug/L		112	80 - 120
Lithium	200	214		ug/L		107	80 - 120
Manganese	100	105		ug/L		105	80 - 120
Molybdenum	200	209		ug/L		104	80 - 120

Lab Sample ID: 310-229565-10 DU
Matrix: Water
Analysis Batch: 352631

Client Sample ID: MW-305
Prep Type: Dissolved
Prep Batch: 351132

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	1.5	J	1.46	J	ug/L		4	20
Iron	1200		1130		ug/L		4	20
Lithium	23		21.6		ug/L		7	20
Manganese	3600		3440		ug/L		4	20
Molybdenum	700		674		ug/L		3	20

Method: 2320B - Alkalinity (Low Level)

Lab Sample ID: MB 310-350906/1
Matrix: Water
Analysis Batch: 350906

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/25/22 10:59	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/25/22 10:59	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/25/22 10:59	1

Lab Sample ID: LCS 310-350906/2
Matrix: Water
Analysis Batch: 350906

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3	1000	964		mg/L		96	90 - 110

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 310-351453/1
Matrix: Water
Analysis Batch: 351453

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/29/22 08:14	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/29/22 08:14	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/29/22 08:14	1

Lab Sample ID: LCS 310-351453/2
Matrix: Water
Analysis Batch: 351453

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3	1000	1000		mg/L		100	90 - 110

Lab Sample ID: MB 310-351489/1
Matrix: Water
Analysis Batch: 351489

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/29/22 10:34	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/29/22 10:34	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			04/29/22 10:34	1

Lab Sample ID: LCS 310-351489/2
Matrix: Water
Analysis Batch: 351489

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3	1000	980		mg/L		98	90 - 110

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Metals

Prep Batch: 351122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-1	MW-307	Total/NA	Water	3005A	
310-229565-2	MW-310	Total/NA	Water	3005A	
310-229565-3	MW-309	Total/NA	Water	3005A	
310-229565-4	Field Blank	Total/NA	Water	3005A	
310-229565-5	MW-308	Total/NA	Water	3005A	
310-229565-6	MW-311A	Total/NA	Water	3005A	
310-229565-7	MW-311	Total/NA	Water	3005A	
310-229565-8	MW-306	Total/NA	Water	3005A	
310-229565-9	MW-301	Total/NA	Water	3005A	
310-229565-10	MW-305	Total/NA	Water	3005A	
310-229565-11	MW-304	Total/NA	Water	3005A	
310-229565-12	MW-304A	Total/NA	Water	3005A	
310-229565-13	MW-303	Total/NA	Water	3005A	
310-229565-14	MW-302	Total/NA	Water	3005A	
MB 310-351122/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-351122/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-229565-1 MS	MW-307	Total/NA	Water	3005A	
310-229565-1 MSD	MW-307	Total/NA	Water	3005A	
310-229565-11 DU	MW-304	Total/NA	Water	3005A	

Prep Batch: 351132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-1	MW-307	Dissolved	Water	3005A	
310-229565-2	MW-310	Dissolved	Water	3005A	
310-229565-3	MW-309	Dissolved	Water	3005A	
310-229565-5	MW-308	Dissolved	Water	3005A	
310-229565-6	MW-311A	Dissolved	Water	3005A	
310-229565-7	MW-311	Dissolved	Water	3005A	
310-229565-8	MW-306	Dissolved	Water	3005A	
310-229565-9	MW-301	Dissolved	Water	3005A	
310-229565-10	MW-305	Dissolved	Water	3005A	
310-229565-11	MW-304	Dissolved	Water	3005A	
310-229565-12	MW-304A	Dissolved	Water	3005A	
310-229565-13	MW-303	Dissolved	Water	3005A	
310-229565-14	MW-302	Dissolved	Water	3005A	
MB 310-351132/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-351132/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-229565-10 DU	MW-305	Dissolved	Water	3005A	

Analysis Batch: 352631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-1	MW-307	Dissolved	Water	6020A	351132
310-229565-2	MW-310	Dissolved	Water	6020A	351132
310-229565-3	MW-309	Dissolved	Water	6020A	351132
310-229565-3	MW-309	Dissolved	Water	6020A	351132
310-229565-5	MW-308	Dissolved	Water	6020A	351132
310-229565-6	MW-311A	Dissolved	Water	6020A	351132
310-229565-7	MW-311	Dissolved	Water	6020A	351132
310-229565-8	MW-306	Dissolved	Water	6020A	351132
310-229565-9	MW-301	Dissolved	Water	6020A	351132
310-229565-10	MW-305	Dissolved	Water	6020A	351132

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Metals (Continued)

Analysis Batch: 352631 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-11	MW-304	Dissolved	Water	6020A	351132
310-229565-12	MW-304A	Dissolved	Water	6020A	351132
310-229565-13	MW-303	Dissolved	Water	6020A	351132
310-229565-13	MW-303	Dissolved	Water	6020A	351132
310-229565-14	MW-302	Dissolved	Water	6020A	351132
MB 310-351132/1-A	Method Blank	Total/NA	Water	6020A	351132
LCS 310-351132/2-A	Lab Control Sample	Total/NA	Water	6020A	351132
310-229565-10 DU	MW-305	Dissolved	Water	6020A	351132

Analysis Batch: 352849

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-8	MW-306	Dissolved	Water	6020A	351132

Analysis Batch: 353445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-1	MW-307	Total/NA	Water	6020A	351122
310-229565-2	MW-310	Total/NA	Water	6020A	351122
310-229565-3	MW-309	Total/NA	Water	6020A	351122
310-229565-4	Field Blank	Total/NA	Water	6020A	351122
310-229565-5	MW-308	Total/NA	Water	6020A	351122
310-229565-6	MW-311A	Total/NA	Water	6020A	351122
310-229565-7	MW-311	Total/NA	Water	6020A	351122
310-229565-8	MW-306	Total/NA	Water	6020A	351122
310-229565-9	MW-301	Total/NA	Water	6020A	351122
310-229565-10	MW-305	Total/NA	Water	6020A	351122
310-229565-11	MW-304	Total/NA	Water	6020A	351122
310-229565-12	MW-304A	Total/NA	Water	6020A	351122
310-229565-13	MW-303	Total/NA	Water	6020A	351122
310-229565-14	MW-302	Total/NA	Water	6020A	351122
MB 310-351122/1-A	Method Blank	Total/NA	Water	6020A	351122
LCS 310-351122/2-A	Lab Control Sample	Total/NA	Water	6020A	351122
310-229565-1 MS	MW-307	Total/NA	Water	6020A	351122
310-229565-1 MSD	MW-307	Total/NA	Water	6020A	351122
310-229565-11 DU	MW-304	Total/NA	Water	6020A	351122

Analysis Batch: 353558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-3	MW-309	Total/NA	Water	6020A	351122

General Chemistry

Analysis Batch: 350906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-4	Field Blank	Total/NA	Water	2320B	
MB 310-350906/1	Method Blank	Total/NA	Water	2320B	
LCS 310-350906/2	Lab Control Sample	Total/NA	Water	2320B	

Analysis Batch: 351453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-1	MW-307	Total/NA	Water	SM 2320B	
310-229565-2	MW-310	Total/NA	Water	SM 2320B	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

General Chemistry (Continued)

Analysis Batch: 351453 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-3	MW-309	Total/NA	Water	SM 2320B	
310-229565-5	MW-308	Total/NA	Water	SM 2320B	
310-229565-6	MW-311A	Total/NA	Water	SM 2320B	
310-229565-9	MW-301	Total/NA	Water	SM 2320B	
310-229565-10	MW-305	Total/NA	Water	SM 2320B	
310-229565-11	MW-304	Total/NA	Water	SM 2320B	
310-229565-12	MW-304A	Total/NA	Water	SM 2320B	
310-229565-13	MW-303	Total/NA	Water	SM 2320B	
310-229565-14	MW-302	Total/NA	Water	SM 2320B	
MB 310-351453/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-351453/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 351489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229565-7	MW-311	Total/NA	Water	SM 2320B	
310-229565-8	MW-306	Total/NA	Water	SM 2320B	
MB 310-351489/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-351489/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-307
Date Collected: 04/19/22 17:33
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 14:36	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 18:54	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Client Sample ID: MW-310
Date Collected: 04/19/22 15:36
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 14:40	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 19:05	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Client Sample ID: MW-309
Date Collected: 04/19/22 14:13
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:00	SAP	TAL CF
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		4	352631	05/10/22 16:17	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 19:24	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353558	05/18/22 15:59	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Client Sample ID: Field Blank
Date Collected: 04/19/22 13:50
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 19:28	SAP	TAL CF
Total/NA	Analysis	2320B		1	350906	04/25/22 10:59	JMH2	TAL CF

Lab Chronicle

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-308
Date Collected: 04/19/22 12:48
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:03	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 19:32	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Client Sample ID: MW-311A
Date Collected: 04/19/22 13:18
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:07	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 19:36	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Client Sample ID: MW-311
Date Collected: 04/19/22 10:26
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:11	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 19:40	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351489	04/29/22 10:34	JMH2	TAL CF

Client Sample ID: MW-306
Date Collected: 04/19/22 08:56
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:15	SAP	TAL CF
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		4	352849	05/11/22 17:59	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 19:43	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351489	04/29/22 10:34	JMH2	TAL CF

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-301

Lab Sample ID: 310-229565-9

Date Collected: 04/18/22 18:50

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:19	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 19:47	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Client Sample ID: MW-305

Lab Sample ID: 310-229565-10

Date Collected: 04/18/22 17:20

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:23	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 19:51	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Client Sample ID: MW-304

Lab Sample ID: 310-229565-11

Date Collected: 04/18/22 15:28

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:31	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 19:55	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Client Sample ID: MW-304A

Lab Sample ID: 310-229565-12

Date Collected: 04/18/22 14:23

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:34	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 20:18	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Lab Chronicle

Client: SCS Engineers
 Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Client Sample ID: MW-303
Date Collected: 04/18/22 12:47
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:54	SAP	TAL CF
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		4	352631	05/10/22 16:21	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 20:22	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Client Sample ID: MW-302
Date Collected: 04/18/22 11:21
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229565-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			351132	04/28/22 09:30	ACM2	TAL CF
Dissolved	Analysis	6020A		1	352631	05/10/22 15:58	SAP	TAL CF
Total/NA	Prep	3005A			351122	04/28/22 09:30	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 20:26	SAP	TAL CF
Total/NA	Analysis	SM 2320B		1	351453	04/29/22 08:14	JMH2	TAL CF

Laboratory References:

TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-21 *

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp MNA 25222077

Job ID: 310-229565-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL CF
2320B	Alkalinity (Low Level)	SM	TAL CF
SM 2320B	Alkalinity	SM	TAL CF
3005A	Preparation, Total Metals	SW846	TAL CF

Protocol References:

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.

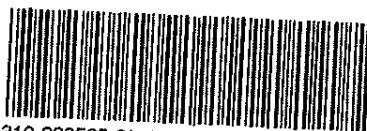
Laboratory References:

TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



310-229565 Chain of Custody

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>4-20-22</u>	<u>1700</u>	<u>AK</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>4</u>
Cooler Custody Seals Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes Cooler custody seals intact? <input checked="" 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>1.1</u>		Corrected Temp (°C) <u>1.2</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 1 pl 250 ml Nitric-N₂ empty for Field Blank</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	TIME	Received By
	<u>4-20-22</u>	<u>1700</u>	<u>AK</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>4</u>
Cooler Custody Seals Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes Cooler custody seals intact? <input checked="" 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>—</u>		Corrected Temp (°C) <u>—</u>	
• Sample Container Temperature			
Container(s) used	CONTAINER 1	CONTAINER 2	
	<u>P1 250 mL</u>		
Uncorrected Temp (°C)	<u>44</u>		
Corrected Temp (°C)	<u>45</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			



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>4-20-22</u>	TIME <u>1700</u>	Received By <u>AK</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 <i>If yes</i> Cooler ID _____			
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler # <u>3</u> of <u>4</u>			
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>0.8</u>		Corrected Temp (°C) <u>0.9</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) <i>If yes</i> 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 <u>4 20 22</u>	TIME <u>1700</u>	Received By <u>AK</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>4</u> of <u>4</u>
Cooler Custody Seals Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes Cooler custody seals intact? <input checked="" 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>0.5</u>		Corrected Temp (°C) <u>0.6</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			

Chain of Custody Record

euofins

Client Information		Lab PVI: Fredrick, Sandie		Carrier Tracking No(s): 310-70331-18916.1					
Client Contact: Rosa Cruz		E-Mail: Sandra.Fredrick@et.euofins.com		Page: Page 1 of 2					
Company: SCS Engineers		PWSID:		Job #:					
Address: 8450 Hickman Road Suite 27		Due Date Requested:		Analysis Requested					
City: Clive		TAT Requested (days):		Total Number of Containers					
State, Zip: IA, 50325		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Preservation Codes:					
Phone: 25222077		WC #:		A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2OAS E NaHSO4 Q Na2SO3 F MeOH R Na2SO3 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Z other (specify)					
Email: rcruz@scsengineers.com		Project #:		Other					
Project Name: ML Kapp 25222077 MNA		SSOW#:		Special Instructions/Note:					
Site:									
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	220B Alkalinity Carb/Bicarb	6020A Total Metals (5)	6020A D, Metals (2-5)
MW-307	4-19-22	1733	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-310	4-19-22	1536	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-309	4-19-22	1413	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-308	4-19-22	1356	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-311A	4-19-22	1247	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-311	4-19-22	1118	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-306	4-19-22	1024	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-301	4-19-22	856	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-305	4-18-22	1850	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-304	4-18-22	1726	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-304	4-18-22	1524	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Deliverable Requested: I II III IV Other (specify)		<input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Empty Kit Relinquished by:		Date: _____		Method of Shipment: _____					
Relinquished by: <i>Rosa Cruz</i>		Date: 4-20-22 9:00		Received by: _____ Company: _____					
Relinquished by:		Date:		Received by: _____ Company: _____					
Relinquished by:		Date:		Received by: <i>Rosa Cruz</i> Company: _____ Date/Time: 4-20-22 1700					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No. _____		Cooler Temperature(s) °C and Other Remarks: _____					

Chain of Custody Record

Client Information			Sampler			Lab PM:			Carrier Tracking No(s):			COC No:		
Client Contact			Phone:			Fredrick, Sandie			310-70331			18916.2		
Company:			PWSID:			E-Mail			State of Origin:			Page:		
SCS Engineers			Address:			8450 Hickman Road Suite 27			Job #:			Page 2 of 2		
City:			TAT Requested (days):			Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			PO #:			Preservation Codes:		
State, Zip:			Due Date Requested:			PO #:			WO #:			A HCL		
IA, 50325			25222077			25222077			31011020			M Hexane		
Phone:			Project Name:			ML Kapp 25222077 MNA			Site:			N None		
Email:			Sample Date			Sample Time			Sample Type (C=Comp, G=grab)			O AsNaO2		
rcruz@scsengineers.com			4-18-22			1423			6			P Na2O4S		
Project Name:			4-18-22			1247			6			Q Na2SO3		
ML Kapp 25222077 MNA			4-18-22			1121			6			R Na2S2O3		
Site:			Sample Date			Sample Time			Sample Type (C=Comp, G=grab)			S H2SO4		
												T TSP Dodecahydrate		
												U Acetone		
												V MCAA		
												W pH 4-5		
												X other (specify)		
												Z other (specify)		
												Other		
Sample Identification			Field Filtered Sample (Yes or No)			Perform MS/MSD (Yes or No)			320B Alkalinity Carb/Bicarb			6020A Total Metals (5)		
MW-3041A			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			6020A D. Metals (2-5)		
MW-303			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
MW-302			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>								

Table 1. Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - M.L. Kapp Ash Pond/ SCS Engineers Project #25220077.00

	Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	Field Blank	TOTAL		
COCs #1 - (non-radium) & #2 (radium) - CCR Rule Parameters	Appendix III Parameters (total/unfiltered)	Boron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
		Calcium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Appendix IV Parameters (total/unfiltered)	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Field Parameters	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X			13
		pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	COC #3 - Additional Parameters	Total (Unfiltered)	Alkalinity - Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X		
Alkalinity - Bicarbonate			X	X	X	X	X	X	X	X	X	X	X	X	X			13
Iron			X	X	X	X	X	X	X	X	X	X	X	X	X			13
Magnesium			X	X	X	X	X	X	X	X	X	X	X	X	X			13
Manganese			X	X	X	X	X	X	X	X	X	X	X	X	X			13
Potassium			X	X	X	X	X	X	X	X	X	X	X	X	X			13
Sodium			X	X	X	X	X	X	X	X	X	X	X	X	X			13
Dissolved (Filtered)		Arsenic			X	X												2
		Iron	X	X	X	X	X	X	X	X	X	X	X	X	X			13
		Lithium			X				X						X			3
		Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X			13
Field Parameters		Molybdenum	X	X	X	X		X								X		6
		Sulfide, Field	X	X	X	X	X	X	X	X	X	X	X	X	X			13
	Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X			13	
	Ferrous Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X				13	

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-229565-1

SDG Number:

Login Number: 229565

List Number: 1

Creator: Homolar, Dana J

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.	True	
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	



ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-229564-1
Client Project/Site: ML Kapp - 25222077

For:
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Attn: Meghan Blodgett



Authorized for release by:
5/18/2022 10:02:24 AM

Sandie Fredrick, Project Manager II
(920)261-1660
Sandra.Fredrick@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Detection Summary	5
Client Sample Results	11
Definitions	25
QC Sample Results	26
QC Association	32
Chronicle	36
Certification Summary	41
Method Summary	42
Chain of Custody	43
Receipt Checklists	49
Field Data Sheets	50

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Job ID: 310-229564-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-229564-1

Comments

No additional comments.

Receipt

The samples were received on 4/20/2022 5:00 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 0.9° C, 1.2° C and 4.5° C.

HPLC/IC

Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-307 (310-229564-1), MW-310 (310-229564-2), MW-309 (310-229564-3), MW-308 (310-229564-5), MW-311A (310-229564-6), MW-311 (310-229564-7), MW-306 (310-229564-8), MW-301 (310-229564-9), MW-305 (310-229564-10), MW-304 (310-229564-11), MW-304A (310-229564-12), MW-303 (310-229564-13) and MW-302 (310-229564-14). 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.

Metals

Method 6020A: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: MW-311A (310-229564-6), MW-311 (310-229564-7), MW-306 (310-229564-8), MW-301 (310-229564-9), MW-305 (310-229564-10), MW-304 (310-229564-11), MW-303 (310-229564-13) and MW-302 (310-229564-14).

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

General Chemistry

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

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-229564-1	MW-307	Water	04/19/22 17:33	04/20/22 17:00
310-229564-2	MW-310	Water	04/19/22 15:36	04/20/22 17:00
310-229564-3	MW-309	Water	04/19/22 14:13	04/20/22 17:00
310-229564-4	Field Blank	Water	04/19/22 13:50	04/20/22 17:00
310-229564-5	MW-308	Water	04/19/22 12:48	04/20/22 17:00
310-229564-6	MW-311A	Water	04/19/22 11:18	04/20/22 17:00
310-229564-7	MW-311	Water	04/19/22 10:26	04/20/22 17:00
310-229564-8	MW-306	Water	04/19/22 08:56	04/20/22 17:00
310-229564-9	MW-301	Water	04/18/22 18:50	04/20/22 17:00
310-229564-10	MW-305	Water	04/18/22 17:20	04/20/22 17:00
310-229564-11	MW-304	Water	04/18/22 15:28	04/20/22 17:00
310-229564-12	MW-304A	Water	04/18/22 14:23	04/20/22 17:00
310-229564-13	MW-303	Water	04/18/22 12:47	04/20/22 17:00
310-229564-14	MW-302	Water	04/18/22 11:21	04/20/22 17:00



Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-307

Lab Sample ID: 310-229564-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	64		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	23		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	1.0	J	2.0	0.75	ug/L	1		6020A	Total/NA
Barium	290		2.0	0.88	ug/L	1		6020A	Total/NA
Cadmium	0.070	J	0.10	0.055	ug/L	1		6020A	Total/NA
Calcium	180		0.50	0.19	mg/L	1		6020A	Total/NA
Cobalt	5.0		0.50	0.19	ug/L	1		6020A	Total/NA
Lithium	5.3	J	10	2.5	ug/L	1		6020A	Total/NA
Selenium	1.1	J	5.0	0.96	ug/L	1		6020A	Total/NA
Total Dissolved Solids	680		50	26	mg/L	1		SM 2540C	Total/NA
pH	6.7	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	592.46				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	11.2				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.12				mg/L	1		Field Sampling	Total/NA
pH, Field	6.52				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1199				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	9.8				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	6.60				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-310

Lab Sample ID: 310-229564-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	68		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	110		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	50		2.0	0.88	ug/L	1		6020A	Total/NA
Boron	1000		100	58	ug/L	1		6020A	Total/NA
Calcium	110		0.50	0.19	mg/L	1		6020A	Total/NA
Cobalt	0.48	J	0.50	0.19	ug/L	1		6020A	Total/NA
Lithium	2.7	J	10	2.5	ug/L	1		6020A	Total/NA
Molybdenum	1.5	J	2.0	1.2	ug/L	1		6020A	Total/NA
Selenium	1.7	J	5.0	0.96	ug/L	1		6020A	Total/NA
Thallium	0.26	J	1.0	0.26	ug/L	1		6020A	Total/NA
Total Dissolved Solids	630		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	590.20				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-35.3				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.29				mg/L	1		Field Sampling	Total/NA
pH, Field	7.04				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1004				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	12.2				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	4.91				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-309

Lab Sample ID: 310-229564-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	41		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	20		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	2.3		2.0	0.75	ug/L	1		6020A	Total/NA
Barium	180		2.0	0.88	ug/L	1		6020A	Total/NA
Boron	470		100	58	ug/L	1		6020A	Total/NA
Calcium	190		0.50	0.19	mg/L	1		6020A	Total/NA
Cobalt	0.49	J	0.50	0.19	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp - 2522077

Job ID: 310-229564-1

Client Sample ID: MW-309 (Continued)

Lab Sample ID: 310-229564-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	670		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	576.75				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-124.3				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.16				mg/L	1		Field Sampling	Total/NA
pH, Field	6.94				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1196				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	9.1				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	5.33				NTU	1		Field Sampling	Total/NA

Client Sample ID: Field Blank

Lab Sample ID: 310-229564-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH	7.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-308

Lab Sample ID: 310-229564-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	81		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	69		2.0	0.88	ug/L	1		6020A	Total/NA
Boron	380		100	58	ug/L	1		6020A	Total/NA
Cadmium	0.065	J	0.10	0.055	ug/L	1		6020A	Total/NA
Calcium	87		0.50	0.19	mg/L	1		6020A	Total/NA
Cobalt	0.40	J	0.50	0.19	ug/L	1		6020A	Total/NA
Total Dissolved Solids	470		50	26	mg/L	1		SM 2540C	Total/NA
pH	6.7	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	576.93				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	103.2				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	1.02				mg/L	1		Field Sampling	Total/NA
pH, Field	6.46				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	817				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	9.8				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	6.06				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-311A

Lab Sample ID: 310-229564-6

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	210		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	22		8.0	3.5	ug/L	4		6020A	Total/NA
Boron	10000		400	230	ug/L	4		6020A	Total/NA
Calcium	110		2.0	0.76	mg/L	4		6020A	Total/NA
Lithium	21	J	40	10	ug/L	4		6020A	Total/NA
Molybdenum	140		8.0	4.8	ug/L	4		6020A	Total/NA
Total Dissolved Solids	470		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.6	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	575.17				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	95.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.13				mg/L	1		Field Sampling	Total/NA
pH, Field	7.39				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	689				umhos/cm	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-311A (Continued)

Lab Sample ID: 310-229564-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Temperature, Field	12.2				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	4.57				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-311

Lab Sample ID: 310-229564-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	110		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	45		8.0	3.5	ug/L	4		6020A	Total/NA
Boron	5600		400	230	ug/L	4		6020A	Total/NA
Calcium	110		2.0	0.76	mg/L	4		6020A	Total/NA
Lithium	45		40	10	ug/L	4		6020A	Total/NA
Molybdenum	25		8.0	4.8	ug/L	4		6020A	Total/NA
Total Dissolved Solids	480		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.4	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	574.77				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	111.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	2.43				mg/L	1		Field Sampling	Total/NA
pH, Field	7.16				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	718				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	11.4				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	5.94				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-306

Lab Sample ID: 310-229564-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	210		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	170		5.0	2.0	mg/L	5		9056A	Total/NA
Antimony	3.1	J	8.0	2.8	ug/L	4		6020A	Total/NA
Barium	76		8.0	3.5	ug/L	4		6020A	Total/NA
Boron	9300		400	230	ug/L	4		6020A	Total/NA
Calcium	210		2.0	0.76	mg/L	4		6020A	Total/NA
Lithium	51		40	10	ug/L	4		6020A	Total/NA
Molybdenum	8.8		8.0	4.8	ug/L	4		6020A	Total/NA
Selenium	7.1	J	20	3.8	ug/L	4		6020A	Total/NA
Total Dissolved Solids	1100		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.0	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	577.24				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	114.2				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	1.56				mg/L	1		Field Sampling	Total/NA
pH, Field	6.88				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1588				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	9.5				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	4.35				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-301

Lab Sample ID: 310-229564-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	53		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	240		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	71		8.0	3.5	ug/L	4		6020A	Total/NA
Boron	12000		400	230	ug/L	4		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-301 (Continued)

Lab Sample ID: 310-229564-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.23	J	0.40	0.22	ug/L	4		6020A	Total/NA
Calcium	120		2.0	0.76	mg/L	4		6020A	Total/NA
Cobalt	3.4		2.0	0.76	ug/L	4		6020A	Total/NA
Molybdenum	380		8.0	4.8	ug/L	4		6020A	Total/NA
Total Dissolved Solids	660		50	26	mg/L	1		SM 2540C	Total/NA
pH	6.8	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	577.53				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	24.9				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.37				mg/L	1		Field Sampling	Total/NA
pH, Field	6.69				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	885				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	9.5				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	26.30				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-305

Lab Sample ID: 310-229564-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	810		50	20	mg/L	50		9056A	Total/NA
Barium	82		8.0	3.5	ug/L	4		6020A	Total/NA
Boron	16000		400	230	ug/L	4		6020A	Total/NA
Calcium	200		2.0	0.76	mg/L	4		6020A	Total/NA
Lithium	21	J	40	10	ug/L	4		6020A	Total/NA
Molybdenum	560		8.0	4.8	ug/L	4		6020A	Total/NA
Total Dissolved Solids	1200		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.5	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	576.10				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-34.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.17				mg/L	1		Field Sampling	Total/NA
pH, Field	7.36				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1438				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	10.1				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	6.78				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-304

Lab Sample ID: 310-229564-11

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	380		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	3.3	J	8.0	3.0	ug/L	4		6020A	Total/NA
Barium	93		8.0	3.5	ug/L	4		6020A	Total/NA
Boron	10000		400	230	ug/L	4		6020A	Total/NA
Calcium	130		2.0	0.76	mg/L	4		6020A	Total/NA
Cobalt	0.78	J	2.0	0.76	ug/L	4		6020A	Total/NA
Molybdenum	500		8.0	4.8	ug/L	4		6020A	Total/NA
Total Dissolved Solids	830		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	576.47				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-42.2				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.14				mg/L	1		Field Sampling	Total/NA
pH, Field	6.97				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1154				umhos/cm	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-304 (Continued)

Lab Sample ID: 310-229564-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Temperature, Field	10.5				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	56.5				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-304A

Lab Sample ID: 310-229564-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	66		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	1.4	J	2.0	0.75	ug/L	1		6020A	Total/NA
Barium	100		2.0	0.88	ug/L	1		6020A	Total/NA
Boron	460		100	58	ug/L	1		6020A	Total/NA
Calcium	89		0.50	0.19	mg/L	1		6020A	Total/NA
Cobalt	0.33	J	0.50	0.19	ug/L	1		6020A	Total/NA
Molybdenum	3.2		2.0	1.2	ug/L	1		6020A	Total/NA
Total Dissolved Solids	360		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	576.65				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	83.9				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.17				mg/L	1		Field Sampling	Total/NA
pH, Field	7.12				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	596				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	11.2				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	6.70				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-303

Lab Sample ID: 310-229564-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	600		20	8.0	mg/L	20		9056A	Total/NA
Arsenic	34		8.0	3.0	ug/L	4		6020A	Total/NA
Barium	140		8.0	3.5	ug/L	4		6020A	Total/NA
Boron	5800		400	230	ug/L	4		6020A	Total/NA
Calcium	230		2.0	0.76	mg/L	4		6020A	Total/NA
Cobalt	2.0		2.0	0.76	ug/L	4		6020A	Total/NA
Lithium	67		40	10	ug/L	4		6020A	Total/NA
Molybdenum	96		8.0	4.8	ug/L	4		6020A	Total/NA
Total Dissolved Solids	1300		50	26	mg/L	1		SM 2540C	Total/NA
pH	6.9	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	577.70				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	132.0				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.20				mg/L	1		Field Sampling	Total/NA
pH, Field	6.81				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1592				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	10.8				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	565				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-302

Lab Sample ID: 310-229564-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	240		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	6.6	J	8.0	3.0	ug/L	4		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-302 (Continued)

Lab Sample ID: 310-229564-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	83		8.0	3.5	ug/L	4		6020A	Total/NA
Boron	5800		400	230	ug/L	4		6020A	Total/NA
Calcium	120		2.0	0.76	mg/L	4		6020A	Total/NA
Lithium	19	J	40	10	ug/L	4		6020A	Total/NA
Molybdenum	140		8.0	4.8	ug/L	4		6020A	Total/NA
Selenium	46		20	3.8	ug/L	4		6020A	Total/NA
Total Dissolved Solids	590		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.5	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	577.59				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	119.2				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.14				mg/L	1		Field Sampling	Total/NA
pH, Field	7.42				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	815				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	9.8				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	4.51				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-307
Date Collected: 04/19/22 17:33
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-1
Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64		5.0	2.3	mg/L			04/30/22 02:37	5
Fluoride	<0.22		0.50	0.22	mg/L			04/30/22 02:37	5
Sulfate	23		5.0	2.0	mg/L			04/30/22 02:37	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		04/27/22 09:15	05/17/22 16:39	1
Arsenic	1.0	J	2.0	0.75	ug/L		04/27/22 09:15	05/17/22 16:39	1
Barium	290		2.0	0.88	ug/L		04/27/22 09:15	05/17/22 16:39	1
Beryllium	<0.27		1.0	0.27	ug/L		04/27/22 09:15	05/17/22 16:39	1
Boron	<58		100	58	ug/L		04/27/22 09:15	05/17/22 16:39	1
Cadmium	0.070	J	0.10	0.055	ug/L		04/27/22 09:15	05/17/22 16:39	1
Calcium	180		0.50	0.19	mg/L		04/27/22 09:15	05/17/22 16:39	1
Chromium	<1.1		5.0	1.1	ug/L		04/27/22 09:15	05/17/22 16:39	1
Cobalt	5.0		0.50	0.19	ug/L		04/27/22 09:15	05/17/22 16:39	1
Lead	<0.24		0.50	0.24	ug/L		04/27/22 09:15	05/17/22 16:39	1
Lithium	5.3	J	10	2.5	ug/L		04/27/22 09:15	05/17/22 16:39	1
Molybdenum	<1.2		2.0	1.2	ug/L		04/27/22 09:15	05/17/22 16:39	1
Selenium	1.1	J	5.0	0.96	ug/L		04/27/22 09:15	05/17/22 16:39	1
Thallium	<0.26		1.0	0.26	ug/L		04/27/22 09:15	05/17/22 16:39	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 11:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	680		50	26	mg/L			04/25/22 17:13	1
pH	6.7	HF	0.1	0.1	SU			04/20/22 20:42	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	592.46				ft			04/19/22 17:33	1
Oxidation Reduction Potential	11.2				millivolts			04/19/22 17:33	1
Oxygen, Dissolved, Client Supplied	0.12				mg/L			04/19/22 17:33	1
pH, Field	6.52				SU			04/19/22 17:33	1
Specific Conductance, Field	1199				umhos/cm			04/19/22 17:33	1
Temperature, Field	9.8				Degrees C			04/19/22 17:33	1
Turbidity, Field	6.60				NTU			04/19/22 17:33	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-310

Lab Sample ID: 310-229564-2

Date Collected: 04/19/22 15:36

Matrix: Water

Date Received: 04/20/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	68		5.0	2.3	mg/L			04/30/22 02:52	5
Fluoride	<0.22		0.50	0.22	mg/L			04/30/22 02:52	5
Sulfate	110		5.0	2.0	mg/L			04/30/22 02:52	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		04/27/22 09:15	05/17/22 16:50	1
Arsenic	<0.75		2.0	0.75	ug/L		04/27/22 09:15	05/17/22 16:50	1
Barium	50		2.0	0.88	ug/L		04/27/22 09:15	05/17/22 16:50	1
Beryllium	<0.27		1.0	0.27	ug/L		04/27/22 09:15	05/17/22 16:50	1
Boron	1000		100	58	ug/L		04/27/22 09:15	05/17/22 16:50	1
Cadmium	<0.055		0.10	0.055	ug/L		04/27/22 09:15	05/17/22 16:50	1
Calcium	110		0.50	0.19	mg/L		04/27/22 09:15	05/17/22 16:50	1
Chromium	<1.1		5.0	1.1	ug/L		04/27/22 09:15	05/17/22 16:50	1
Cobalt	0.48	J	0.50	0.19	ug/L		04/27/22 09:15	05/17/22 16:50	1
Lead	<0.24		0.50	0.24	ug/L		04/27/22 09:15	05/17/22 16:50	1
Lithium	2.7	J	10	2.5	ug/L		04/27/22 09:15	05/17/22 16:50	1
Molybdenum	1.5	J	2.0	1.2	ug/L		04/27/22 09:15	05/17/22 16:50	1
Selenium	1.7	J	5.0	0.96	ug/L		04/27/22 09:15	05/17/22 16:50	1
Thallium	0.26	J	1.0	0.26	ug/L		04/27/22 09:15	05/17/22 16:50	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 11:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	630		50	26	mg/L			04/25/22 17:13	1
pH	7.1	HF	0.1	0.1	SU			04/20/22 20:43	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	590.20				ft			04/19/22 15:36	1
Oxidation Reduction Potential	-35.3				millivolts			04/19/22 15:36	1
Oxygen, Dissolved, Client Supplied	0.29				mg/L			04/19/22 15:36	1
pH, Field	7.04				SU			04/19/22 15:36	1
Specific Conductance, Field	1004				umhos/cm			04/19/22 15:36	1
Temperature, Field	12.2				Degrees C			04/19/22 15:36	1
Turbidity, Field	4.91				NTU			04/19/22 15:36	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-309
Date Collected: 04/19/22 14:13
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-3
Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41		5.0	2.3	mg/L			04/30/22 03:08	5
Fluoride	<0.22		0.50	0.22	mg/L			04/30/22 03:08	5
Sulfate	20		5.0	2.0	mg/L			04/30/22 03:08	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		04/27/22 09:15	05/17/22 16:54	1
Arsenic	2.3		2.0	0.75	ug/L		04/27/22 09:15	05/17/22 16:54	1
Barium	180		2.0	0.88	ug/L		04/27/22 09:15	05/17/22 16:54	1
Beryllium	<0.27		1.0	0.27	ug/L		04/27/22 09:15	05/17/22 16:54	1
Boron	470		100	58	ug/L		04/27/22 09:15	05/17/22 16:54	1
Cadmium	<0.055		0.10	0.055	ug/L		04/27/22 09:15	05/17/22 16:54	1
Calcium	190		0.50	0.19	mg/L		04/27/22 09:15	05/17/22 16:54	1
Chromium	<1.1		5.0	1.1	ug/L		04/27/22 09:15	05/17/22 16:54	1
Cobalt	0.49 J		0.50	0.19	ug/L		04/27/22 09:15	05/17/22 16:54	1
Lead	<0.24		0.50	0.24	ug/L		04/27/22 09:15	05/17/22 16:54	1
Lithium	<2.5		10	2.5	ug/L		04/27/22 09:15	05/17/22 16:54	1
Molybdenum	<1.2		2.0	1.2	ug/L		04/27/22 09:15	05/17/22 16:54	1
Selenium	<0.96		5.0	0.96	ug/L		04/27/22 09:15	05/17/22 16:54	1
Thallium	<0.26		1.0	0.26	ug/L		04/27/22 09:15	05/17/22 16:54	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	670		50	26	mg/L			04/25/22 17:13	1
pH	7.1	HF	0.1	0.1	SU			04/20/22 20:45	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	576.75				ft			04/19/22 14:13	1
Oxidation Reduction Potential	-124.3				millivolts			04/19/22 14:13	1
Oxygen, Dissolved, Client Supplied	0.16				mg/L			04/19/22 14:13	1
pH, Field	6.94				SU			04/19/22 14:13	1
Specific Conductance, Field	1196				umhos/cm			04/19/22 14:13	1
Temperature, Field	9.1				Degrees C			04/19/22 14:13	1
Turbidity, Field	5.33				NTU			04/19/22 14:13	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: Field Blank

Lab Sample ID: 310-229564-4

Date Collected: 04/19/22 13:50

Matrix: Water

Date Received: 04/20/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.45		1.0	0.45	mg/L			04/30/22 03:23	1
Fluoride	<0.044		0.10	0.044	mg/L			04/30/22 03:23	1
Sulfate	<0.40		1.0	0.40	mg/L			04/30/22 03:23	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		04/27/22 09:15	05/17/22 16:58	1
Arsenic	<0.75		2.0	0.75	ug/L		04/27/22 09:15	05/17/22 16:58	1
Barium	<0.88		2.0	0.88	ug/L		04/27/22 09:15	05/17/22 16:58	1
Beryllium	<0.27		1.0	0.27	ug/L		04/27/22 09:15	05/17/22 16:58	1
Boron	<58		100	58	ug/L		04/27/22 09:15	05/17/22 16:58	1
Cadmium	<0.055		0.10	0.055	ug/L		04/27/22 09:15	05/17/22 16:58	1
Calcium	<0.19		0.50	0.19	mg/L		04/27/22 09:15	05/17/22 16:58	1
Chromium	<1.1		5.0	1.1	ug/L		04/27/22 09:15	05/17/22 16:58	1
Cobalt	<0.19		0.50	0.19	ug/L		04/27/22 09:15	05/17/22 16:58	1
Lead	<0.24		0.50	0.24	ug/L		04/27/22 09:15	05/17/22 16:58	1
Lithium	<2.5		10	2.5	ug/L		04/27/22 09:15	05/17/22 16:58	1
Molybdenum	<1.2		2.0	1.2	ug/L		04/27/22 09:15	05/17/22 16:58	1
Selenium	<0.96		5.0	0.96	ug/L		04/27/22 09:15	05/17/22 16:58	1
Thallium	<0.26		1.0	0.26	ug/L		04/27/22 09:15	05/17/22 16:58	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<26		50	26	mg/L			04/25/22 17:13	1
pH	7.2	HF	0.1	0.1	SU			04/20/22 20:47	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-308
Date Collected: 04/19/22 12:48
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-5
Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34		5.0	2.3	mg/L			04/30/22 04:10	5
Fluoride	<0.22		0.50	0.22	mg/L			04/30/22 04:10	5
Sulfate	81		5.0	2.0	mg/L			04/30/22 04:10	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		04/27/22 09:15	05/17/22 17:01	1
Arsenic	<0.75		2.0	0.75	ug/L		04/27/22 09:15	05/17/22 17:01	1
Barium	69		2.0	0.88	ug/L		04/27/22 09:15	05/17/22 17:01	1
Beryllium	<0.27		1.0	0.27	ug/L		04/27/22 09:15	05/17/22 17:01	1
Boron	380		100	58	ug/L		04/27/22 09:15	05/17/22 17:01	1
Cadmium	0.065 J		0.10	0.055	ug/L		04/27/22 09:15	05/17/22 17:01	1
Calcium	87		0.50	0.19	mg/L		04/27/22 09:15	05/17/22 17:01	1
Chromium	<1.1		5.0	1.1	ug/L		04/27/22 09:15	05/17/22 17:01	1
Cobalt	0.40 J		0.50	0.19	ug/L		04/27/22 09:15	05/17/22 17:01	1
Lead	<0.24		0.50	0.24	ug/L		04/27/22 09:15	05/17/22 17:01	1
Lithium	<2.5		10	2.5	ug/L		04/27/22 09:15	05/17/22 17:01	1
Molybdenum	<1.2		2.0	1.2	ug/L		04/27/22 09:15	05/17/22 17:01	1
Selenium	<0.96		5.0	0.96	ug/L		04/27/22 09:15	05/17/22 17:01	1
Thallium	<0.26		1.0	0.26	ug/L		04/27/22 09:15	05/17/22 17:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	470		50	26	mg/L			04/25/22 17:13	1
pH	6.7 HF		0.1	0.1	SU			04/20/22 20:48	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	576.93				ft			04/19/22 12:48	1
Oxidation Reduction Potential	103.2				millivolts			04/19/22 12:48	1
Oxygen, Dissolved, Client Supplied	1.02				mg/L			04/19/22 12:48	1
pH, Field	6.46				SU			04/19/22 12:48	1
Specific Conductance, Field	817				umhos/cm			04/19/22 12:48	1
Temperature, Field	9.8				Degrees C			04/19/22 12:48	1
Turbidity, Field	6.06				NTU			04/19/22 12:48	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-311A

Lab Sample ID: 310-229564-6

Date Collected: 04/19/22 11:18

Matrix: Water

Date Received: 04/20/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19		5.0	2.3	mg/L			04/30/22 04:26	5
Fluoride	<0.22		0.50	0.22	mg/L			04/30/22 04:26	5
Sulfate	210		5.0	2.0	mg/L			04/30/22 04:26	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.8		8.0	2.8	ug/L		04/27/22 09:15	05/17/22 17:05	4
Arsenic	<3.0		8.0	3.0	ug/L		04/27/22 09:15	05/17/22 17:05	4
Barium	22		8.0	3.5	ug/L		04/27/22 09:15	05/17/22 17:05	4
Beryllium	<1.1		4.0	1.1	ug/L		04/27/22 09:15	05/17/22 17:05	4
Boron	10000		400	230	ug/L		04/27/22 09:15	05/17/22 17:05	4
Cadmium	<0.22		0.40	0.22	ug/L		04/27/22 09:15	05/17/22 17:05	4
Calcium	110		2.0	0.76	mg/L		04/27/22 09:15	05/17/22 17:05	4
Chromium	<4.4		20	4.4	ug/L		04/27/22 09:15	05/17/22 17:05	4
Cobalt	<0.76		2.0	0.76	ug/L		04/27/22 09:15	05/17/22 17:05	4
Lead	<0.96		2.0	0.96	ug/L		04/27/22 09:15	05/17/22 17:05	4
Lithium	21 J		40	10	ug/L		04/27/22 09:15	05/17/22 17:05	4
Molybdenum	140		8.0	4.8	ug/L		04/27/22 09:15	05/17/22 17:05	4
Selenium	<3.8		20	3.8	ug/L		04/27/22 09:15	05/17/22 17:05	4
Thallium	<1.0		4.0	1.0	ug/L		04/27/22 09:15	05/17/22 17:05	4

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	470		50	26	mg/L			04/25/22 17:13	1
pH	7.6	HF	0.1	0.1	SU			04/20/22 20:50	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	575.17				ft			04/19/22 11:18	1
Oxidation Reduction Potential	95.1				millivolts			04/19/22 11:18	1
Oxygen, Dissolved, Client Supplied	0.13				mg/L			04/19/22 11:18	1
pH, Field	7.39				SU			04/19/22 11:18	1
Specific Conductance, Field	689				umhos/cm			04/19/22 11:18	1
Temperature, Field	12.2				Degrees C			04/19/22 11:18	1
Turbidity, Field	4.57				NTU			04/19/22 11:18	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-311

Lab Sample ID: 310-229564-7

Date Collected: 04/19/22 10:26

Matrix: Water

Date Received: 04/20/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		5.0	2.3	mg/L			05/02/22 11:58	5
Fluoride	<0.22		0.50	0.22	mg/L			05/02/22 11:58	5
Sulfate	110		5.0	2.0	mg/L			05/02/22 11:58	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.8		8.0	2.8	ug/L		04/27/22 09:15	05/17/22 17:09	4
Arsenic	<3.0		8.0	3.0	ug/L		04/27/22 09:15	05/17/22 17:09	4
Barium	45		8.0	3.5	ug/L		04/27/22 09:15	05/17/22 17:09	4
Beryllium	<1.1		4.0	1.1	ug/L		04/27/22 09:15	05/17/22 17:09	4
Boron	5600		400	230	ug/L		04/27/22 09:15	05/17/22 17:09	4
Cadmium	<0.22		0.40	0.22	ug/L		04/27/22 09:15	05/17/22 17:09	4
Calcium	110		2.0	0.76	mg/L		04/27/22 09:15	05/17/22 17:09	4
Chromium	<4.4		20	4.4	ug/L		04/27/22 09:15	05/17/22 17:09	4
Cobalt	<0.76		2.0	0.76	ug/L		04/27/22 09:15	05/17/22 17:09	4
Lead	<0.96		2.0	0.96	ug/L		04/27/22 09:15	05/17/22 17:09	4
Lithium	45		40	10	ug/L		04/27/22 09:15	05/17/22 17:09	4
Molybdenum	25		8.0	4.8	ug/L		04/27/22 09:15	05/17/22 17:09	4
Selenium	<3.8		20	3.8	ug/L		04/27/22 09:15	05/17/22 17:09	4
Thallium	<1.0		4.0	1.0	ug/L		04/27/22 09:15	05/17/22 17:09	4

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	480		50	26	mg/L			04/25/22 17:13	1
pH	7.4	HF	0.1	0.1	SU			04/20/22 20:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	574.77				ft			04/19/22 10:26	1
Oxidation Reduction Potential	111.8				millivolts			04/19/22 10:26	1
Oxygen, Dissolved, Client Supplied	2.43				mg/L			04/19/22 10:26	1
pH, Field	7.16				SU			04/19/22 10:26	1
Specific Conductance, Field	718				umhos/cm			04/19/22 10:26	1
Temperature, Field	11.4				Degrees C			04/19/22 10:26	1
Turbidity, Field	5.94				NTU			04/19/22 10:26	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-306

Lab Sample ID: 310-229564-8

Date Collected: 04/19/22 08:56

Matrix: Water

Date Received: 04/20/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	210		5.0	2.3	mg/L			05/02/22 12:13	5
Fluoride	<0.22		0.50	0.22	mg/L			05/02/22 12:13	5
Sulfate	170		5.0	2.0	mg/L			05/02/22 12:13	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.1	J	8.0	2.8	ug/L		04/27/22 09:15	05/17/22 17:29	4
Arsenic	<3.0		8.0	3.0	ug/L		04/27/22 09:15	05/17/22 17:29	4
Barium	76		8.0	3.5	ug/L		04/27/22 09:15	05/17/22 17:29	4
Beryllium	<1.1		4.0	1.1	ug/L		04/27/22 09:15	05/17/22 17:29	4
Boron	9300		400	230	ug/L		04/27/22 09:15	05/17/22 17:29	4
Cadmium	<0.22		0.40	0.22	ug/L		04/27/22 09:15	05/17/22 17:29	4
Calcium	210		2.0	0.76	mg/L		04/27/22 09:15	05/17/22 17:29	4
Chromium	<4.4		20	4.4	ug/L		04/27/22 09:15	05/17/22 17:29	4
Cobalt	<0.76		2.0	0.76	ug/L		04/27/22 09:15	05/17/22 17:29	4
Lead	<0.96		2.0	0.96	ug/L		04/27/22 09:15	05/17/22 17:29	4
Lithium	51		40	10	ug/L		04/27/22 09:15	05/17/22 17:29	4
Molybdenum	8.8		8.0	4.8	ug/L		04/27/22 09:15	05/17/22 17:29	4
Selenium	7.1	J	20	3.8	ug/L		04/27/22 09:15	05/17/22 17:29	4
Thallium	<1.0		4.0	1.0	ug/L		04/27/22 09:15	05/17/22 17:29	4

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1100		50	26	mg/L			04/26/22 15:45	1
pH	7.0	HF	0.1	0.1	SU			04/20/22 20:58	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	577.24				ft			04/19/22 08:56	1
Oxidation Reduction Potential	114.2				millivolts			04/19/22 08:56	1
Oxygen, Dissolved, Client Supplied	1.56				mg/L			04/19/22 08:56	1
pH, Field	6.88				SU			04/19/22 08:56	1
Specific Conductance, Field	1588				umhos/cm			04/19/22 08:56	1
Temperature, Field	9.5				Degrees C			04/19/22 08:56	1
Turbidity, Field	4.35				NTU			04/19/22 08:56	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-301

Lab Sample ID: 310-229564-9

Date Collected: 04/18/22 18:50

Matrix: Water

Date Received: 04/20/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53		5.0	2.3	mg/L			05/02/22 12:29	5
Fluoride	<0.22		0.50	0.22	mg/L			05/02/22 12:29	5
Sulfate	240		5.0	2.0	mg/L			05/02/22 12:29	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.8		8.0	2.8	ug/L		04/27/22 09:15	05/17/22 17:33	4
Arsenic	<3.0		8.0	3.0	ug/L		04/27/22 09:15	05/17/22 17:33	4
Barium	71		8.0	3.5	ug/L		04/27/22 09:15	05/17/22 17:33	4
Beryllium	<1.1		4.0	1.1	ug/L		04/27/22 09:15	05/17/22 17:33	4
Boron	12000		400	230	ug/L		04/27/22 09:15	05/17/22 17:33	4
Cadmium	0.23	J	0.40	0.22	ug/L		04/27/22 09:15	05/17/22 17:33	4
Calcium	120		2.0	0.76	mg/L		04/27/22 09:15	05/17/22 17:33	4
Chromium	<4.4		20	4.4	ug/L		04/27/22 09:15	05/17/22 17:33	4
Cobalt	3.4		2.0	0.76	ug/L		04/27/22 09:15	05/17/22 17:33	4
Lead	<0.96		2.0	0.96	ug/L		04/27/22 09:15	05/17/22 17:33	4
Lithium	<10		40	10	ug/L		04/27/22 09:15	05/17/22 17:33	4
Molybdenum	380		8.0	4.8	ug/L		04/27/22 09:15	05/17/22 17:33	4
Selenium	<3.8		20	3.8	ug/L		04/27/22 09:15	05/17/22 17:33	4
Thallium	<1.0		4.0	1.0	ug/L		04/27/22 09:15	05/17/22 17:33	4

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	660		50	26	mg/L			04/22/22 16:00	1
pH	6.8	HF	0.1	0.1	SU			04/20/22 21:01	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	577.53				ft			04/18/22 18:50	1
Oxidation Reduction Potential	24.9				millivolts			04/18/22 18:50	1
Oxygen, Dissolved, Client Supplied	0.37				mg/L			04/18/22 18:50	1
pH, Field	6.69				SU			04/18/22 18:50	1
Specific Conductance, Field	885				umhos/cm			04/18/22 18:50	1
Temperature, Field	9.5				Degrees C			04/18/22 18:50	1
Turbidity, Field	26.30				NTU			04/18/22 18:50	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-305

Lab Sample ID: 310-229564-10

Date Collected: 04/18/22 17:20

Matrix: Water

Date Received: 04/20/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		5.0	2.3	mg/L			05/02/22 16:45	5
Fluoride	<0.22		0.50	0.22	mg/L			05/02/22 16:45	5
Sulfate	810		50	20	mg/L			05/03/22 02:13	50

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.8		8.0	2.8	ug/L		04/27/22 09:15	05/17/22 17:36	4
Arsenic	<3.0		8.0	3.0	ug/L		04/27/22 09:15	05/17/22 17:36	4
Barium	82		8.0	3.5	ug/L		04/27/22 09:15	05/17/22 17:36	4
Beryllium	<1.1		4.0	1.1	ug/L		04/27/22 09:15	05/17/22 17:36	4
Boron	16000		400	230	ug/L		04/27/22 09:15	05/17/22 17:36	4
Cadmium	<0.22		0.40	0.22	ug/L		04/27/22 09:15	05/17/22 17:36	4
Calcium	200		2.0	0.76	mg/L		04/27/22 09:15	05/17/22 17:36	4
Chromium	<4.4		20	4.4	ug/L		04/27/22 09:15	05/17/22 17:36	4
Cobalt	<0.76		2.0	0.76	ug/L		04/27/22 09:15	05/17/22 17:36	4
Lead	<0.96		2.0	0.96	ug/L		04/27/22 09:15	05/17/22 17:36	4
Lithium	21 J		40	10	ug/L		04/27/22 09:15	05/17/22 17:36	4
Molybdenum	560		8.0	4.8	ug/L		04/27/22 09:15	05/17/22 17:36	4
Selenium	<3.8		20	3.8	ug/L		04/27/22 09:15	05/17/22 17:36	4
Thallium	<1.0		4.0	1.0	ug/L		04/27/22 09:15	05/17/22 17:36	4

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1200		50	26	mg/L			04/22/22 16:00	1
pH	7.5	HF	0.1	0.1	SU			04/20/22 21:03	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	576.10				ft			04/18/22 17:20	1
Oxidation Reduction Potential	-34.8				millivolts			04/18/22 17:20	1
Oxygen, Dissolved, Client Supplied	0.17				mg/L			04/18/22 17:20	1
pH, Field	7.36				SU			04/18/22 17:20	1
Specific Conductance, Field	1438				umhos/cm			04/18/22 17:20	1
Temperature, Field	10.1				Degrees C			04/18/22 17:20	1
Turbidity, Field	6.78				NTU			04/18/22 17:20	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-304
Date Collected: 04/18/22 15:28
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-11
Matrix: Water

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20		5.0	2.3	mg/L			05/02/22 17:01	5
Fluoride	<0.22		0.50	0.22	mg/L			05/02/22 17:01	5
Sulfate	380		5.0	2.0	mg/L			05/02/22 17:01	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.8		8.0	2.8	ug/L		04/27/22 09:15	05/17/22 17:40	4
Arsenic	3.3	J	8.0	3.0	ug/L		04/27/22 09:15	05/17/22 17:40	4
Barium	93		8.0	3.5	ug/L		04/27/22 09:15	05/17/22 17:40	4
Beryllium	<1.1		4.0	1.1	ug/L		04/27/22 09:15	05/17/22 17:40	4
Boron	10000		400	230	ug/L		04/27/22 09:15	05/17/22 17:40	4
Cadmium	<0.22		0.40	0.22	ug/L		04/27/22 09:15	05/17/22 17:40	4
Calcium	130		2.0	0.76	mg/L		04/27/22 09:15	05/17/22 17:40	4
Chromium	<4.4		20	4.4	ug/L		04/27/22 09:15	05/17/22 17:40	4
Cobalt	0.78	J	2.0	0.76	ug/L		04/27/22 09:15	05/17/22 17:40	4
Lead	<0.96		2.0	0.96	ug/L		04/27/22 09:15	05/17/22 17:40	4
Lithium	<10		40	10	ug/L		04/27/22 09:15	05/17/22 17:40	4
Molybdenum	500		8.0	4.8	ug/L		04/27/22 09:15	05/17/22 17:40	4
Selenium	<3.8		20	3.8	ug/L		04/27/22 09:15	05/17/22 17:40	4
Thallium	<1.0		4.0	1.0	ug/L		04/27/22 09:15	05/17/22 17:40	4

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	830		50	26	mg/L			04/22/22 16:00	1
pH	7.1	HF	0.1	0.1	SU			04/20/22 21:05	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	576.47				ft			04/18/22 15:28	1
Oxidation Reduction Potential	-42.2				millivolts			04/18/22 15:28	1
Oxygen, Dissolved, Client Supplied	0.14				mg/L			04/18/22 15:28	1
pH, Field	6.97				SU			04/18/22 15:28	1
Specific Conductance, Field	1154				umhos/cm			04/18/22 15:28	1
Temperature, Field	10.5				Degrees C			04/18/22 15:28	1
Turbidity, Field	56.5				NTU			04/18/22 15:28	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-304A

Lab Sample ID: 310-229564-12

Date Collected: 04/18/22 14:23

Matrix: Water

Date Received: 04/20/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		5.0	2.3	mg/L			05/02/22 17:54	5
Fluoride	<0.22		0.50	0.22	mg/L			05/02/22 17:54	5
Sulfate	66		5.0	2.0	mg/L			05/02/22 17:54	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		04/27/22 09:15	05/17/22 17:48	1
Arsenic	1.4	J	2.0	0.75	ug/L		04/27/22 09:15	05/17/22 17:48	1
Barium	100		2.0	0.88	ug/L		04/27/22 09:15	05/17/22 17:48	1
Beryllium	<0.27		1.0	0.27	ug/L		04/27/22 09:15	05/17/22 17:48	1
Boron	460		100	58	ug/L		04/27/22 09:15	05/17/22 17:48	1
Cadmium	<0.055		0.10	0.055	ug/L		04/27/22 09:15	05/17/22 17:48	1
Calcium	89		0.50	0.19	mg/L		04/27/22 09:15	05/17/22 17:48	1
Chromium	<1.1		5.0	1.1	ug/L		04/27/22 09:15	05/17/22 17:48	1
Cobalt	0.33	J	0.50	0.19	ug/L		04/27/22 09:15	05/17/22 17:48	1
Lead	<0.24		0.50	0.24	ug/L		04/27/22 09:15	05/17/22 17:48	1
Lithium	<2.5		10	2.5	ug/L		04/27/22 09:15	05/17/22 17:48	1
Molybdenum	3.2		2.0	1.2	ug/L		04/27/22 09:15	05/17/22 17:48	1
Selenium	<0.96		5.0	0.96	ug/L		04/27/22 09:15	05/17/22 17:48	1
Thallium	<0.26		1.0	0.26	ug/L		04/27/22 09:15	05/17/22 17:48	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	360		50	26	mg/L			04/22/22 16:00	1
pH	7.3	HF	0.1	0.1	SU			04/20/22 21:06	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	576.65				ft			04/18/22 14:23	1
Oxidation Reduction Potential	83.9				millivolts			04/18/22 14:23	1
Oxygen, Dissolved, Client Supplied	0.17				mg/L			04/18/22 14:23	1
pH, Field	7.12				SU			04/18/22 14:23	1
Specific Conductance, Field	596				umhos/cm			04/18/22 14:23	1
Temperature, Field	11.2				Degrees C			04/18/22 14:23	1
Turbidity, Field	6.70				NTU			04/18/22 14:23	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-303

Lab Sample ID: 310-229564-13

Date Collected: 04/18/22 12:47

Matrix: Water

Date Received: 04/20/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		5.0	2.3	mg/L			05/02/22 18:10	5
Fluoride	<0.22		0.50	0.22	mg/L			05/02/22 18:10	5
Sulfate	600		20	8.0	mg/L			05/03/22 13:13	20

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.8		8.0	2.8	ug/L		04/27/22 09:15	05/17/22 17:52	4
Arsenic	34		8.0	3.0	ug/L		04/27/22 09:15	05/17/22 17:52	4
Barium	140		8.0	3.5	ug/L		04/27/22 09:15	05/17/22 17:52	4
Beryllium	<1.1		4.0	1.1	ug/L		04/27/22 09:15	05/17/22 17:52	4
Boron	5800		400	230	ug/L		04/27/22 09:15	05/17/22 17:52	4
Cadmium	<0.22		0.40	0.22	ug/L		04/27/22 09:15	05/17/22 17:52	4
Calcium	230		2.0	0.76	mg/L		04/27/22 09:15	05/17/22 17:52	4
Chromium	<4.4		20	4.4	ug/L		04/27/22 09:15	05/17/22 17:52	4
Cobalt	2.0		2.0	0.76	ug/L		04/27/22 09:15	05/17/22 17:52	4
Lead	<0.96		2.0	0.96	ug/L		04/27/22 09:15	05/17/22 17:52	4
Lithium	67		40	10	ug/L		04/27/22 09:15	05/17/22 17:52	4
Molybdenum	96		8.0	4.8	ug/L		04/27/22 09:15	05/17/22 17:52	4
Selenium	<3.8		20	3.8	ug/L		04/27/22 09:15	05/17/22 17:52	4
Thallium	<1.0		4.0	1.0	ug/L		04/27/22 09:15	05/17/22 17:52	4

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1300		50	26	mg/L			04/22/22 16:00	1
pH	6.9	HF	0.1	0.1	SU			04/20/22 21:08	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	577.70				ft			04/18/22 12:47	1
Oxidation Reduction Potential	132.0				millivolts			04/18/22 12:47	1
Oxygen, Dissolved, Client Supplied	0.20				mg/L			04/18/22 12:47	1
pH, Field	6.81				SU			04/18/22 12:47	1
Specific Conductance, Field	1592				umhos/cm			04/18/22 12:47	1
Temperature, Field	10.8				Degrees C			04/18/22 12:47	1
Turbidity, Field	565				NTU			04/18/22 12:47	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-302

Lab Sample ID: 310-229564-14

Date Collected: 04/18/22 11:21

Matrix: Water

Date Received: 04/20/22 17:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		5.0	2.3	mg/L			05/02/22 18:25	5
Fluoride	<0.22		0.50	0.22	mg/L			05/02/22 18:25	5
Sulfate	240		5.0	2.0	mg/L			05/02/22 18:25	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.8		8.0	2.8	ug/L		04/27/22 09:15	05/17/22 17:56	4
Arsenic	6.6	J	8.0	3.0	ug/L		04/27/22 09:15	05/17/22 17:56	4
Barium	83		8.0	3.5	ug/L		04/27/22 09:15	05/17/22 17:56	4
Beryllium	<1.1		4.0	1.1	ug/L		04/27/22 09:15	05/17/22 17:56	4
Boron	5800		400	230	ug/L		04/27/22 09:15	05/17/22 17:56	4
Cadmium	<0.22		0.40	0.22	ug/L		04/27/22 09:15	05/17/22 17:56	4
Calcium	120		2.0	0.76	mg/L		04/27/22 09:15	05/17/22 17:56	4
Chromium	<4.4		20	4.4	ug/L		04/27/22 09:15	05/17/22 17:56	4
Cobalt	<0.76		2.0	0.76	ug/L		04/27/22 09:15	05/17/22 17:56	4
Lead	<0.96		2.0	0.96	ug/L		04/27/22 09:15	05/17/22 17:56	4
Lithium	19	J	40	10	ug/L		04/27/22 09:15	05/17/22 17:56	4
Molybdenum	140		8.0	4.8	ug/L		04/27/22 09:15	05/17/22 17:56	4
Selenium	46		20	3.8	ug/L		04/27/22 09:15	05/17/22 17:56	4
Thallium	<1.0		4.0	1.0	ug/L		04/27/22 09:15	05/17/22 17:56	4

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 12:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	590		50	26	mg/L			04/22/22 15:16	1
pH	7.5	HF	0.1	0.1	SU			04/20/22 21:10	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	577.59				ft			04/18/22 11:21	1
Oxidation Reduction Potential	119.2				millivolts			04/18/22 11:21	1
Oxygen, Dissolved, Client Supplied	0.14				mg/L			04/18/22 11:21	1
pH, Field	7.42				SU			04/18/22 11:21	1
Specific Conductance, Field	815				umhos/cm			04/18/22 11:21	1
Temperature, Field	9.8				Degrees C			04/18/22 11:21	1
Turbidity, Field	4.51				NTU			04/18/22 11:21	1

Eurofins Cedar Falls

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Qualifiers

Metals

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.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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: ML Kapp - 2522077

Job ID: 310-229564-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-351933/3
Matrix: Water
Analysis Batch: 351933

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			04/30/22 00:16	1
Fluoride	<0.044		0.10	0.044	mg/L			04/30/22 00:16	1
Sulfate	<0.40		1.0	0.40	mg/L			04/30/22 00:16	1

Lab Sample ID: LCS 310-351933/4
Matrix: Water
Analysis Batch: 351933

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	9.20		mg/L		92	90 - 110
Fluoride	2.00	1.93		mg/L		97	90 - 110
Sulfate	10.0	9.40		mg/L		94	90 - 110

Lab Sample ID: 310-229564-4 MS
Matrix: Water
Analysis Batch: 351933

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	<0.45		5.00	4.85		mg/L		97	80 - 120
Fluoride	<0.044		1.00	1.06		mg/L		106	80 - 120
Sulfate	<0.40		5.00	4.99		mg/L		100	80 - 120

Lab Sample ID: 310-229564-4 MSD
Matrix: Water
Analysis Batch: 351933

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	<0.45		5.00	4.97		mg/L		99	80 - 120	2	15
Fluoride	<0.044		1.00	1.09		mg/L		109	80 - 120	3	15
Sulfate	<0.40		5.00	5.21		mg/L		104	80 - 120	4	15

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-351124/1-A
Matrix: Water
Analysis Batch: 353445

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351124

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		04/27/22 09:15	05/17/22 16:16	1
Arsenic	<0.75		2.0	0.75	ug/L		04/27/22 09:15	05/17/22 16:16	1
Barium	<0.88		2.0	0.88	ug/L		04/27/22 09:15	05/17/22 16:16	1
Beryllium	<0.27		1.0	0.27	ug/L		04/27/22 09:15	05/17/22 16:16	1
Boron	<58		100	58	ug/L		04/27/22 09:15	05/17/22 16:16	1
Cadmium	<0.055		0.10	0.055	ug/L		04/27/22 09:15	05/17/22 16:16	1
Calcium	<0.19		0.50	0.19	mg/L		04/27/22 09:15	05/17/22 16:16	1
Chromium	<1.1		5.0	1.1	ug/L		04/27/22 09:15	05/17/22 16:16	1
Cobalt	<0.19		0.50	0.19	ug/L		04/27/22 09:15	05/17/22 16:16	1
Lead	<0.24		0.50	0.24	ug/L		04/27/22 09:15	05/17/22 16:16	1
Lithium	<2.5		10	2.5	ug/L		04/27/22 09:15	05/17/22 16:16	1
Molybdenum	<1.2		2.0	1.2	ug/L		04/27/22 09:15	05/17/22 16:16	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

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

Lab Sample ID: MB 310-351124/1-A
Matrix: Water
Analysis Batch: 353445

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351124

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.96		5.0	0.96	ug/L		04/27/22 09:15	05/17/22 16:16	1
Thallium	<0.26		1.0	0.26	ug/L		04/27/22 09:15	05/17/22 16:16	1

Lab Sample ID: LCS 310-351124/2-A
Matrix: Water
Analysis Batch: 353445

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351124

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	200	206		ug/L		103	80 - 120
Arsenic	200	187		ug/L		93	80 - 120
Barium	100	96.0		ug/L		96	80 - 120
Beryllium	100	89.6		ug/L		90	80 - 120
Boron	200	191		ug/L		96	80 - 120
Cadmium	100	93.7		ug/L		94	80 - 120
Calcium	2.00	2.00		mg/L		100	80 - 120
Chromium	100	90.9		ug/L		91	80 - 120
Cobalt	100	93.6		ug/L		94	80 - 120
Lead	200	208		ug/L		104	80 - 120
Lithium	200	200		ug/L		100	80 - 120
Molybdenum	200	189		ug/L		94	80 - 120
Selenium	400	360		ug/L		90	80 - 120
Thallium	200	206		ug/L		103	80 - 120

Lab Sample ID: 310-229564-1 MS
Matrix: Water
Analysis Batch: 353445

Client Sample ID: MW-307
Prep Type: Total/NA
Prep Batch: 351124

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.69		200	206		ug/L		103	75 - 125
Arsenic	1.0	J	200	200		ug/L		99	75 - 125
Barium	290		100	387		ug/L		98	75 - 125
Beryllium	<0.27		100	96.6		ug/L		97	75 - 125
Boron	<58		200	195		ug/L		98	75 - 125
Cadmium	0.070	J	100	91.5		ug/L		91	75 - 125
Calcium	180		2.00	184	4	mg/L		73	75 - 125
Chromium	<1.1		100	94.5		ug/L		95	75 - 125
Cobalt	5.0		100	102		ug/L		97	75 - 125
Lead	<0.24		200	200		ug/L		100	75 - 125
Lithium	5.3	J	200	208		ug/L		101	75 - 125
Molybdenum	<1.2		200	196		ug/L		98	75 - 125
Selenium	1.1	J	400	390		ug/L		97	75 - 125
Thallium	<0.26		200	198		ug/L		99	75 - 125

Lab Sample ID: 310-229564-1 MSD
Matrix: Water
Analysis Batch: 353445

Client Sample ID: MW-307
Prep Type: Total/NA
Prep Batch: 351124

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.69		200	210		ug/L		105	75 - 125	2	20

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

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

Lab Sample ID: 310-229564-1 MSD
Matrix: Water
Analysis Batch: 353445

Client Sample ID: MW-307
Prep Type: Total/NA
Prep Batch: 351124

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier		Result	Qualifier				Limits	RPD		
Arsenic	1.0	J	200	205		ug/L		102	75 - 125	2	20	
Barium	290		100	404		ug/L		116	75 - 125	4	20	
Beryllium	<0.27		100	99.6		ug/L		100	75 - 125	3	20	
Boron	<58		200	196		ug/L		98	75 - 125	0	20	
Cadmium	0.070	J	100	94.6		ug/L		95	75 - 125	3	20	
Calcium	180		2.00	190	4	mg/L		400	75 - 125	3	20	
Chromium	<1.1		100	96.9		ug/L		97	75 - 125	2	20	
Cobalt	5.0		100	104		ug/L		99	75 - 125	2	20	
Lead	<0.24		200	207		ug/L		103	75 - 125	3	20	
Lithium	5.3	J	200	208		ug/L		101	75 - 125	0	20	
Molybdenum	<1.2		200	202		ug/L		101	75 - 125	3	20	
Selenium	1.1	J	400	398		ug/L		99	75 - 125	2	20	
Thallium	<0.26		200	203		ug/L		101	75 - 125	2	20	

Lab Sample ID: 310-229564-11 DU
Matrix: Water
Analysis Batch: 353445

Client Sample ID: MW-304
Prep Type: Total/NA
Prep Batch: 351124

Analyte	Sample	Sample	DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Antimony	<2.8		<2.8		ug/L		NC	20
Arsenic	3.3	J	3.17	J	ug/L		4	20
Barium	93		90.7		ug/L		3	20
Beryllium	<1.1		<1.1		ug/L		NC	20
Boron	10000		9850		ug/L		4	20
Cadmium	<0.22		<0.22		ug/L		NC	20
Calcium	130		126		mg/L		4	20
Chromium	<4.4		<4.4		ug/L		NC	20
Cobalt	0.78	J	0.804	J	ug/L		4	20
Lead	<0.96		<0.96		ug/L		NC	20
Lithium	<10		<10		ug/L		NC	20
Molybdenum	500		484		ug/L		3	20
Selenium	<3.8		<3.8		ug/L		NC	20
Thallium	<1.0		<1.0		ug/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-351707/1-A
Matrix: Water
Analysis Batch: 351869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 351707

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.11		0.20	0.11	ug/L		05/02/22 14:07	05/03/22 11:51	1

Lab Sample ID: LCS 310-351707/2-A
Matrix: Water
Analysis Batch: 351869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 351707

Analyte	Spike	LCS		Unit	D	%Rec	%Rec
		Added	Result				
Mercury	1.67	1.66		ug/L		100	80 - 120

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 310-229564-2 MS
Matrix: Water
Analysis Batch: 351869

Client Sample ID: MW-310
Prep Type: Total/NA
Prep Batch: 351707

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.11		1.67	1.70		ug/L		102	80 - 120

Lab Sample ID: 310-229564-2 MSD
Matrix: Water
Analysis Batch: 351869

Client Sample ID: MW-310
Prep Type: Total/NA
Prep Batch: 351707

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.11		1.67	1.62		ug/L		97	80 - 120	4	20

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

Lab Sample ID: MB 310-350822/1
Matrix: Water
Analysis Batch: 350822

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	<26		50	26	mg/L			04/22/22 15:16	1

Lab Sample ID: LCS 310-350822/2
Matrix: Water
Analysis Batch: 350822

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	942		mg/L		94	90 - 110

Lab Sample ID: MB 310-350825/1
Matrix: Water
Analysis Batch: 350825

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	<26		50	26	mg/L			04/22/22 16:00	1

Lab Sample ID: LCS 310-350825/2
Matrix: Water
Analysis Batch: 350825

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	928		mg/L		93	90 - 110

Lab Sample ID: MB 310-350981/1
Matrix: Water
Analysis Batch: 350981

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	<26		50	26	mg/L			04/25/22 17:13	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

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

Lab Sample ID: LCS 310-350981/2
Matrix: Water
Analysis Batch: 350981

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	918		mg/L		92	90 - 110

Lab Sample ID: 310-229564-5 DU
Matrix: Water
Analysis Batch: 350981

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	470		484		mg/L		3	20

Lab Sample ID: MB 310-351114/1
Matrix: Water
Analysis Batch: 351114

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	<26		50	26	mg/L			04/26/22 15:45	1

Lab Sample ID: LCS 310-351114/2
Matrix: Water
Analysis Batch: 351114

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	930		mg/L		93	90 - 110

Lab Sample ID: 310-229564-8 DU
Matrix: Water
Analysis Batch: 351114

Client Sample ID: MW-306
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1100		1040		mg/L		1	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-350552/1
Matrix: Water
Analysis Batch: 350552

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	7.1		SU		101	98 - 102

Lab Sample ID: LCS 310-350552/25
Matrix: Water
Analysis Batch: 350552

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	7.1		SU		101	98 - 102

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: 310-229564-8 DU
Matrix: Water
Analysis Batch: 350552

Client Sample ID: MW-306
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	7.0	HF	7.0		SU		0.4	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

HPLC/IC

Analysis Batch: 351933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-1	MW-307	Total/NA	Water	9056A	
310-229564-2	MW-310	Total/NA	Water	9056A	
310-229564-3	MW-309	Total/NA	Water	9056A	
310-229564-4	Field Blank	Total/NA	Water	9056A	
310-229564-5	MW-308	Total/NA	Water	9056A	
310-229564-6	MW-311A	Total/NA	Water	9056A	
310-229564-7	MW-311	Total/NA	Water	9056A	
310-229564-8	MW-306	Total/NA	Water	9056A	
310-229564-9	MW-301	Total/NA	Water	9056A	
310-229564-10	MW-305	Total/NA	Water	9056A	
310-229564-10	MW-305	Total/NA	Water	9056A	
310-229564-11	MW-304	Total/NA	Water	9056A	
310-229564-12	MW-304A	Total/NA	Water	9056A	
310-229564-13	MW-303	Total/NA	Water	9056A	
310-229564-13	MW-303	Total/NA	Water	9056A	
310-229564-14	MW-302	Total/NA	Water	9056A	
MB 310-351933/3	Method Blank	Total/NA	Water	9056A	
LCS 310-351933/4	Lab Control Sample	Total/NA	Water	9056A	
310-229564-4 MS	Field Blank	Total/NA	Water	9056A	
310-229564-4 MSD	Field Blank	Total/NA	Water	9056A	

Metals

Prep Batch: 351124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-1	MW-307	Total/NA	Water	3005A	
310-229564-2	MW-310	Total/NA	Water	3005A	
310-229564-3	MW-309	Total/NA	Water	3005A	
310-229564-4	Field Blank	Total/NA	Water	3005A	
310-229564-5	MW-308	Total/NA	Water	3005A	
310-229564-6	MW-311A	Total/NA	Water	3005A	
310-229564-7	MW-311	Total/NA	Water	3005A	
310-229564-8	MW-306	Total/NA	Water	3005A	
310-229564-9	MW-301	Total/NA	Water	3005A	
310-229564-10	MW-305	Total/NA	Water	3005A	
310-229564-11	MW-304	Total/NA	Water	3005A	
310-229564-12	MW-304A	Total/NA	Water	3005A	
310-229564-13	MW-303	Total/NA	Water	3005A	
310-229564-14	MW-302	Total/NA	Water	3005A	
MB 310-351124/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-351124/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-229564-1 MS	MW-307	Total/NA	Water	3005A	
310-229564-1 MSD	MW-307	Total/NA	Water	3005A	
310-229564-11 DU	MW-304	Total/NA	Water	3005A	

Prep Batch: 351707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-1	MW-307	Total/NA	Water	7470A	
310-229564-2	MW-310	Total/NA	Water	7470A	
310-229564-3	MW-309	Total/NA	Water	7470A	
310-229564-4	Field Blank	Total/NA	Water	7470A	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp - 2522077

Job ID: 310-229564-1

Metals (Continued)

Prep Batch: 351707 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-5	MW-308	Total/NA	Water	7470A	
310-229564-6	MW-311A	Total/NA	Water	7470A	
310-229564-7	MW-311	Total/NA	Water	7470A	
310-229564-8	MW-306	Total/NA	Water	7470A	
310-229564-9	MW-301	Total/NA	Water	7470A	
310-229564-10	MW-305	Total/NA	Water	7470A	
310-229564-11	MW-304	Total/NA	Water	7470A	
310-229564-12	MW-304A	Total/NA	Water	7470A	
310-229564-13	MW-303	Total/NA	Water	7470A	
310-229564-14	MW-302	Total/NA	Water	7470A	
MB 310-351707/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-351707/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-229564-2 MS	MW-310	Total/NA	Water	7470A	
310-229564-2 MSD	MW-310	Total/NA	Water	7470A	

Analysis Batch: 351869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-1	MW-307	Total/NA	Water	7470A	351707
310-229564-2	MW-310	Total/NA	Water	7470A	351707
310-229564-3	MW-309	Total/NA	Water	7470A	351707
310-229564-4	Field Blank	Total/NA	Water	7470A	351707
310-229564-5	MW-308	Total/NA	Water	7470A	351707
310-229564-6	MW-311A	Total/NA	Water	7470A	351707
310-229564-7	MW-311	Total/NA	Water	7470A	351707
310-229564-8	MW-306	Total/NA	Water	7470A	351707
310-229564-9	MW-301	Total/NA	Water	7470A	351707
310-229564-10	MW-305	Total/NA	Water	7470A	351707
310-229564-11	MW-304	Total/NA	Water	7470A	351707
310-229564-12	MW-304A	Total/NA	Water	7470A	351707
310-229564-13	MW-303	Total/NA	Water	7470A	351707
310-229564-14	MW-302	Total/NA	Water	7470A	351707
MB 310-351707/1-A	Method Blank	Total/NA	Water	7470A	351707
LCS 310-351707/2-A	Lab Control Sample	Total/NA	Water	7470A	351707
310-229564-2 MS	MW-310	Total/NA	Water	7470A	351707
310-229564-2 MSD	MW-310	Total/NA	Water	7470A	351707

Analysis Batch: 353445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-1	MW-307	Total/NA	Water	6020A	351124
310-229564-2	MW-310	Total/NA	Water	6020A	351124
310-229564-3	MW-309	Total/NA	Water	6020A	351124
310-229564-4	Field Blank	Total/NA	Water	6020A	351124
310-229564-5	MW-308	Total/NA	Water	6020A	351124
310-229564-6	MW-311A	Total/NA	Water	6020A	351124
310-229564-7	MW-311	Total/NA	Water	6020A	351124
310-229564-8	MW-306	Total/NA	Water	6020A	351124
310-229564-9	MW-301	Total/NA	Water	6020A	351124
310-229564-10	MW-305	Total/NA	Water	6020A	351124
310-229564-11	MW-304	Total/NA	Water	6020A	351124
310-229564-12	MW-304A	Total/NA	Water	6020A	351124
310-229564-13	MW-303	Total/NA	Water	6020A	351124

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp - 2522077

Job ID: 310-229564-1

Metals (Continued)

Analysis Batch: 353445 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-14	MW-302	Total/NA	Water	6020A	351124
MB 310-351124/1-A	Method Blank	Total/NA	Water	6020A	351124
LCS 310-351124/2-A	Lab Control Sample	Total/NA	Water	6020A	351124
310-229564-1 MS	MW-307	Total/NA	Water	6020A	351124
310-229564-1 MSD	MW-307	Total/NA	Water	6020A	351124
310-229564-11 DU	MW-304	Total/NA	Water	6020A	351124

General Chemistry

Analysis Batch: 350552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-1	MW-307	Total/NA	Water	SM 4500 H+ B	
310-229564-2	MW-310	Total/NA	Water	SM 4500 H+ B	
310-229564-3	MW-309	Total/NA	Water	SM 4500 H+ B	
310-229564-4	Field Blank	Total/NA	Water	SM 4500 H+ B	
310-229564-5	MW-308	Total/NA	Water	SM 4500 H+ B	
310-229564-6	MW-311A	Total/NA	Water	SM 4500 H+ B	
310-229564-7	MW-311	Total/NA	Water	SM 4500 H+ B	
310-229564-8	MW-306	Total/NA	Water	SM 4500 H+ B	
310-229564-9	MW-301	Total/NA	Water	SM 4500 H+ B	
310-229564-10	MW-305	Total/NA	Water	SM 4500 H+ B	
310-229564-11	MW-304	Total/NA	Water	SM 4500 H+ B	
310-229564-12	MW-304A	Total/NA	Water	SM 4500 H+ B	
310-229564-13	MW-303	Total/NA	Water	SM 4500 H+ B	
310-229564-14	MW-302	Total/NA	Water	SM 4500 H+ B	
LCS 310-350552/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCS 310-350552/25	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-229564-8 DU	MW-306	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 350822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-14	MW-302	Total/NA	Water	SM 2540C	
MB 310-350822/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-350822/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 350825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-9	MW-301	Total/NA	Water	SM 2540C	
310-229564-10	MW-305	Total/NA	Water	SM 2540C	
310-229564-11	MW-304	Total/NA	Water	SM 2540C	
310-229564-12	MW-304A	Total/NA	Water	SM 2540C	
310-229564-13	MW-303	Total/NA	Water	SM 2540C	
MB 310-350825/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-350825/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 350981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-1	MW-307	Total/NA	Water	SM 2540C	
310-229564-2	MW-310	Total/NA	Water	SM 2540C	
310-229564-3	MW-309	Total/NA	Water	SM 2540C	
310-229564-4	Field Blank	Total/NA	Water	SM 2540C	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

General Chemistry (Continued)

Analysis Batch: 350981 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-5	MW-308	Total/NA	Water	SM 2540C	
310-229564-6	MW-311A	Total/NA	Water	SM 2540C	
310-229564-7	MW-311	Total/NA	Water	SM 2540C	
MB 310-350981/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-350981/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-229564-5 DU	MW-308	Total/NA	Water	SM 2540C	

Analysis Batch: 351114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-8	MW-306	Total/NA	Water	SM 2540C	
MB 310-351114/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-351114/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-229564-8 DU	MW-306	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 352114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-1	MW-307	Total/NA	Water	Field Sampling	
310-229564-2	MW-310	Total/NA	Water	Field Sampling	
310-229564-3	MW-309	Total/NA	Water	Field Sampling	
310-229564-5	MW-308	Total/NA	Water	Field Sampling	
310-229564-6	MW-311A	Total/NA	Water	Field Sampling	
310-229564-7	MW-311	Total/NA	Water	Field Sampling	
310-229564-8	MW-306	Total/NA	Water	Field Sampling	
310-229564-9	MW-301	Total/NA	Water	Field Sampling	
310-229564-10	MW-305	Total/NA	Water	Field Sampling	
310-229564-11	MW-304	Total/NA	Water	Field Sampling	
310-229564-12	MW-304A	Total/NA	Water	Field Sampling	
310-229564-13	MW-303	Total/NA	Water	Field Sampling	
310-229564-14	MW-302	Total/NA	Water	Field Sampling	

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp - 2522077

Job ID: 310-229564-1

Client Sample ID: MW-307

Lab Sample ID: 310-229564-1

Date Collected: 04/19/22 17:33

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	04/30/22 02:37	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 16:39	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 11:55	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350981	04/25/22 17:13	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 20:42	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/19/22 17:33	SLD	TAL CF

Client Sample ID: MW-310

Lab Sample ID: 310-229564-2

Date Collected: 04/19/22 15:36

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	04/30/22 02:52	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 16:50	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 11:57	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350981	04/25/22 17:13	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 20:43	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/19/22 15:36	SLD	TAL CF

Client Sample ID: MW-309

Lab Sample ID: 310-229564-3

Date Collected: 04/19/22 14:13

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	04/30/22 03:08	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 16:54	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:04	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350981	04/25/22 17:13	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 20:45	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/19/22 14:13	SLD	TAL CF

Client Sample ID: Field Blank

Lab Sample ID: 310-229564-4

Date Collected: 04/19/22 13:50

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	351933	04/30/22 03:23	JNR	TAL CF

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: Field Blank

Lab Sample ID: 310-229564-4

Date Collected: 04/19/22 13:50

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 16:58	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:06	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350981	04/25/22 17:13	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 20:47	JWH	TAL CF

Client Sample ID: MW-308

Lab Sample ID: 310-229564-5

Date Collected: 04/19/22 12:48

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	04/30/22 04:10	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 17:01	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:12	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350981	04/25/22 17:13	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 20:48	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/19/22 12:48	SLD	TAL CF

Client Sample ID: MW-311A

Lab Sample ID: 310-229564-6

Date Collected: 04/19/22 11:18

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	04/30/22 04:26	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 17:05	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:15	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350981	04/25/22 17:13	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 20:50	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/19/22 11:18	SLD	TAL CF

Client Sample ID: MW-311

Lab Sample ID: 310-229564-7

Date Collected: 04/19/22 10:26

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	05/02/22 11:58	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 17:09	SAP	TAL CF

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp - 2522077

Job ID: 310-229564-1

Client Sample ID: MW-311
Date Collected: 04/19/22 10:26
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:17	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350981	04/25/22 17:13	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 20:52	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/19/22 10:26	SLD	TAL CF

Client Sample ID: MW-306
Date Collected: 04/19/22 08:56
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	05/02/22 12:13	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 17:29	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:19	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	351114	04/26/22 15:45	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 20:58	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/19/22 08:56	SLD	TAL CF

Client Sample ID: MW-301
Date Collected: 04/18/22 18:50
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	05/02/22 12:29	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 17:33	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:21	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350825	04/22/22 16:00	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 21:01	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/18/22 18:50	SLD	TAL CF

Client Sample ID: MW-305
Date Collected: 04/18/22 17:20
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	05/02/22 16:45	JNR	TAL CF
Total/NA	Analysis	9056A		50	351933	05/03/22 02:13	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 17:36	SAP	TAL CF

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp - 2522077

Job ID: 310-229564-1

Client Sample ID: MW-305
Date Collected: 04/18/22 17:20
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:23	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350825	04/22/22 16:00	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 21:03	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/18/22 17:20	SLD	TAL CF

Client Sample ID: MW-304
Date Collected: 04/18/22 15:28
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	05/02/22 17:01	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 17:40	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:25	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350825	04/22/22 16:00	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 21:05	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/18/22 15:28	SLD	TAL CF

Client Sample ID: MW-304A
Date Collected: 04/18/22 14:23
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	05/02/22 17:54	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		1	353445	05/17/22 17:48	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:27	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350825	04/22/22 16:00	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 21:06	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/18/22 14:23	SLD	TAL CF

Client Sample ID: MW-303
Date Collected: 04/18/22 12:47
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	05/02/22 18:10	JNR	TAL CF
Total/NA	Analysis	9056A		20	351933	05/03/22 13:13	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 17:52	SAP	TAL CF

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Client Sample ID: MW-303
Date Collected: 04/18/22 12:47
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:30	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350825	04/22/22 16:00	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 21:08	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/18/22 12:47	SLD	TAL CF

Client Sample ID: MW-302
Date Collected: 04/18/22 11:21
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	351933	05/02/22 18:25	JNR	TAL CF
Total/NA	Prep	3005A			351124	04/27/22 09:15	ACM2	TAL CF
Total/NA	Analysis	6020A		4	353445	05/17/22 17:56	SAP	TAL CF
Total/NA	Prep	7470A			351707	05/02/22 14:07	EAM	TAL CF
Total/NA	Analysis	7470A		1	351869	05/03/22 12:32	EAM	TAL CF
Total/NA	Analysis	SM 2540C		1	350822	04/22/22 15:16	TGF	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	350552	04/20/22 21:10	JWH	TAL CF
Total/NA	Analysis	Field Sampling		1	352114	04/18/22 11:21	SLD	TAL CF

Laboratory References:

TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-21 *

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CF
SM 4500 H+ B	pH	SM	TAL CF
Field Sampling	Field Sampling	EPA	TAL CF
3005A	Preparation, Total Metals	SW846	TAL CF
7470A	Preparation, Mercury	SW846	TAL CF

Protocol References:

EPA = US Environmental Protection Agency

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.

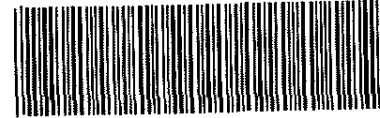
Laboratory References:

TAL CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



310-229564 Chain of Custody

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>4-20-22</u>	TIME <u>1700</u>	Received By <u>AK</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 <i>If yes</i> Cooler ID			
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler # <u>1</u> of <u>4</u>			
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
* Temp Blank Temperature – if no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>1.1</u>		Corrected Temp (°C) <u>1.2</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) <i>If yes</i> 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			

Document: CED-P-SAM-FRM45521
Revision 26
Date 27 Jan 2022

Eurofins Cedar Falls

General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C



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>4-20-22</u>	<u>1700</u>	<u>AK</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>4</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes Cooler custody seals intact? <input checked="" 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>-</u>		Corrected Temp (°C) <u>-</u>	
* Sample Container Temperature			
Container(s) used	CONTAINER 1	CONTAINER 2	
	<u>PI 250 mL</u>		
Uncorrected Temp (°C)	<u>4.4</u>		
Corrected Temp (°C)	<u>4.5</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			



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>4-20-22</u>	TIME <u>1700</u>	Received By <u>AK</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>4</u>			
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes Cooler custody seals intact? <input checked="" 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>0.8</u>		Corrected Temp (°C) <u>0.9</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>4-20-22</u>	<u>1700</u>	<u>AK</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 <i>If yes</i> Cooler ID			
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler # <u>4</u> of <u>4</u>			
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>0.5</u>		Corrected Temp (°C) <u>0.6</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) <i>If yes</i> 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

eurofins

Client Information		Lab P/N: Fredrick, Sandie		Carrier Tracking No(s): 310-70330-18812.1						
Client Contact: Meghan Blogett		E-Mail: Sandra.Fredrick@et.eurofins.com		Page: Page 1 of 2						
Company: SCS Engineers		PWSID: 515-864-9340		Job #: 						
Address: 2830 Dairy Drive		Due Date Requested: 		Analysis Requested: 						
City: Madison		TAT Requested (days): 		Preservation Codes: 						
State, Zip: WI 53718		Compliance Project: Δ Yes Δ No		A HCL M Hexane B NaOH N None C Zn Acetate O AshNaO2 D Nitric Acid P Na2OAS E NaHSO4 Q Na2SO3 F MeOH R Na2SO4 G Amchlor S H2SO4 H Ascorbic Acid T TSP Dodecahydrate I Ice U Acetone J DI Water V MCAA K EDTA W pH 4-5 L EDA Z other (specify) Other: 						
Phone: 25222077		PO #: 25222077		Total Number of Containers: 0						
Email: mblogett@scsengineers.com		WO #: 		Special Instructions/Note: 						
Project Name: ML Kapp. 25222077		Project #: 31011020								
Site: 		SSOW#: 								
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056A_ORGFM_28D Chloride, Fluoride & Sulfate	6020A_7470A (14)	9030 Radium-228 (GFC)	9040 Radium-228 (GFC)
MW-307	4-19-22	17:33	6	Water	X	X	X	X	X	X
MW-310	4-19-22	15:36	6	Water	X	X	X	X	X	X
MW-309	4-19-22	14:13	6	Water	X	X	X	X	X	X
Field blank	4-19-22	13:50	6	Water	X	X	X	X	X	X
MW-308	4-19-22	12:48	6	Water	X	X	X	X	X	X
MW-311A	4-19-22	11:18	6	Water	X	X	X	X	X	X
MW-311	4-19-22	10:26	6	Water	X	X	X	X	X	X
MW-306	4-19-22	8:56	6	Water	X	X	X	X	X	X
MW-301	4-18-22	18:50	6	Water	X	X	X	X	X	X
MW-305	4-18-22	17:26	6	Water	X	X	X	X	X	X
MW-304	4-18-22	15:28	6	Water	X	X	X	X	X	X
Possible Hazard Identification <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 Deliverable Requested: I, II, III, IV Other (specify) 										
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: Method of Shipment: 										
Relinquished by: [Signature] Date/Time: 4-20-22 9:00 Company: Company										
Relinquished by: Date/Time: Company: Company										
Relinquished by: Date/Time: Company: Company										
Custody Seals Intact: Δ Yes Δ No Cooler Temperature(s) °C and Other Remarks: 										



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-229564-1

SDG Number:

Login Number: 229564

List Number: 1

Creator: Homolar, Dana J

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.	True	
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	



Groundwater Monitoring Results - Field Parameters
M.L. Kapp Generating Station / SCS Engineers Project #25222077.00
April 2022

Sample	Sample Date/Time	GW Elevation (ft amsl)	Temperature (Deg. C)	pH (Std. Units)	Dissolved Oxygen (mg/L)	Specific Conductivity (µs/cm)	ORP (mV)	Turbidity
MW-301	4/18/2022 1850	577.53	9.5	6.69	0.37	885	24.9	26.30
MW-302	4/18/2022 1121	577.59	9.8	7.42	0.14	815	119.2	4.51
MW-303	4/18/2022 1247	577.70	10.8	6.81	0.20	1,592	132.0	565
MW-304	4/18/2022 1528	576.47	10.5	6.97	0.14	1,154	-42.2	56.5
MW-304A	4/18/2022 1423	576.65	11.2	7.12	0.17	596	83.9	6.70
MW-305	4/18/2022 1720	576.10	10.1	7.36	0.17	1,438	-34.8	6.78
MW-306	4/19/2022 856	577.24	9.5	6.88	1.56	1,588	114.2	4.35
MW-307	4/19/2022 1733	592.46	9.8	6.52	0.12	1,199	11.2	6.60
MW-308	4/19/2022 1248	576.93	9.8	6.46	1.02	817	103.2	6.06
MW-309	4/19/2022 1413	576.75	9.1	6.94	0.16	1,196	-124.3	5.33
MW-310	4/19/2022 1536	590.20	12.2	7.04	0.29	1,004	-35.3	4.91
MW-311	4/19/2022 1026	574.77	11.4	7.16	2.43	718	111.8	5.94
MW-311A	4/19/2022 1118	575.17	12.2	7.39	0.13	689	95.1	4.57

Abbreviations:

mg/L = milligrams per liter

mV = millivolts

amsl = above mean sea level

Notes:

None

Created by: NDK _____
 Last revision by: RM _____
 Checked by: JJK _____

Date: 10/6/2021 _____
 Date: 4/27/2022 _____
 Date: 5/4/2022 _____

C:\Users\fredricks\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\D8427408\2204_M.L. Kapp_CCR_Field.xlsx\GW Field Parameters

ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-229564-2
Client Project/Site: ML Kapp - 25222077

For:
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Attn: Meghan Blodgett



Authorized for release by:
5/23/2022 12:41:15 PM

Sandie Fredrick, Project Manager II
(920)261-1660
Sandra.Fredrick@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Detection Summary	5
Client Sample Results	6
Definitions	20
QC Sample Results	21
QC Association	24
Chronicle	25
Certification Summary	29
Method Summary	30
Chain of Custody	31
Receipt Checklists	41
Tracer Carrier Summary	44

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Job ID: 310-229564-2

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-229564-2

Comments

No additional comments.

Receipt

The samples were received on 4/20/2022 5:00 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 0.9° C, 1.2° C and 4.5° C.

RAD

Method 903.0: Radium 226 batch 561963

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-311 (310-229564-7), MW-306 (310-229564-8), MW-305 (310-229564-10), MW-304 (310-229564-11), MW-304A (310-229564-12), MW-303 (310-229564-13), MW-302 (310-229564-14), (LCS 160-561963/1-A), (LCSD 160-561963/2-A) and (MB 160-561963/10-A)

Method 903.0: Radium-226 batch 562027

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-307 (310-229564-1), MW-310 (310-229564-2), MW-309 (310-229564-3), Field Blank (310-229564-4), MW-308 (310-229564-5), MW-311A (310-229564-6), MW-301 (310-229564-9), (LCS 160-562027/1-A), (LCSD 160-562027/2-A) and (MB 160-562027/20-A)

Method 904.0: Radium 228 batch 561965

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-311 (310-229564-7), MW-306 (310-229564-8), MW-305 (310-229564-10), MW-304 (310-229564-11), MW-304A (310-229564-12), MW-303 (310-229564-13), MW-302 (310-229564-14), (LCS 160-561965/1-A), (LCSD 160-561965/2-A) and (MB 160-561965/10-A)

Method 904.0: Radium-28 prep batch 160-562032:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-307 (310-229564-1), MW-310 (310-229564-2), MW-309 (310-229564-3), Field Blank (310-229564-4), MW-308 (310-229564-5), MW-311A (310-229564-6), MW-301 (310-229564-9), (LCS 160-562032/1-A), (LCSD 160-562032/2-A) and (MB 160-562032/20-A)

Method PrecSep_0: Radium-228 Prep Batch 160-562032

The following sample was prepared at a reduced aliquot due to Matrix: MW-309 (310-229564-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

Method PrecSep-21: Radium-226 Prep Batch 160-562027

The following sample was prepared at a reduced aliquot due to Matrix: MW-309 (310-229564-3). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead of a sample duplicate (DUP) to demonstrate batch precision.

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

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-229564-1	MW-307	Water	04/19/22 17:33	04/20/22 17:00
310-229564-2	MW-310	Water	04/19/22 15:36	04/20/22 17:00
310-229564-3	MW-309	Water	04/19/22 14:13	04/20/22 17:00
310-229564-4	Field Blank	Water	04/19/22 13:50	04/20/22 17:00
310-229564-5	MW-308	Water	04/19/22 12:48	04/20/22 17:00
310-229564-6	MW-311A	Water	04/19/22 11:18	04/20/22 17:00
310-229564-7	MW-311	Water	04/19/22 10:26	04/20/22 17:00
310-229564-8	MW-306	Water	04/19/22 08:56	04/20/22 17:00
310-229564-9	MW-301	Water	04/18/22 18:50	04/20/22 17:00
310-229564-10	MW-305	Water	04/18/22 17:20	04/20/22 17:00
310-229564-11	MW-304	Water	04/18/22 15:28	04/20/22 17:00
310-229564-12	MW-304A	Water	04/18/22 14:23	04/20/22 17:00
310-229564-13	MW-303	Water	04/18/22 12:47	04/20/22 17:00
310-229564-14	MW-302	Water	04/18/22 11:21	04/20/22 17:00

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-307	Lab Sample ID: 310-229564-1
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-310	Lab Sample ID: 310-229564-2
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-309	Lab Sample ID: 310-229564-3
<input type="checkbox"/> No Detections.	
Client Sample ID: Field Blank	Lab Sample ID: 310-229564-4
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-308	Lab Sample ID: 310-229564-5
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-311A	Lab Sample ID: 310-229564-6
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-311	Lab Sample ID: 310-229564-7
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-306	Lab Sample ID: 310-229564-8
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-301	Lab Sample ID: 310-229564-9
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-305	Lab Sample ID: 310-229564-10
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-304	Lab Sample ID: 310-229564-11
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-304A	Lab Sample ID: 310-229564-12
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-303	Lab Sample ID: 310-229564-13
<input type="checkbox"/> No Detections.	
Client Sample ID: MW-302	Lab Sample ID: 310-229564-14
<input type="checkbox"/> No Detections.	

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-307
Date Collected: 04/19/22 17:33
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-1
Matrix: Water

Method: 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	0.0876	0.0881	1.00	0.131	pCi/L	04/26/22 11:05	05/20/22 14:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.1		40 - 110					04/26/22 11:05	05/20/22 14:21	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.440		0.246	0.250	1.00	0.367	pCi/L	04/26/22 11:51	05/12/22 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	95.1		40 - 110					04/26/22 11:51	05/12/22 13:02	1
Y Carrier	87.1		40 - 110					04/26/22 11:51	05/12/22 13:02	1

Method: 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	0.549		0.261	0.265	5.00	0.367	pCi/L		05/23/22 12:09	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-310
Date Collected: 04/19/22 15:36
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-2
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.135	U	0.105	0.106	1.00	0.160	pCi/L	04/26/22 11:05	05/20/22 14:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.1		40 - 110					04/26/22 11:05	05/20/22 14:21	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.182	U	0.239	0.240	1.00	0.398	pCi/L	04/26/22 11:51	05/12/22 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	95.1		40 - 110					04/26/22 11:51	05/12/22 13:02	1
Y Carrier	89.0		40 - 110					04/26/22 11:51	05/12/22 13:02	1

Method: 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	0.317	U	0.261	0.262	5.00	0.398	pCi/L		05/23/22 12:09	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-309
 Date Collected: 04/19/22 14:13
 Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-3
 Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.321		0.140	0.143	1.00	0.167	pCi/L	04/26/22 11:05	05/20/22 18:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.0		40 - 110					04/26/22 11:05	05/20/22 18:37	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.754		0.323	0.331	1.00	0.446	pCi/L	04/26/22 11:51	05/12/22 13:02	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	99.0		40 - 110					04/26/22 11:51	05/12/22 13:02	1
Y Carrier	87.5		40 - 110					04/26/22 11:51	05/12/22 13:02	1

Method: 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	1.08		0.352	0.361	5.00	0.446	pCi/L		05/23/22 12:09	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: Field Blank

Lab Sample ID: 310-229564-4

Date Collected: 04/19/22 13:50

Matrix: Water

Date Received: 04/20/22 17:00

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0214	U	0.0766	0.0767	1.00	0.143	pCi/L	04/26/22 11:05	05/20/22 18:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					04/26/22 11:05	05/20/22 18:37	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.0953	U	0.230	0.230	1.00	0.397	pCi/L	04/26/22 11:51	05/12/22 13:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	94.1		40 - 110					04/26/22 11:51	05/12/22 13:03	1
Y Carrier	87.9		40 - 110					04/26/22 11:51	05/12/22 13:03	1

Method: 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	0.117	U	0.242	0.242	5.00	0.397	pCi/L		05/23/22 12:09	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-308
Date Collected: 04/19/22 12:48
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-5
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0503	U	0.0670	0.0671	1.00	0.112	pCi/L	04/26/22 11:05	05/20/22 18:37	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	98.8		40 - 110					04/26/22 11:05	05/20/22 18:37	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.394		0.254	0.257	1.00	0.392	pCi/L	04/26/22 11:51	05/12/22 13:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	98.8		40 - 110					04/26/22 11:51	05/12/22 13:03	1
Y Carrier	87.9		40 - 110					04/26/22 11:51	05/12/22 13:03	1

Method: 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	0.444		0.263	0.266	5.00	0.392	pCi/L		05/23/22 12:09	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-311A

Lab Sample ID: 310-229564-6

Date Collected: 04/19/22 11:18

Matrix: Water

Date Received: 04/20/22 17:00

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0677	U	0.0758	0.0761	1.00	0.123	pCi/L	04/26/22 11:05	05/22/22 12:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110					04/26/22 11:05	05/22/22 12:27	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.278	U	0.205	0.207	1.00	0.317	pCi/L	04/26/22 11:51	05/12/22 13:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	94.1		40 - 110					04/26/22 11:51	05/12/22 13:03	1
Y Carrier	88.2		40 - 110					04/26/22 11:51	05/12/22 13:03	1

Method: 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	0.346		0.219	0.221	5.00	0.317	pCi/L		05/23/22 12:09	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-311
Date Collected: 04/19/22 10:26
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-7
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0434	U	0.0542	0.0543	1.00	0.0895	pCi/L	04/25/22 13:11	05/20/22 14:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	95.6		40 - 110					04/25/22 13:11	05/20/22 14:14	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.473		0.285	0.289	1.00	0.434	pCi/L	04/25/22 13:23	04/29/22 17:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	95.6		40 - 110					04/25/22 13:23	04/29/22 17:28	1
Y Carrier	82.6		40 - 110					04/25/22 13:23	04/29/22 17:28	1

Method: 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	0.517		0.290	0.294	5.00	0.434	pCi/L		05/23/22 12:10	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-306
Date Collected: 04/19/22 08:56
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-8
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0258	U	0.0683	0.0684	1.00	0.125	pCi/L	04/25/22 13:11	05/19/22 21:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.1		40 - 110					04/25/22 13:11	05/19/22 21:53	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.128	U	0.228	0.228	1.00	0.388	pCi/L	04/25/22 13:23	04/29/22 17:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	91.1		40 - 110					04/25/22 13:23	04/29/22 17:28	1
Y Carrier	81.5		40 - 110					04/25/22 13:23	04/29/22 17:28	1

Method: 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	0.154	U	0.238	0.238	5.00	0.388	pCi/L		05/23/22 12:10	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-301
 Date Collected: 04/18/22 18:50
 Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-9
 Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.167		0.0914	0.0926	1.00	0.118	pCi/L	04/26/22 11:05	05/22/22 12:27	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		40 - 110					04/26/22 11:05	05/22/22 12:27	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.305	U	0.207	0.209	1.00	0.313	pCi/L	04/26/22 11:51	05/12/22 13:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	91.6		40 - 110					04/26/22 11:51	05/12/22 13:03	1
Y Carrier	88.2		40 - 110					04/26/22 11:51	05/12/22 13:03	1

Method: 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	0.472		0.226	0.229	5.00	0.313	pCi/L		05/23/22 12:09	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-305
 Date Collected: 04/18/22 17:20
 Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-10
 Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.143		0.0792	0.0803	1.00	0.103	pCi/L	04/25/22 13:11	05/19/22 21:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.9		40 - 110					04/25/22 13:11	05/19/22 21:53	1

Method: 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	0.271	0.273	1.00	0.425	pCi/L	04/25/22 13:23	04/29/22 17:28	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	89.9		40 - 110					04/25/22 13:23	04/29/22 17:28	1
Y Carrier	80.0		40 - 110					04/25/22 13:23	04/29/22 17:28	1

Method: 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	0.496		0.282	0.285	5.00	0.425	pCi/L		05/23/22 12:10	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-304
Date Collected: 04/18/22 15:28
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-11
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.368		0.125	0.130	1.00	0.144	pCi/L	04/25/22 13:11	05/19/22 21:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.2		40 - 110					04/25/22 13:11	05/19/22 21:53	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.530		0.303	0.307	1.00	0.456	pCi/L	04/25/22 13:23	04/29/22 17:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	88.2		40 - 110					04/25/22 13:23	04/29/22 17:29	1
Y Carrier	81.5		40 - 110					04/25/22 13:23	04/29/22 17:29	1

Method: 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	0.898		0.328	0.333	5.00	0.456	pCi/L		05/23/22 12:10	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-304A

Lab Sample ID: 310-229564-12

Date Collected: 04/18/22 14:23

Matrix: Water

Date Received: 04/20/22 17:00

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.160		0.0877	0.0889	1.00	0.115	pCi/L	04/25/22 13:11	05/20/22 08:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.2		40 - 110					04/25/22 13:11	05/20/22 08:53	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.406	U	0.295	0.297	1.00	0.461	pCi/L	04/25/22 13:23	04/29/22 17:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	89.2		40 - 110					04/25/22 13:23	04/29/22 17:29	1
Y Carrier	82.2		40 - 110					04/25/22 13:23	04/29/22 17:29	1

Method: 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	0.566		0.308	0.310	5.00	0.461	pCi/L		05/23/22 12:10	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-303
 Date Collected: 04/18/22 12:47
 Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-13
 Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.427		0.120	0.126	1.00	0.108	pCi/L	04/25/22 13:11	05/20/22 08:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.9		40 - 110					04/25/22 13:11	05/20/22 08:53	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	1.29		0.353	0.372	1.00	0.426	pCi/L	04/25/22 13:23	04/29/22 17:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	88.9		40 - 110					04/25/22 13:23	04/29/22 17:29	1
Y Carrier	80.4		40 - 110					04/25/22 13:23	04/29/22 17:29	1

Method: 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	1.72		0.373	0.393	5.00	0.426	pCi/L		05/23/22 12:10	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-302
Date Collected: 04/18/22 11:21
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-14
Matrix: Water

Method: 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.194		0.0986	0.100	1.00	0.127	pCi/L	04/25/22 13:11	05/20/22 08:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	88.4		40 - 110					04/25/22 13:11	05/20/22 08:53	1

Method: 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.404	U	0.335	0.337	1.00	0.535	pCi/L	04/25/22 13:23	04/29/22 17:29	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	88.4		40 - 110					04/25/22 13:23	04/29/22 17:29	1
Y Carrier	82.6		40 - 110					04/25/22 13:23	04/29/22 17:29	1

Method: 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	0.598		0.349	0.352	5.00	0.535	pCi/L		05/23/22 12:10	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Qualifiers

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: ML Kapp - 25222077

Job ID: 310-229564-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-561963/10-A
Matrix: Water
Analysis Batch: 566756

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 561963

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium 226	0.006968	U	0.0513	0.0513	1.00	0.100	pCi/L	04/25/22 13:11	05/20/22 08:53	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	91.6		40 - 110					04/25/22 13:11	05/20/22 08:53	1

Lab Sample ID: LCS 160-561963/1-A
Matrix: Water
Analysis Batch: 566756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 561963

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium 226	11.3	9.147		0.957	1.00	0.107	pCi/L	81	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits		Prepared	Analyzed	Dil Fac		
Ba Carrier	97.0		40 - 110					04/25/22 13:11	05/20/22 08:53

Lab Sample ID: LCSD 160-561963/2-A
Matrix: Water
Analysis Batch: 566756

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 561963

Analyte	Spike Added	LCSD Result	LCSD Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits	RER	Limit
				Uncert. (2σ+/-)							
Radium 226	11.3	9.177		0.957	1.00	0.0994	pCi/L	81	75 - 125	0.02	1
Carrier	LCSD %Yield	LCSD Qualifier	Limits		Prepared	Analyzed	Dil Fac				
Ba Carrier	98.3		40 - 110					04/25/22 13:11	05/20/22 08:53	1	

Lab Sample ID: MB 160-562027/20-A
Matrix: Water
Analysis Batch: 566860

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 562027

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium 226	0.05029	U	0.0773	0.0774	1.00	0.133	pCi/L	04/26/22 11:05	05/22/22 15:56	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	95.8		40 - 110					04/26/22 11:05	05/22/22 15:56	1

Lab Sample ID: LCS 160-562027/1-A
Matrix: Water
Analysis Batch: 566756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 562027

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium 226	11.3	9.382		1.01	1.00	0.144	pCi/L	83	75 - 125

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

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

Lab Sample ID: LCS 160-562027/1-A
Matrix: Water
Analysis Batch: 566756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 562027

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba Carrier	93.1		40 - 110

Lab Sample ID: LCSD 160-562027/2-A
Matrix: Water
Analysis Batch: 566756

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 562027

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium 226	11.3	9.556		1.00	1.00	0.110	pCi/L	84	75 - 125	0.09	1

Carrier	LCSD %Yield	LCSD Qualifier	Limits
Ba Carrier	101		40 - 110

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-561965/10-A
Matrix: Water
Analysis Batch: 562835

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 561965

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	-0.3352	U	0.197	0.199	1.00	0.419	pCi/L	04/25/22 13:23	04/29/22 17:29	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Ba	91.6		40 - 110	04/25/22 13:23	04/29/22 17:29	1
Y Carrier	87.1		40 - 110	04/25/22 13:23	04/29/22 17:29	1

Lab Sample ID: LCS 160-561965/1-A
Matrix: Water
Analysis Batch: 562835

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 561965

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium 228	8.66	9.477		1.11	1.00	0.369	pCi/L	109	75 - 125

Carrier	LCS %Yield	LCS Qualifier	Limits
Ba	97.0		40 - 110
Y Carrier	81.5		40 - 110

Lab Sample ID: LCSD 160-561965/2-A
Matrix: Water
Analysis Batch: 562835

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 561965

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium 228	8.66	8.771		1.05	1.00	0.409	pCi/L	101	75 - 125	0.33	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCSD 160-561965/2-A
Matrix: Water
Analysis Batch: 562835

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 561965

Carrier	LCSD		Limits
	%Yield	Qualifier	
Ba	98.3		40 - 110
Y Carrier	81.5		40 - 110

Lab Sample ID: MB 160-562032/20-A
Matrix: Water
Analysis Batch: 565228

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 562032

Analyte	MB		Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier								
Radium 228	0.3019	U	0.273	0.275	1.00	0.441	pCi/L	04/26/22 11:51	05/12/22 13:00	1

Carrier	MB		Limits	Prepared	Analyzed	Dil Fac
	%Yield	Qualifier				
Ba	95.8		40 - 110	04/26/22 11:51	05/12/22 13:00	1
Y Carrier	88.2		40 - 110	04/26/22 11:51	05/12/22 13:00	1

Lab Sample ID: LCS 160-562032/1-A
Matrix: Water
Analysis Batch: 565231

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 562032

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits

Carrier	LCS		Limits
	%Yield	Qualifier	
Ba	93.1		40 - 110
Y Carrier	89.3		40 - 110

Lab Sample ID: LCSD 160-562032/2-A
Matrix: Water
Analysis Batch: 565231

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 562032

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit

Carrier	LCSD		Limits
	%Yield	Qualifier	
Ba	101		40 - 110
Y Carrier	86.7		40 - 110

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Rad

Prep Batch: 561963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-7	MW-311	Total/NA	Water	PrecSep-21	
310-229564-8	MW-306	Total/NA	Water	PrecSep-21	
310-229564-10	MW-305	Total/NA	Water	PrecSep-21	
310-229564-11	MW-304	Total/NA	Water	PrecSep-21	
310-229564-12	MW-304A	Total/NA	Water	PrecSep-21	
310-229564-13	MW-303	Total/NA	Water	PrecSep-21	
310-229564-14	MW-302	Total/NA	Water	PrecSep-21	
MB 160-561963/10-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-561963/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-561963/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 561965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-7	MW-311	Total/NA	Water	PrecSep_0	
310-229564-8	MW-306	Total/NA	Water	PrecSep_0	
310-229564-10	MW-305	Total/NA	Water	PrecSep_0	
310-229564-11	MW-304	Total/NA	Water	PrecSep_0	
310-229564-12	MW-304A	Total/NA	Water	PrecSep_0	
310-229564-13	MW-303	Total/NA	Water	PrecSep_0	
310-229564-14	MW-302	Total/NA	Water	PrecSep_0	
MB 160-561965/10-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-561965/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-561965/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Prep Batch: 562027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-1	MW-307	Total/NA	Water	PrecSep-21	
310-229564-2	MW-310	Total/NA	Water	PrecSep-21	
310-229564-3	MW-309	Total/NA	Water	PrecSep-21	
310-229564-4	Field Blank	Total/NA	Water	PrecSep-21	
310-229564-5	MW-308	Total/NA	Water	PrecSep-21	
310-229564-6	MW-311A	Total/NA	Water	PrecSep-21	
310-229564-9	MW-301	Total/NA	Water	PrecSep-21	
MB 160-562027/20-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-562027/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-562027/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 562032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-229564-1	MW-307	Total/NA	Water	PrecSep_0	
310-229564-2	MW-310	Total/NA	Water	PrecSep_0	
310-229564-3	MW-309	Total/NA	Water	PrecSep_0	
310-229564-4	Field Blank	Total/NA	Water	PrecSep_0	
310-229564-5	MW-308	Total/NA	Water	PrecSep_0	
310-229564-6	MW-311A	Total/NA	Water	PrecSep_0	
310-229564-9	MW-301	Total/NA	Water	PrecSep_0	
MB 160-562032/20-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-562032/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-562032/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp - 2522077

Job ID: 310-229564-2

Client Sample ID: MW-307
Date Collected: 04/19/22 17:33
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			562027	04/26/22 11:05	MS	TAL SL
Total/NA	Analysis	903.0		1	566756	05/20/22 14:21	CLP	TAL SL
Total/NA	Prep	PrecSep_0			562032	04/26/22 11:51	MS	TAL SL
Total/NA	Analysis	904.0		1	565231	05/12/22 13:02	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566888	05/23/22 12:09	SCB	TAL SL

Client Sample ID: MW-310
Date Collected: 04/19/22 15:36
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			562027	04/26/22 11:05	MS	TAL SL
Total/NA	Analysis	903.0		1	566756	05/20/22 14:21	CLP	TAL SL
Total/NA	Prep	PrecSep_0			562032	04/26/22 11:51	MS	TAL SL
Total/NA	Analysis	904.0		1	565231	05/12/22 13:02	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566888	05/23/22 12:09	SCB	TAL SL

Client Sample ID: MW-309
Date Collected: 04/19/22 14:13
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			562027	04/26/22 11:05	MS	TAL SL
Total/NA	Analysis	903.0		1	566756	05/20/22 18:37	CLP	TAL SL
Total/NA	Prep	PrecSep_0			562032	04/26/22 11:51	MS	TAL SL
Total/NA	Analysis	904.0		1	565231	05/12/22 13:02	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566888	05/23/22 12:09	SCB	TAL SL

Client Sample ID: Field Blank
Date Collected: 04/19/22 13:50
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			562027	04/26/22 11:05	MS	TAL SL
Total/NA	Analysis	903.0		1	566756	05/20/22 18:37	CLP	TAL SL
Total/NA	Prep	PrecSep_0			562032	04/26/22 11:51	MS	TAL SL
Total/NA	Analysis	904.0		1	565231	05/12/22 13:03	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566888	05/23/22 12:09	SCB	TAL SL

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-308
Date Collected: 04/19/22 12:48
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			562027	04/26/22 11:05	MS	TAL SL
Total/NA	Analysis	903.0		1	566756	05/20/22 18:37	CLP	TAL SL
Total/NA	Prep	PrecSep_0			562032	04/26/22 11:51	MS	TAL SL
Total/NA	Analysis	904.0		1	565231	05/12/22 13:03	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566888	05/23/22 12:09	SCB	TAL SL

Client Sample ID: MW-311A
Date Collected: 04/19/22 11:18
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			562027	04/26/22 11:05	MS	TAL SL
Total/NA	Analysis	903.0		1	566860	05/22/22 12:27	CLP	TAL SL
Total/NA	Prep	PrecSep_0			562032	04/26/22 11:51	MS	TAL SL
Total/NA	Analysis	904.0		1	565231	05/12/22 13:03	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566888	05/23/22 12:09	SCB	TAL SL

Client Sample ID: MW-311
Date Collected: 04/19/22 10:26
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561963	04/25/22 13:11	LPS	TAL SL
Total/NA	Analysis	903.0		1	566756	05/20/22 14:14	CLP	TAL SL
Total/NA	Prep	PrecSep_0			561965	04/25/22 13:23	LPS	TAL SL
Total/NA	Analysis	904.0		1	562835	04/29/22 17:28	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566889	05/23/22 12:10	SCB	TAL SL

Client Sample ID: MW-306
Date Collected: 04/19/22 08:56
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561963	04/25/22 13:11	LPS	TAL SL
Total/NA	Analysis	903.0		1	566441	05/19/22 21:53	FLC	TAL SL
Total/NA	Prep	PrecSep_0			561965	04/25/22 13:23	LPS	TAL SL
Total/NA	Analysis	904.0		1	562835	04/29/22 17:28	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566889	05/23/22 12:10	SCB	TAL SL

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp - 2522077

Job ID: 310-229564-2

Client Sample ID: MW-301
Date Collected: 04/18/22 18:50
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			562027	04/26/22 11:05	MS	TAL SL
Total/NA	Analysis	903.0		1	566860	05/22/22 12:27	CLP	TAL SL
Total/NA	Prep	PrecSep_0			562032	04/26/22 11:51	MS	TAL SL
Total/NA	Analysis	904.0		1	565231	05/12/22 13:03	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566888	05/23/22 12:09	SCB	TAL SL

Client Sample ID: MW-305
Date Collected: 04/18/22 17:20
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561963	04/25/22 13:11	LPS	TAL SL
Total/NA	Analysis	903.0		1	566441	05/19/22 21:53	FLC	TAL SL
Total/NA	Prep	PrecSep_0			561965	04/25/22 13:23	LPS	TAL SL
Total/NA	Analysis	904.0		1	562835	04/29/22 17:28	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566889	05/23/22 12:10	SCB	TAL SL

Client Sample ID: MW-304
Date Collected: 04/18/22 15:28
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561963	04/25/22 13:11	LPS	TAL SL
Total/NA	Analysis	903.0		1	566441	05/19/22 21:53	FLC	TAL SL
Total/NA	Prep	PrecSep_0			561965	04/25/22 13:23	LPS	TAL SL
Total/NA	Analysis	904.0		1	562835	04/29/22 17:29	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566889	05/23/22 12:10	SCB	TAL SL

Client Sample ID: MW-304A
Date Collected: 04/18/22 14:23
Date Received: 04/20/22 17:00

Lab Sample ID: 310-229564-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561963	04/25/22 13:11	LPS	TAL SL
Total/NA	Analysis	903.0		1	566756	05/20/22 08:53	CLP	TAL SL
Total/NA	Prep	PrecSep_0			561965	04/25/22 13:23	LPS	TAL SL
Total/NA	Analysis	904.0		1	562835	04/29/22 17:29	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566889	05/23/22 12:10	SCB	TAL SL

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Client Sample ID: MW-303

Lab Sample ID: 310-229564-13

Date Collected: 04/18/22 12:47

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561963	04/25/22 13:11	LPS	TAL SL
Total/NA	Analysis	903.0		1	566756	05/20/22 08:53	CLP	TAL SL
Total/NA	Prep	PrecSep_0			561965	04/25/22 13:23	LPS	TAL SL
Total/NA	Analysis	904.0		1	562835	04/29/22 17:29	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566889	05/23/22 12:10	SCB	TAL SL

Client Sample ID: MW-302

Lab Sample ID: 310-229564-14

Date Collected: 04/18/22 11:21

Matrix: Water

Date Received: 04/20/22 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			561963	04/25/22 13:11	LPS	TAL SL
Total/NA	Analysis	903.0		1	566756	05/20/22 08:53	CLP	TAL SL
Total/NA	Prep	PrecSep_0			561965	04/25/22 13:23	LPS	TAL SL
Total/NA	Analysis	904.0		1	562835	04/29/22 17:29	CLP	TAL SL
Total/NA	Analysis	Ra226_Ra228 Pos		1	566889	05/23/22 12:10	SCB	TAL SL

Laboratory References:

TAL SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

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	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22
California	State	2886	07-01-22
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-22
HI - RadChem Recognition	State	n/a	06-30-22
Illinois	NELAP	200023	11-30-22
Iowa	State	373	12-01-22
Kansas	NELAP	E-10236	10-31-22
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana	NELAP	04080	06-30-22
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-22
MI - RadChem Recognition	State	9005	06-30-22
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-22
New Jersey	NELAP	MO002	06-30-22
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-22
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-22
Oregon	NELAP	4157	09-01-22
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-22
Texas	NELAP	T104704193	07-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	08-01-22
Virginia	NELAP	10310	06-14-22
Washington	State	C592	08-30-22
West Virginia DEP	State	381	10-31-22



Method Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	TAL SL
904.0	Radium-228 (GFPC)	EPA	TAL SL
Ra226_Ra228 Pos	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

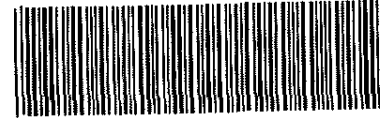
Laboratory References:

TAL SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15



Environment Testing
America



310-229564 Chain of Custody

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>4-20-22</u>	TIME <u>1700</u>	Received By <u>AK</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 <i>If yes</i> Cooler ID _____			
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler # <u>1</u> of <u>4</u>			
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Trip Blank Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes</i> 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
* Temp Blank Temperature – if no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>1.1</u>		Corrected Temp (°C) <u>1.2</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) <i>If yes</i> 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			

Document: CED-P-SAM-FRM45521
Revision 26
Date 27 Jan 2022

Eurofins Cedar Falls

General temperature criteria is 0 to 6°C
Bacteria temperature criteria is 0 to 10°C



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>4-20-22</u>	<u>1700</u>	<u>AK</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>4</u>	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes Cooler custody seals intact? <input checked="" 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>S</u>	Correction Factor (°C)	<u>+0.1</u>
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C)	<u>-</u>	Corrected Temp (°C)	<u>-</u>
* Sample Container Temperature			
Container(s) used	CONTAINER 1	CONTAINER 2	
	<u>PI 250 mL</u>		
Uncorrected Temp (°C)	<u>4.4</u>		
Corrected Temp (°C)	<u>4.5</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			



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>4-20-22</u>	TIME <u>1700</u>	Received By <u>AK</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>4</u>			
Cooler Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes Cooler custody seals intact? <input checked="" 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>0.8</u>		Corrected Temp (°C) <u>0.9</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>4-20-22</u>	<u>1700</u>	<u>AK</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>4</u> of <u>4</u>
Cooler Custody Seals Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes Cooler custody seals intact? <input checked="" 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>S</u>		Correction Factor (°C) <u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C) <u>0.5</u>		Corrected Temp (°C) <u>0.6</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

eurofins

Client Information		Sampler		Lab P/N:		Carrier Tracking No(s):		COC No:	
Company: SCS Engineers		Phone: 515-864-9340		Fredrick, Sandie		310-70330-18812.1		Page: Page 1 of 2	
Address: 2830 Dairy Drive		P/MSID:		E-Mail: Sandra.Fredrick@et.eurofins.com		State of Origin:		Job #:	
City: Madison		Due Date Requested:		Analysis Requested		Total Number of Containers		Preservation Codes:	
State, Zip: WI 53718		TAT Requested (days):		Perform MS/MSD (Yes or No)		904.0 Radium-228 (GFC)		A HCL M Hexane	
Phone: 25222077		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Field Filtered Sample (Yes or No)		903.0 Radium-228 (GFC)		B NaOH N None	
PO #: 25222077		Sample Date		Sample Type (C=Comp, G=Grab)		6020A, 7470A (14)		C Zn Acetate O AshNaO2	
WC #: 25222077		Sample Time		Preservation Code:		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate		D Nitric Acid P Na2OAS	
Email: mbloggett@scsengineers.com		Sample Date		Matrix (W=Water, S=Solid, O=Non-Hazard)		2540C, Calcd, SM4500, H+		E NaHSO4 Q Na2SO3	
Project Name: ML Kapp. 25222077		Sample Time		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate		F MeOH R Na2SO3	
Site: 31011020		Sample Date		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate		G Amchlor S H2SO4	
SSOW#: 31011020		Sample Time		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate		H Ascorbic Acid T TSP Dodecahydrate	
Sample Identification		Sample Date		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate		I Ice U Acetone	
MW-307		4-19-22 17:33		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate		J DI Water V MCAA	
MW-310		4-19-22 15:36		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate		K EDTA W PH 4-5	
MW-309		4-19-22 14:13		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate		L EDA Z other (specify)	
Field blank		4-19-22 13:50		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate		Other:	
MW-308		4-19-22 12:48		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate		Special Instructions/Note:	
MW-311A		4-19-22 11:18		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate			
MW-311		4-19-22 10:26		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate			
MW-306		4-19-22 8:56		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate			
MW-301		4-18-22 18:50		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate			
MW-305		4-18-22 17:26		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate			
MW-304		4-18-22 15:28		Water		9056A, ORGFM, 28D Chloride, Fluoride & Sulfate			
Possible Hazard Identification <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									
Deliverable Requested: I, II, III, IV Other (specify)									
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:									
Relinquished by: <i>[Signature]</i> Date/Time: 4-20-22 9:00 Company:									
Relinquished by: Date/Time: Company:									
Relinquished by: Date/Time: Company:									
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No									
Cooler Temperature(s) °C and Other Remarks:									



Chain of Custody Record

Euofins Cedar Falls
 3019 Venture Way
 Cedar Falls, IA 50613
 Phone (319) 277-2401 Phone (319) 277-2425

Client Information		Lab PM: Fredrick, Sandie		Carrier Tracking No(s): 310-70330-18812.2	
Client Contact: Meghan Blodgett		E-Mail: Sandra.Fredrick@euofins.com		Page: Page 2 of 2	
Company: SCS Engineers		PWSID:		Job #:	
Address: 2830 Dairy Drive		Due Date Requested:		Total Number of Containers	
City: Madison		TAT Requested (days):		Preservation Codes:	
State, Zip: WI 53718		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		A HCL M Hexane B NaOH N None C Zn Acetate O AsNaO2 D Nitric Acid P Na2O4S E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K EDTA L EDA Z other (specify)	
Email: mblodgett@scsengineers.com		PO #: 25222077		Other	
Project Name: ML Kepp. 25222077		W/O #:		Special Instructions/Note:	
Site:		Project #: 31011020			
		SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soil, Other)	Field Filled Sample (Yes or No)		Perform MS/MSD (Yes or No)		9056A_ORGM_28D Chloride, Fluoride & Sulfate		6020A, 7470A (14)		903.0 Radium-226 (GFPC)		904.0 Radium-228 (GFPC)		Special Instructions/Note:
					Field Filled	MS/MSD	Field Filled	MS/MSD	N	D	D	D	N	D	D	D	
MW-304A	4-18-22	1423	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW-303	4-18-22	1217	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW-302	4-18-22	11.21	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
				Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

<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 Deliverable Requested: I, II, III, IV Other (specify)		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	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: <i>[Signature]</i>	Date: 4-20-22 9:00	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time: 4-20-22 1700
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:	



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler Fredrick, Sandie	Lab PM Fredrick, Sandie	Carmer Tracking No(s)	COC No 310-48913.1
Client Contact Shipping/Receiving		Phone Sandra Fredrick@eurofins.com	E-Mail Sandra Fredrick@eurofins.com	State of Origin Iowa	Page Page 1 of 2
Company TestAmerica Laboratories, Inc.		Accreditations Required (See note) State Program - Iowa		Job # 310-229564-2	Preservation Codes: 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: 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 Z - other (specify)
Address 13715 Rider Trail North, City Earth City State, Zip MO, 63045 Phone 314-298-8566(Tel) 314-298-8757(Fax) Email		Due Date Requested: 5/19/2022 TAT Requested (days):		Analysis Requested	
PO #		Field Filtered Sample (Yes or No)		Total Number of Containers	
WO #		Perform MS/MSD (Yes or No)		903.0/PrecSep_21 Radium-226 (GFPC)	
Project # 31011020		904.0/PrecSep_0 Radium-228 (GFPC)		Radium-228	
Site ML Kapp - 25222077		Radium-226, 228GFPC_P/Combined Radium-226 and			
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Sample Time		Matrix (W=water, S=solid, O=waste/leach, BT=Tissue, AS=Air)		Preservation Code:	
MW-307 (310-229564-1)		4/19/22		17:33 Central	
MW-310 (310-229564-2)		4/19/22		15:36 Central	
MW-309 (310-229564-3)		4/19/22		14:13 Central	
Field Blank (310-229564-4)		4/19/22		13:50 Central	
MW-308 (310-229564-5)		4/19/22		12:48 Central	
MW-311A (310-229564-6)		4/19/22		11:18 Central	
MW-311 (310-229564-7)		4/19/22		10:26 Central	
MW-306 (310-229564-8)		4/19/22		08:56 Central	
MW-301 (310-229564-9)		4/18/22		18:50 Central	
<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>					
<p>Possible Hazard Identification <input type="checkbox"/> Unconfirmed <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months</p>					
<p>Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Special Instructions/QC Requirements:</p>					
<p>Empty Kit Relinquished by: _____ Date: _____ Method of Shipment:</p>					
<p>Relinquished by: _____ Date/Time: 4/21/22 Company: _____ Received by: _____ Date/Time: _____ Company: _____</p>					
<p>Relinquished by: _____ Date/Time: _____ Company: _____ Received by: <i>Sandra Worthington</i> Date/Time: APR 25 2022 08:30 Company: ETAS R</p>					
<p>Relinquished by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____</p>					
<p>Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks:</p>					



Eurofins Cedar Falls

3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record



Client Information (Sub Contract Lab)			Lab PM Fredrick, Sandie		Carrier Tracking No(s) 310-48913.2	
Client Contact Shipping/Receiving			E-Mail Sandra.Fredrick@eurofins.com		Page Page 2 of 2	
Company TestAmerica Laboratories, Inc.			Accreditations Required (See note) State Program - Iowa		Job # 310-229564-2	
Address 13715 Rider Trail North,			Due Date Requested: 5/19/2022		Preservation Codes: 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: 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 Z - other (specify)	
City Earth City			TAT Requested (days):		Analysis Requested	
State, Zip MO, 63045			PO #		Total Number of Containers	
Phone 314-298-8566(Tel) 314-298-8757(Fax)			WO #		Field Filtered Sample (Yes or No)	
Email			Project # 31011020		Perform MS/MSD (Yes or No)	
Project Name ML Kapp - 25222077			SSOW#		Radium-228	
Site			Sample Date		904.0/PreSep_0 Radium-226 (GFC)	
Sample Identification - Client ID (Lab ID)			Sample Time		903.0/PreSep_21 Radium-226 (GFC)	
MW-305 (310-229564-10)			17:20 Central		X X X	
MW-304 (310-229564-11)			4/18/22 15:28 Central		X X X	
MW-304A (310-229564-12)			4/18/22 14:23 Central		X X X	
MW-303 (310-229564-13)			4/18/22 12:47 Central		X X X	
MW-302 (310-229564-14)			4/18/22 11:21 Central		X X X	
Special Instructions/Note: DO NOT SHIP ON ICE TO ST. LOUIS			Matrix (W=Water, S=solid, O=water/oli, BT=Tissue, AA=Air)		DO NOT SHIP ON ICE TO ST. LOUIS	
DO NOT SHIP ON ICE TO ST. LOUIS			Water		DO NOT SHIP ON ICE TO ST. LOUIS	
DO NOT SHIP ON ICE TO ST. LOUIS			Water		DO NOT SHIP ON ICE TO ST. LOUIS	
DO NOT SHIP ON ICE TO ST. LOUIS			Water		DO NOT SHIP ON ICE TO ST. LOUIS	
DO NOT SHIP ON ICE TO ST. LOUIS			Water		DO NOT SHIP ON ICE TO ST. LOUIS	
DO NOT SHIP ON ICE TO ST. LOUIS			Water		DO NOT SHIP ON ICE TO ST. LOUIS	

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

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 4/18/22 16:10
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Yes No

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:
 Received by: _____ Date/Time: _____
 Received by: *Suzanne Worthington* Date/Time: APR 25 2022 08:30
 Received by: _____ Date/Time: _____
 Cooler Temperature(s) °C and Other Remarks: _____



Eurofins Cedar Falls

3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record



Environment Testing
America

Client Information (Sub Contract Lab)
 Client Contact: Fredrick, Sandie
 Shipping/Receiving: Sandra.Fredrick@et.eurofins.com
 Company: TestAmerica Laboratories, Inc.
 Address: 13715 Rider Trail North, Iowa
 City: Earth City
 State, Zip: MO, 63045
 Phone: 314-298-8566 (Tel) 314-298-8757 (Fax)
 Email: ML Kapp - 25222077
 Site: **MISSING 1-6**

Analysis Requested
 Due Date Requested: 5/19/2022
 TAT Requested (days):
 PO #

Sample ID	Field Filtered Sample (Yes or No)	Form MS/MSD (Yes or No)	903.0/PreSep_21 Radium-226 (GFPC)	904.0/PreSep_0 Radium-226 (GFPC)	Ra226_228GFPC_P/ Combined Radium-226 and Radium-228	Total Number of Containers	Special Instructions/Note:
MW-307 (310-229564-1)			X	X		2	DO NOT SHIP ON ICE TO ST LOUIS
MW-310 (310-229564-2)			X	X		2	DO NOT SHIP ON ICE TO ST LOUIS
MW-309 (310-229564-3)			X	X		2	DO NOT SHIP ON ICE TO ST LOUIS
Field Blank (310-229564-4)			X	X		2	DO NOT SHIP ON ICE TO ST LOUIS
MW-308 (310-229564-5)			X	X		2	DO NOT SHIP ON ICE TO ST LOUIS
MW-311A (310-229564-6)			X	X		2	DO NOT SHIP ON ICE TO ST LOUIS
MW-311 (310-229564-7)			X	X		2	DO NOT SHIP ON ICE TO ST LOUIS
MW-306 (310-229564-8)			X	X		2	DO NOT SHIP ON ICE TO ST LOUIS
MW-301 (310-229564-9)			X	X		2	DO NOT SHIP ON ICE TO ST LOUIS

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 4/19/22
 Relinquished by: _____ Date/Time: 4/19/22
 Relinquished by: _____ Date/Time: 4/18/22
 Custody Seals Intact: Yes No
 Custody Seal No.: _____
 Cooler Temperature(s) °C and Other Remarks: _____

Received by: _____ Date/Time: _____
 Received by: *Sara Worthington* Date/Time: APR 25 2022 08:30
 Received by: _____ Date/Time: _____

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM Fredrick, Sandie	Carrier Tracking No(s) 310-489132
Shipping/Receiving		E-Mail Sandra.Fredrick@et.eurofins.com	Page Page 2 of 2
Company TestAmerica Laboratories, Inc.		Accreditations Required (See note) State Program - Iowa	
Address 13715 Rider Trail North, Earth City State, Zip MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email		Job # 310-229564-2	
Project Name ML Kapp - 25222077 Site		Preservation Codes: 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:	
Due Date Requested: 5/19/2022 TAT Requested (days):		Analysis Requested	
PO #:	Matrix (W=water, S=solid, O=water/soil, BT=Tissue, AA=Air)	Total Number of Containers	
WO #:	Sample Type (C=Comp, G=grab)	903.0/PreSep_21 Radium-226 (GFC)	
Project # 31011020	Sample Time	904.0/PreSep_0 Radium-228 (GFC)	
SSOW#	Sample Date	Radium-228 R226_228GFC_P/ Combined Radium-226 and	
	Sample Date	Perform MS/MSD (Yes or No)	
	Sample Date	Field Filtered Sample (Yes or No)	
	Sample Date	Special Instructions/Note:	
	Sample Date	DO NOT SHIP ON ICE TO ST. LOUIS	
	Sample Date	DO NOT SHIP ON ICE TO ST. LOUIS	
	Sample Date	DO NOT SHIP ON ICE TO ST. LOUIS	
	Sample Date	DO NOT SHIP ON ICE TO ST. LOUIS	
	Sample Date	DO NOT SHIP ON ICE TO ST. LOUIS	

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

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
Special Instructions/QC Requirements:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____

Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No

Received by: *Suzanne Worthington* Date/Time: APR 25 2022 08:30
 Company: *ETAS*

Ver: 06/08/2021



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-229564-2

SDG Number:

Login Number: 229564

List Number: 1

Creator: Homolar, Dana J

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.	True	
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: 310-229564-2

SDG Number:

Login Number: 229564

List Number: 2

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 04/23/22 01:10 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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.	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 <6mm (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: 310-229564-2

SDG Number:

Login Number: 229564

List Number: 3

Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

List Creation: 04/25/22 12:51 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.	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	



Tracer/Carrier Summary

Client: SCS Engineers
 Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
310-229564-1	MW-307	95.1	87.1
310-229564-2	MW-310	95.1	89.0
310-229564-3	MW-309	99.0	87.5
310-229564-4	Field Blank	94.1	87.9
310-229564-5	MW-308	98.8	87.9
310-229564-6	MW-311A	94.1	88.2
310-229564-7	MW-311	95.6	82.6
310-229564-8	MW-306	91.1	81.5
310-229564-9	MW-301	91.6	88.2
310-229564-10	MW-305	89.9	80.0
310-229564-11	MW-304	88.2	81.5
310-229564-12	MW-304A	89.2	82.2
310-229564-13	MW-303	88.9	80.4
310-229564-14	MW-302	88.4	82.6
LCS 160-561963/1-A	Lab Control Sample	97.0	81.5
LCS 160-562027/1-A	Lab Control Sample	93.1	89.3
LCSD 160-561963/2-A	Lab Control Sample Dup	98.3	81.5
LCSD 160-562027/2-A	Lab Control Sample Dup	101	86.7
MB 160-561963/10-A	Method Blank	91.6	87.1
MB 160-562027/20-A	Method Blank	95.8	88.2

Tracer/Carrier Legend
 Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (40-110)	Y (40-110)
310-229564-1	MW-307	95.1	87.1
310-229564-2	MW-310	95.1	89.0
310-229564-3	MW-309	99.0	87.5
310-229564-4	Field Blank	94.1	87.9
310-229564-5	MW-308	98.8	87.9
310-229564-6	MW-311A	94.1	88.2
310-229564-7	MW-311	95.6	82.6
310-229564-8	MW-306	91.1	81.5
310-229564-9	MW-301	91.6	88.2
310-229564-10	MW-305	89.9	80.0
310-229564-11	MW-304	88.2	81.5
310-229564-12	MW-304A	89.2	82.2
310-229564-13	MW-303	88.9	80.4
310-229564-14	MW-302	88.4	82.6
LCS 160-561965/1-A	Lab Control Sample	97.0	81.5
LCS 160-562032/1-A	Lab Control Sample	93.1	89.3
LCSD 160-561965/2-A	Lab Control Sample Dup	98.3	81.5
LCSD 160-562032/2-A	Lab Control Sample Dup	101	86.7
MB 160-561965/10-A	Method Blank	91.6	87.1
MB 160-562032/20-A	Method Blank	95.8	88.2

Eurofins Cedar Falls

Tracer/Carrier Summary

Client: SCS Engineers
Project/Site: ML Kapp - 25222077

Job ID: 310-229564-2

Tracer/Carrier Legend

Ba = Ba

Y = Y Carrier

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

C3 August 2022 Supplemental Assessment Monitoring

ANALYTICAL REPORT

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-238661-1

Client Project/Site: Alliant ML Kapp, 25222077 Li/Mo

For:

SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Attn: Meghan Blodgett



Authorized for release by:
9/7/2022 7:39:43 AM

Sandie Fredrick, Project Manager II
(920)261-1660
Sandra.Fredrick@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Detection Summary	5
Client Sample Results	6
Definitions	9
QC Sample Results	10
QC Association	11
Chronicle	12
Certification Summary	13
Method Summary	14
Chain of Custody	15
Receipt Checklists	17
Field Data Sheets	18

Case Narrative

Client: SCS Engineers
Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Job ID: 310-238661-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-238661-1

Comments

No additional comments.

Receipt

The samples were received on 8/24/2022 9:25 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.8° C.

Metals

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Sample Summary

Client: SCS Engineers
Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-238661-1	MW-311	Water	08/22/22 17:40	08/24/22 09:25
310-238661-2	MW-311A	Water	08/22/22 17:15	08/24/22 09:25
310-238661-3	Field Blank	Water	08/22/22 17:15	08/24/22 09:25

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Client Sample ID: MW-311

Lab Sample ID: 310-238661-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	45		10	2.5	ug/L	1		6020A	Total/NA
Molybdenum	29		2.0	1.2	ug/L	1		6020A	Total/NA
Ground Water Elevation	574.51				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	89.7				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	4.89				mg/L	1		Field Sampling	Total/NA
pH, Field	7.28				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	842				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	13.8				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.90				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-311A

Lab Sample ID: 310-238661-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	19		10	2.5	ug/L	1		6020A	Total/NA
Molybdenum	180		2.0	1.2	ug/L	1		6020A	Total/NA
Ground Water Elevation	574.76				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	79.6				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.89				mg/L	1		Field Sampling	Total/NA
pH, Field	7.55				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	870				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	13.6				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	0.14				NTU	1		Field Sampling	Total/NA

Client Sample ID: Field Blank

Lab Sample ID: 310-238661-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Client Sample ID: MW-311
 Date Collected: 08/22/22 17:40
 Date Received: 08/24/22 09:25

Lab Sample ID: 310-238661-1
 Matrix: Water

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	45		10	2.5	ug/L		08/26/22 08:45	09/06/22 16:17	1
Molybdenum	29		2.0	1.2	ug/L		08/26/22 08:45	09/02/22 22:03	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	574.51				ft			08/22/22 17:40	1
Oxidation Reduction Potential	89.7				millivolts			08/22/22 17:40	1
Oxygen, Dissolved, Client Supplied	4.89				mg/L			08/22/22 17:40	1
pH, Field	7.28				SU			08/22/22 17:40	1
Specific Conductance, Field	842				umhos/cm			08/22/22 17:40	1
Temperature, Field	13.8				Degrees C			08/22/22 17:40	1
Turbidity, Field	1.90				NTU			08/22/22 17:40	1



Client Sample Results

Client: SCS Engineers
 Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Client Sample ID: MW-311A

Lab Sample ID: 310-238661-2

Date Collected: 08/22/22 17:15

Matrix: Water

Date Received: 08/24/22 09:25

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	19		10	2.5	ug/L		08/26/22 08:45	09/06/22 16:21	1
Molybdenum	180		2.0	1.2	ug/L		08/26/22 08:45	09/02/22 22:06	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	574.76				ft			08/22/22 17:15	1
Oxidation Reduction Potential	79.6				millivolts			08/22/22 17:15	1
Oxygen, Dissolved, Client Supplied	0.89				mg/L			08/22/22 17:15	1
pH, Field	7.55				SU			08/22/22 17:15	1
Specific Conductance, Field	870				umhos/cm			08/22/22 17:15	1
Temperature, Field	13.6				Degrees C			08/22/22 17:15	1
Turbidity, Field	0.14				NTU			08/22/22 17:15	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Client Sample ID: Field Blank

Lab Sample ID: 310-238661-3

Date Collected: 08/22/22 17:15

Matrix: Water

Date Received: 08/24/22 09:25

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<2.5		10	2.5	ug/L		08/26/22 08:45	09/06/22 16:25	1
Molybdenum	<1.2		2.0	1.2	ug/L		08/26/22 08:45	09/02/22 22:43	1

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Definitions/Glossary

Client: SCS Engineers
Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

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: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-363766/1-A
Matrix: Water
Analysis Batch: 364641

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363766

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<1.2		2.0	1.2	ug/L		08/26/22 08:45	09/02/22 20:44	1

Lab Sample ID: MB 310-363766/1-A
Matrix: Water
Analysis Batch: 364758

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 363766

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<2.5		10	2.5	ug/L		08/26/22 08:45	09/06/22 14:53	1

Lab Sample ID: LCS 310-363766/2-A
Matrix: Water
Analysis Batch: 364641

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363766

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	200	210		ug/L		105	80 - 120

Lab Sample ID: LCS 310-363766/2-A
Matrix: Water
Analysis Batch: 364758

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 363766

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	200	200		ug/L		100	80 - 120

QC Association Summary

Client: SCS Engineers
Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Metals

Prep Batch: 363766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-238661-1	MW-311	Total/NA	Water	3005A	
310-238661-2	MW-311A	Total/NA	Water	3005A	
310-238661-3	Field Blank	Total/NA	Water	3005A	
MB 310-363766/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-363766/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 364641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-238661-1	MW-311	Total/NA	Water	6020A	363766
310-238661-2	MW-311A	Total/NA	Water	6020A	363766
310-238661-3	Field Blank	Total/NA	Water	6020A	363766
MB 310-363766/1-A	Method Blank	Total/NA	Water	6020A	363766
LCS 310-363766/2-A	Lab Control Sample	Total/NA	Water	6020A	363766

Analysis Batch: 364758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-238661-1	MW-311	Total/NA	Water	6020A	363766
310-238661-2	MW-311A	Total/NA	Water	6020A	363766
310-238661-3	Field Blank	Total/NA	Water	6020A	363766
MB 310-363766/1-A	Method Blank	Total/NA	Water	6020A	363766
LCS 310-363766/2-A	Lab Control Sample	Total/NA	Water	6020A	363766

Field Service / Mobile Lab

Analysis Batch: 363630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-238661-1	MW-311	Total/NA	Water	Field Sampling	
310-238661-2	MW-311A	Total/NA	Water	Field Sampling	

Lab Chronicle

Client: SCS Engineers
 Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Client Sample ID: MW-311
Date Collected: 08/22/22 17:40
Date Received: 08/24/22 09:25

Lab Sample ID: 310-238661-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			363766	QTZ5	EET CF	08/26/22 08:45
Total/NA	Analysis	6020A		1	364641	A6US	EET CF	09/02/22 22:03
Total/NA	Prep	3005A			363766	QTZ5	EET CF	08/26/22 08:45
Total/NA	Analysis	6020A		1	364758	A6US	EET CF	09/06/22 16:17
Total/NA	Analysis	Field Sampling		1	363630	SJF	EET CF	08/22/22 17:40

Client Sample ID: MW-311A
Date Collected: 08/22/22 17:15
Date Received: 08/24/22 09:25

Lab Sample ID: 310-238661-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			363766	QTZ5	EET CF	08/26/22 08:45
Total/NA	Analysis	6020A		1	364641	A6US	EET CF	09/02/22 22:06
Total/NA	Prep	3005A			363766	QTZ5	EET CF	08/26/22 08:45
Total/NA	Analysis	6020A		1	364758	A6US	EET CF	09/06/22 16:21
Total/NA	Analysis	Field Sampling		1	363630	SJF	EET CF	08/22/22 17:15

Client Sample ID: Field Blank
Date Collected: 08/22/22 17:15
Date Received: 08/24/22 09:25

Lab Sample ID: 310-238661-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			363766	QTZ5	EET CF	08/26/22 08:45
Total/NA	Analysis	6020A		1	364641	A6US	EET CF	09/02/22 22:43
Total/NA	Prep	3005A			363766	QTZ5	EET CF	08/26/22 08:45
Total/NA	Analysis	6020A		1	364758	A6US	EET CF	09/06/22 16:25

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-21 *

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: Alliant ML Kapp, 25222077 Li/Mo

Job ID: 310-238661-1

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	EET CF
Field Sampling	Field Sampling	EPA	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

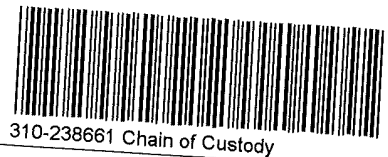
Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	<small>CITY</small> <u>Madison</u>	<small>STATE</small> <u>WI</u>	Project:
Receipt Information			
Date/Time Received:	<small>DATE</small> <u>8/24/24</u>	<small>TIME</small> <u>925</u>	Received By: <u>EM</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input 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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>T</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>1.8</u>	Corrected Temp (°C):	<u>1.8</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>TB listed on COC but not included</u>			

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Chain of Custody Record

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Client Information Client Contact: Mr. Tom Karwoski Company: SCS Engineers Address: 2830 Dairy Drive City: Madison State Zip: WI 53718 Phone: 608-224-2830 Email: tkarwoski@scsengneers.com Project Name: Allrent ML Kapp 25222077 -J/Mo Site:		Lab P/N: Fredrick, Sandie E-Mail: Sandra.Fredrick@eurofins.com PWSID:		Carrier Tracking No(s): 310-73446-20950 1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PC #: 25222077 WO #: 3-011020 Project #: 3-011020 SOW#:	Analysis Requested				
Sample Date: 8/22/22 Sample Time: 1740 Sample Type (C=Comp, G=Grab): G Preservation Code:	Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Perform MS/MSD (Yes or No): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 6020A Total Metals (2) L/Mo: <input checked="" type="checkbox"/> D	Total Number of Containers:			
Sample Identification: MW-311 MW-311A Field Blank Trip Blank	Matrix (New, Sealed, On-wastefield, Ist. Tissue A-AU): Water Water Water Water	Special Instructions/Note:			
Possible Hazard Identification <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 Deliverable Requested II III IV Other (specify):					
Empty Kit Relinquished by: Adam Daton Relinquished by: Adam Daton Relinquished by:					
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:					
Method of Shipment:					
Date/Time: 8/27/2022 1030 Date/Time:		Date/Time: 8/24/22 935 Date/Time:		Date/Time:	
Company: SCS Eng Company:		Company: M. Clark Company:		Company: Eurofins Company:	
Date/Time: 8/27/2022 1030 Date/Time:		Date/Time: 8/24/22 935 Date/Time:		Date/Time:	
Cooler Temperature(s) °C and Other Remarks:					



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-238661-1

Login Number: 238661

List Number: 1

Creator: Kizer, Preston V

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.	True	
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	



Groundwater Monitoring Results - Field Parameters
M.L. Kapp Generating Station / SCS Engineers Project #25222077.00
August 2022

Sample	Sample Date/Time	GW Elevation (ft amsl)	Temperature (Deg. C)	pH (Std. Units)	Dissolved Oxygen (mg/L)	Specific Conductivity (µs/cm)	ORP (mV)	Turbidity
MW-311	8/22/2022 / 1740	574.51	13.8	7.28	4.89	842	89.7	1.90
MW-311A	8/22/2022 / 1715	574.76	13.6	7.55	0.89	870	79.6	0.14

Abbreviations:

mg/L = milligrams per liter

mV = millivolts

amsl = above mean sea level

Notes:

None

Created by: NDK
 Last revision by: NDK
 Checked by: ES

Date: 8/24/2022
 Date: 8/24/2022
 Date: 8/24/2022

C:\Users\hld0\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\USG3GGGC\[2208_M.L. Kapp_CCR_Field.xlsx]GW Field Parameters



C4 November 2022 Assessment Monitoring

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison Wisconsin 53718

Generated 11/17/2022 2:33:21 PM

JOB DESCRIPTION

ML Kapp 25222077 MNA

JOB NUMBER

310-244102-1



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Detection Summary	5
Client Sample Results	7
Definitions	15
QC Sample Results	16
QC Association	19
Chronicle	21
Certification Summary	23
Method Summary	24
Chain of Custody	25
Receipt Checklists	44
Appendix	45

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Job ID: 310-244102-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-244102-1

Comments

No additional comments.

Receipt

The samples were received on 11/4/2022 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.8° C.

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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-244102-1	MW-311	Water	11/03/22 11:30	11/04/22 16:20
310-244102-2	MW-311A	Water	11/03/22 12:20	11/04/22 16:20
310-244102-3	MW-309	Water	11/02/22 16:40	11/04/22 16:20
310-244102-4	MW-310	Water	11/03/22 10:00	11/04/22 16:20
310-244102-5	MW-308	Water	11/02/22 15:30	11/04/22 16:20
310-244102-6	MW-301	Water	11/02/22 14:10	11/04/22 16:20
310-244102-7	MW-307	Water	11/03/22 07:45	11/04/22 16:20
310-244102-8	MW-306	Water	11/02/22 12:35	11/04/22 16:20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-311

Lab Sample ID: 310-244102-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	21000		500	150	ug/L	1		6020B	Total/NA
Potassium	7200		500	150	ug/L	1		6020B	Total/NA
Sodium	31000		1000	610	ug/L	1		6020B	Total/NA
Lithium	53		10	2.5	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO3	300		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	300		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-311A

Lab Sample ID: 310-244102-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	23000		500	150	ug/L	1		6020B	Total/NA
Manganese	6.9	J	10	3.6	ug/L	1		6020B	Total/NA
Potassium	7400		500	150	ug/L	1		6020B	Total/NA
Sodium	46000		1000	610	ug/L	1		6020B	Total/NA
Manganese	6.4	J	10	3.6	ug/L	1		6020B	Dissolved
Molybdenum	150		2.0	1.2	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO3	200		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	200		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-309

Lab Sample ID: 310-244102-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	32000		100	36	ug/L	1		6020B	Total/NA
Magnesium	40000		500	150	ug/L	1		6020B	Total/NA
Manganese	3900		10	3.6	ug/L	1		6020B	Total/NA
Potassium	2600		500	150	ug/L	1		6020B	Total/NA
Sodium	13000		1000	610	ug/L	1		6020B	Total/NA
Iron	32000		100	36	ug/L	1		6020B	Dissolved
Manganese	3900		10	3.6	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO3	510		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	510		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-310

Lab Sample ID: 310-244102-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	46000		500	150	ug/L	1		6020B	Total/NA
Manganese	160		10	3.6	ug/L	1		6020B	Total/NA
Potassium	910		500	150	ug/L	1		6020B	Total/NA
Sodium	61000		1000	610	ug/L	1		6020B	Total/NA
Manganese	160		10	3.6	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO3	420		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	420		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-308

Lab Sample ID: 310-244102-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	1100		100	36	ug/L	1		6020B	Total/NA
Magnesium	48000		500	150	ug/L	1		6020B	Total/NA
Manganese	900		10	3.6	ug/L	1		6020B	Total/NA
Potassium	630		500	150	ug/L	1		6020B	Total/NA
Sodium	43000		1000	610	ug/L	1		6020B	Total/NA
Iron	150		100	36	ug/L	1		6020B	Dissolved
Manganese	930		10	3.6	ug/L	1		6020B	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-308 (Continued)

Lab Sample ID: 310-244102-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bicarbonate Alkalinity as CaCO ₃	400		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO ₃	400		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-301

Lab Sample ID: 310-244102-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	570		100	36	ug/L	1		6020B	Total/NA
Magnesium	29000		500	150	ug/L	1		6020B	Total/NA
Manganese	730		10	3.6	ug/L	1		6020B	Total/NA
Potassium	2900		500	150	ug/L	1		6020B	Total/NA
Sodium	48000		1000	610	ug/L	1		6020B	Total/NA
Iron	410		100	36	ug/L	1		6020B	Dissolved
Manganese	750		10	3.6	ug/L	1		6020B	Dissolved
Molybdenum	550		2.0	1.2	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO ₃	200		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO ₃	200		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-307

Lab Sample ID: 310-244102-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	980		100	36	ug/L	1		6020B	Total/NA
Magnesium	66000		500	150	ug/L	1		6020B	Total/NA
Manganese	2600		10	3.6	ug/L	1		6020B	Total/NA
Potassium	730		500	150	ug/L	1		6020B	Total/NA
Sodium	13000		1000	610	ug/L	1		6020B	Total/NA
Iron	1500		100	36	ug/L	1		6020B	Dissolved
Manganese	2700		10	3.6	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO ₃	660		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO ₃	660		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-306

Lab Sample ID: 310-244102-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	25000		500	150	ug/L	1		6020B	Total/NA
Manganese	470		10	3.6	ug/L	1		6020B	Total/NA
Potassium	11000		500	150	ug/L	1		6020B	Total/NA
Sodium	130000		1000	610	ug/L	1		6020B	Total/NA
Lithium	95		10	2.5	ug/L	1		6020B	Dissolved
Manganese	540		10	3.6	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO ₃	350		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO ₃	350		10	4.6	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-311

Lab Sample ID: 310-244102-1

Date Collected: 11/03/22 11:30

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		11/10/22 08:30	11/11/22 03:50	1
Magnesium	21000		500	150	ug/L		11/10/22 08:30	11/11/22 03:50	1
Manganese	<3.6		10	3.6	ug/L		11/10/22 08:30	11/11/22 03:50	1
Potassium	7200		500	150	ug/L		11/10/22 08:30	11/11/22 03:50	1
Sodium	31000		1000	610	ug/L		11/10/22 08:30	11/11/22 03:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		11/09/22 09:00	11/11/22 14:13	1
Lithium	53		10	2.5	ug/L		11/09/22 09:00	11/11/22 14:13	1
Manganese	<3.6		10	3.6	ug/L		11/09/22 09:00	11/11/22 14:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	300		10	4.6	mg/L			11/17/22 08:20	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/17/22 08:20	1
Total Alkalinity as CaCO3 (SM 2320B)	300		10	4.6	mg/L			11/17/22 08:20	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-311A

Lab Sample ID: 310-244102-2

Date Collected: 11/03/22 12:20

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		11/10/22 08:30	11/15/22 00:39	1
Magnesium	23000		500	150	ug/L		11/10/22 08:30	11/15/22 00:39	1
Manganese	6.9 J		10	3.6	ug/L		11/10/22 08:30	11/15/22 00:39	1
Potassium	7400		500	150	ug/L		11/10/22 08:30	11/15/22 00:39	1
Sodium	46000		1000	610	ug/L		11/10/22 08:30	11/15/22 00:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		11/09/22 09:00	11/11/22 15:02	1
Manganese	6.4 J		10	3.6	ug/L		11/09/22 09:00	11/11/22 15:02	1
Molybdenum	150		2.0	1.2	ug/L		11/09/22 09:00	11/11/22 15:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	200		10	4.6	mg/L			11/17/22 08:20	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/17/22 08:20	1
Total Alkalinity as CaCO3 (SM 2320B)	200		10	4.6	mg/L			11/17/22 08:20	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-309

Lab Sample ID: 310-244102-3

Date Collected: 11/02/22 16:40

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	32000		100	36	ug/L		11/10/22 08:30	11/15/22 00:42	1
Magnesium	40000		500	150	ug/L		11/10/22 08:30	11/15/22 00:42	1
Manganese	3900		10	3.6	ug/L		11/10/22 08:30	11/15/22 00:42	1
Potassium	2600		500	150	ug/L		11/10/22 08:30	11/15/22 00:42	1
Sodium	13000		1000	610	ug/L		11/10/22 08:30	11/15/22 00:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	32000		100	36	ug/L		11/09/22 09:00	11/11/22 15:05	1
Manganese	3900		10	3.6	ug/L		11/09/22 09:00	11/11/22 15:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	510		10	4.6	mg/L			11/15/22 08:17	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/15/22 08:17	1
Total Alkalinity as CaCO3 (SM 2320B)	510		10	4.6	mg/L			11/15/22 08:17	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-310
 Date Collected: 11/03/22 10:00
 Date Received: 11/04/22 16:20

Lab Sample ID: 310-244102-4
 Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		11/10/22 08:30	11/15/22 00:46	1
Magnesium	46000		500	150	ug/L		11/10/22 08:30	11/15/22 00:46	1
Manganese	160		10	3.6	ug/L		11/10/22 08:30	11/15/22 00:46	1
Potassium	910		500	150	ug/L		11/10/22 08:30	11/15/22 00:46	1
Sodium	61000		1000	610	ug/L		11/10/22 08:30	11/15/22 00:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		11/09/22 09:00	11/11/22 15:21	1
Manganese	160		10	3.6	ug/L		11/09/22 09:00	11/11/22 15:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	420		10	4.6	mg/L			11/17/22 08:20	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/17/22 08:20	1
Total Alkalinity as CaCO3 (SM 2320B)	420		10	4.6	mg/L			11/17/22 08:20	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-308

Lab Sample ID: 310-244102-5

Date Collected: 11/02/22 15:30

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1100		100	36	ug/L		11/10/22 08:30	11/15/22 00:50	1
Magnesium	48000		500	150	ug/L		11/10/22 08:30	11/15/22 00:50	1
Manganese	900		10	3.6	ug/L		11/10/22 08:30	11/15/22 00:50	1
Potassium	630		500	150	ug/L		11/10/22 08:30	11/15/22 00:50	1
Sodium	43000		1000	610	ug/L		11/10/22 08:30	11/15/22 00:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	150		100	36	ug/L		11/09/22 09:00	11/11/22 15:24	1
Manganese	930		10	3.6	ug/L		11/09/22 09:00	11/11/22 15:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	400		10	4.6	mg/L			11/15/22 08:17	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/15/22 08:17	1
Total Alkalinity as CaCO3 (SM 2320B)	400		10	4.6	mg/L			11/15/22 08:17	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-301

Lab Sample ID: 310-244102-6

Date Collected: 11/02/22 14:10

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	570		100	36	ug/L		11/10/22 08:30	11/15/22 00:53	1
Magnesium	29000		500	150	ug/L		11/10/22 08:30	11/15/22 00:53	1
Manganese	730		10	3.6	ug/L		11/10/22 08:30	11/15/22 00:53	1
Potassium	2900		500	150	ug/L		11/10/22 08:30	11/15/22 00:53	1
Sodium	48000		1000	610	ug/L		11/10/22 08:30	11/15/22 00:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	410		100	36	ug/L		11/09/22 09:00	11/11/22 15:27	1
Manganese	750		10	3.6	ug/L		11/09/22 09:00	11/11/22 15:27	1
Molybdenum	550		2.0	1.2	ug/L		11/09/22 09:00	11/11/22 15:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	200		10	4.6	mg/L			11/15/22 10:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/15/22 10:47	1
Total Alkalinity as CaCO3 (SM 2320B)	200		10	4.6	mg/L			11/15/22 10:47	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-307

Lab Sample ID: 310-244102-7

Date Collected: 11/03/22 07:45

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	980		100	36	ug/L		11/10/22 08:30	11/15/22 01:14	1
Magnesium	66000		500	150	ug/L		11/10/22 08:30	11/15/22 01:14	1
Manganese	2600		10	3.6	ug/L		11/10/22 08:30	11/15/22 01:14	1
Potassium	730		500	150	ug/L		11/10/22 08:30	11/15/22 01:14	1
Sodium	13000		1000	610	ug/L		11/10/22 08:30	11/15/22 01:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1500		100	36	ug/L		11/09/22 09:00	11/11/22 15:30	1
Manganese	2700		10	3.6	ug/L		11/09/22 09:00	11/11/22 15:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	660		10	4.6	mg/L			11/17/22 08:20	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/17/22 08:20	1
Total Alkalinity as CaCO3 (SM 2320B)	660		10	4.6	mg/L			11/17/22 08:20	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-306

Lab Sample ID: 310-244102-8

Date Collected: 11/02/22 12:35

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		11/10/22 08:30	11/15/22 01:18	1
Magnesium	25000		500	150	ug/L		11/10/22 08:30	11/15/22 01:18	1
Manganese	470		10	3.6	ug/L		11/10/22 08:30	11/15/22 01:18	1
Potassium	11000		500	150	ug/L		11/10/22 08:30	11/15/22 01:18	1
Sodium	130000		1000	610	ug/L		11/10/22 08:30	11/15/22 01:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		11/09/22 09:00	11/11/22 15:33	1
Lithium	95		10	2.5	ug/L		11/09/22 09:00	11/11/22 15:33	1
Manganese	540		10	3.6	ug/L		11/09/22 09:00	11/11/22 15:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	350		10	4.6	mg/L			11/15/22 10:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/15/22 10:47	1
Total Alkalinity as CaCO3 (SM 2320B)	350		10	4.6	mg/L			11/15/22 10:47	1



Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Qualifiers

Metals

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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	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: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-371364/1-A
Matrix: Water
Analysis Batch: 371883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371364

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Iron	<36		100	36	ug/L		11/09/22 09:00	11/11/22 14:07	1
Lithium	<2.5		10	2.5	ug/L		11/09/22 09:00	11/11/22 14:07	1
Manganese	<3.6		10	3.6	ug/L		11/09/22 09:00	11/11/22 14:07	1
Molybdenum	<1.2		2.0	1.2	ug/L		11/09/22 09:00	11/11/22 14:07	1

Lab Sample ID: LCS 310-371364/2-A
Matrix: Water
Analysis Batch: 371883

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371364

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	200	236		ug/L		118	80 - 120
Manganese	100	98.8		ug/L		99	80 - 120
Molybdenum	200	209		ug/L		104	80 - 120

Lab Sample ID: MB 310-371503/1-A
Matrix: Water
Analysis Batch: 371783

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371503

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Iron	<36		100	36	ug/L		11/10/22 08:30	11/11/22 03:40	1
Magnesium	<150		500	150	ug/L		11/10/22 08:30	11/11/22 03:40	1
Manganese	<3.6		10	3.6	ug/L		11/10/22 08:30	11/11/22 03:40	1
Potassium	<150		500	150	ug/L		11/10/22 08:30	11/11/22 03:40	1
Sodium	<610		1000	610	ug/L		11/10/22 08:30	11/11/22 03:40	1

Lab Sample ID: LCS 310-371503/2-A
Matrix: Water
Analysis Batch: 371783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	2000	1730		ug/L		87	80 - 120
Manganese	100	100		ug/L		100	80 - 120
Potassium	2000	2010		ug/L		100	80 - 120
Sodium	2000	1900		ug/L		95	80 - 120

Lab Sample ID: 310-244102-1 MS
Matrix: Water
Analysis Batch: 371783

Client Sample ID: MW-311
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Iron	<36		200	227		ug/L		113	75 - 125
Magnesium	21000		2000	22300	4	ug/L		49	75 - 125
Manganese	<3.6		100	102		ug/L		102	75 - 125
Potassium	7200		2000	8880		ug/L		84	75 - 125
Sodium	31000		2000	32100	4	ug/L		48	75 - 125

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

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

Lab Sample ID: 310-244102-1 MSD
Matrix: Water
Analysis Batch: 371783

Client Sample ID: MW-311
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Iron	<36		200	225		ug/L		113	75 - 125	1	20
Magnesium	21000		2000	22700	4	ug/L		67	75 - 125	2	20
Manganese	<3.6		100	102		ug/L		102	75 - 125	0	20
Potassium	7200		2000	9050		ug/L		93	75 - 125	2	20
Sodium	31000		2000	32500	4	ug/L		72	75 - 125	2	20

Lab Sample ID: 310-244102-1 MS
Matrix: Water
Analysis Batch: 371883

Client Sample ID: MW-311
Prep Type: Dissolved
Prep Batch: 371364

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Iron	<36		200	231		ug/L		115	75 - 125		
Lithium	53		200	288		ug/L		118	75 - 125		
Manganese	<3.6		100	98.6		ug/L		99	75 - 125		
Molybdenum	28		200	241		ug/L		106	75 - 125		

Lab Sample ID: 310-244102-1 MSD
Matrix: Water
Analysis Batch: 371883

Client Sample ID: MW-311
Prep Type: Dissolved
Prep Batch: 371364

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Iron	<36		200	235		ug/L		118	75 - 125	2	20
Lithium	53		200	288		ug/L		118	75 - 125	0	20
Manganese	<3.6		100	101		ug/L		101	75 - 125	2	20
Molybdenum	28		200	244		ug/L		108	75 - 125	1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 310-372062/1
Matrix: Water
Analysis Batch: 372062

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/15/22 08:17	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/15/22 08:17	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/15/22 08:17	1

Lab Sample ID: LCS 310-372062/2
Matrix: Water
Analysis Batch: 372062

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				Limits
Total Alkalinity as CaCO3	1000	945		mg/L		94	90 - 110

Lab Sample ID: MB 310-372098/1
Matrix: Water
Analysis Batch: 372098

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/15/22 10:47	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 310-372098/1
Matrix: Water
Analysis Batch: 372098

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/15/22 10:47	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/15/22 10:47	1

Lab Sample ID: LCS 310-372098/2
Matrix: Water
Analysis Batch: 372098

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3	1000	945		mg/L		94	90 - 110

Lab Sample ID: MB 310-372330/1
Matrix: Water
Analysis Batch: 372330

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/17/22 08:20	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/17/22 08:20	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/17/22 08:20	1

Lab Sample ID: LCS 310-372330/2
Matrix: Water
Analysis Batch: 372330

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3	1000	969		mg/L		97	90 - 110

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 2522077 MNA

Job ID: 310-244102-1

Metals

Prep Batch: 371364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244102-1	MW-311	Dissolved	Water	3005A	
310-244102-2	MW-311A	Dissolved	Water	3005A	
310-244102-3	MW-309	Dissolved	Water	3005A	
310-244102-4	MW-310	Dissolved	Water	3005A	
310-244102-5	MW-308	Dissolved	Water	3005A	
310-244102-6	MW-301	Dissolved	Water	3005A	
310-244102-7	MW-307	Dissolved	Water	3005A	
310-244102-8	MW-306	Dissolved	Water	3005A	
MB 310-371364/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-371364/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-244102-1 MS	MW-311	Dissolved	Water	3005A	
310-244102-1 MSD	MW-311	Dissolved	Water	3005A	

Prep Batch: 371503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244102-1	MW-311	Total/NA	Water	3005A	
310-244102-2	MW-311A	Total/NA	Water	3005A	
310-244102-3	MW-309	Total/NA	Water	3005A	
310-244102-4	MW-310	Total/NA	Water	3005A	
310-244102-5	MW-308	Total/NA	Water	3005A	
310-244102-6	MW-301	Total/NA	Water	3005A	
310-244102-7	MW-307	Total/NA	Water	3005A	
310-244102-8	MW-306	Total/NA	Water	3005A	
MB 310-371503/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-371503/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-244102-1 MS	MW-311	Total/NA	Water	3005A	
310-244102-1 MSD	MW-311	Total/NA	Water	3005A	

Analysis Batch: 371783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244102-1	MW-311	Total/NA	Water	6020B	371503
MB 310-371503/1-A	Method Blank	Total/NA	Water	6020B	371503
LCS 310-371503/2-A	Lab Control Sample	Total/NA	Water	6020B	371503
310-244102-1 MS	MW-311	Total/NA	Water	6020B	371503
310-244102-1 MSD	MW-311	Total/NA	Water	6020B	371503

Analysis Batch: 371883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244102-1	MW-311	Dissolved	Water	6020B	371364
310-244102-2	MW-311A	Dissolved	Water	6020B	371364
310-244102-3	MW-309	Dissolved	Water	6020B	371364
310-244102-4	MW-310	Dissolved	Water	6020B	371364
310-244102-5	MW-308	Dissolved	Water	6020B	371364
310-244102-6	MW-301	Dissolved	Water	6020B	371364
310-244102-7	MW-307	Dissolved	Water	6020B	371364
310-244102-8	MW-306	Dissolved	Water	6020B	371364
MB 310-371364/1-A	Method Blank	Total/NA	Water	6020B	371364
LCS 310-371364/2-A	Lab Control Sample	Total/NA	Water	6020B	371364
310-244102-1 MS	MW-311	Dissolved	Water	6020B	371364
310-244102-1 MSD	MW-311	Dissolved	Water	6020B	371364

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Metals

Analysis Batch: 372070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244102-2	MW-311A	Total/NA	Water	6020B	371503
310-244102-3	MW-309	Total/NA	Water	6020B	371503
310-244102-4	MW-310	Total/NA	Water	6020B	371503
310-244102-5	MW-308	Total/NA	Water	6020B	371503
310-244102-6	MW-301	Total/NA	Water	6020B	371503
310-244102-7	MW-307	Total/NA	Water	6020B	371503
310-244102-8	MW-306	Total/NA	Water	6020B	371503

General Chemistry

Analysis Batch: 372062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244102-3	MW-309	Total/NA	Water	SM 2320B	
310-244102-5	MW-308	Total/NA	Water	SM 2320B	
MB 310-372062/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-372062/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 372098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244102-6	MW-301	Total/NA	Water	SM 2320B	
310-244102-8	MW-306	Total/NA	Water	SM 2320B	
MB 310-372098/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-372098/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 372330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244102-1	MW-311	Total/NA	Water	SM 2320B	
310-244102-2	MW-311A	Total/NA	Water	SM 2320B	
310-244102-4	MW-310	Total/NA	Water	SM 2320B	
310-244102-7	MW-307	Total/NA	Water	SM 2320B	
MB 310-372330/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-372330/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-311

Lab Sample ID: 310-244102-1

Date Collected: 11/03/22 11:30

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 14:13
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	371783	A6US	EET CF	11/11/22 03:50
Total/NA	Analysis	SM 2320B		1	372330	MAQ3	EET CF	11/17/22 08:20

Client Sample ID: MW-311A

Lab Sample ID: 310-244102-2

Date Collected: 11/03/22 12:20

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 15:02
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 00:39
Total/NA	Analysis	SM 2320B		1	372330	MAQ3	EET CF	11/17/22 08:20

Client Sample ID: MW-309

Lab Sample ID: 310-244102-3

Date Collected: 11/02/22 16:40

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 15:05
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 00:42
Total/NA	Analysis	SM 2320B		1	372062	MAQ3	EET CF	11/15/22 08:17

Client Sample ID: MW-310

Lab Sample ID: 310-244102-4

Date Collected: 11/03/22 10:00

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 15:21
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 00:46
Total/NA	Analysis	SM 2320B		1	372330	MAQ3	EET CF	11/17/22 08:20

Lab Chronicle

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Client Sample ID: MW-308

Date Collected: 11/02/22 15:30

Date Received: 11/04/22 16:20

Lab Sample ID: 310-244102-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 15:24
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 00:50
Total/NA	Analysis	SM 2320B		1	372062	MAQ3	EET CF	11/15/22 08:17

Client Sample ID: MW-301

Date Collected: 11/02/22 14:10

Date Received: 11/04/22 16:20

Lab Sample ID: 310-244102-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 15:27
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 00:53
Total/NA	Analysis	SM 2320B		1	372098	MAQ3	EET CF	11/15/22 10:47

Client Sample ID: MW-307

Date Collected: 11/03/22 07:45

Date Received: 11/04/22 16:20

Lab Sample ID: 310-244102-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 15:30
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 01:14
Total/NA	Analysis	SM 2320B		1	372330	MAQ3	EET CF	11/17/22 08:20

Client Sample ID: MW-306

Date Collected: 11/02/22 12:35

Date Received: 11/04/22 16:20

Lab Sample ID: 310-244102-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 15:33
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 01:18
Total/NA	Analysis	SM 2320B		1	372098	MAQ3	EET CF	11/15/22 10:47

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244102-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET CF
SM 2320B	Alkalinity	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

Protocol References:

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.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



310-244102 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY <u>Madison</u>	STATE <u>WI</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>11-4-22</u>	TIME <u>1620</u>	Received By: <u>ML</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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # ____ of ____	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>1.8</u>	Corrected Temp (°C):	<u>1.8</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			

Client Information
 Client Name: MEGHAN BLODGETT
 Company: SCS Engineers
 Address: 2330 DAIRY DRIVE
 City: MADISON WI 53713
 State/Zip: WI 53713
 Phone: 608-533-2626
 Email: M.BLODGETT@SCSENGEN.COM
 Project Name: ML KAYO 2502077 MNA
 Site:
 Project #: 3 011020
 SSOW#:
 PC #: 2502077
 Compliance Project: Yes No
 TAT Requested (days):
 Due Date Requested:
 PWSID:
 Phone: 72-661-482
 Email: Sandra.Fredrick@eurofins.com
 Lab PM: Fredrick, Sandie
 Sampler: SEAN MADISON
 Camera Tracking No: 310-74719 15916 2
 Page: Page 2 of 2
 Job #:

Analysis Requested

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Liquid, Solid, Swab, etc.)	Preservation Code	Analysis Requested
W-311	11-16-20	11:00	L	Water	A	2300 Alkalinity Carb/Carb
W-114	11-16-20	12:00	L	Water	A	6020A Total Metals (5)
W-114	11-16-20	14:00	L	Water	A	6020A D Metals (2 S)
W-114	11-16-20	16:00	L	Water	A	
W-313	11-16-20	17:00	L	Water	A	
W-311	11-16-20	17:45	L	Water	A	
W-311	11-16-20	18:30	L	Water	A	
W-311	11-16-20	19:15	L	Water	A	
W-311	11-16-20	20:00	L	Water	A	

Sample Identification

Sample ID	Sample Date	Sample Time	Sample Type	Matrix	Preservation Code	Analysis Requested
W-311	11-16-20	11:00	L	Water	A	2300 Alkalinity Carb/Carb
W-114	11-16-20	12:00	L	Water	A	6020A Total Metals (5)
W-114	11-16-20	14:00	L	Water	A	6020A D Metals (2 S)
W-114	11-16-20	16:00	L	Water	A	
W-313	11-16-20	17:00	L	Water	A	
W-311	11-16-20	17:45	L	Water	A	
W-311	11-16-20	18:30	L	Water	A	
W-311	11-16-20	19:15	L	Water	A	
W-311	11-16-20	20:00	L	Water	A	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested I II III IV Other (specify)
 Empty Kit Relinquished by:
 Relinquished by: SEAN MADISON
 Relinquished by:
 Relinquished by:
 Custody Seals Intact: Yes No
 Custody Seal No:
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/Note:
 Total Number of Containers:
 Preservation Codes:
 A H₂L
 B NaOH
 C In Acetate
 D Nitric Acid
 E H₂SO₄
 F MeOH
 G Amchlo
 H Aromatic Acid
 I Ice
 J DI Water
 K EDTA
 L EDA
 Other:
 M Hexane
 N None
 O Ashes/2
 P Na₂O₂s
 Q H₂SO₄
 R Na₂S₂O₃
 S H₂SO₄
 T TSP Dodeca w/flat
 U Acetone
 V MCAA
 W pH 4.5
 Y Trizma
 Z other (specify)



Table 1 Sampling Points and Parameters CCR Rule Sampling Program
Groundwater Monitoring M.L. Kapp Ash Pond/ SCS Engineers Project #25220077.00

	Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	Field Blank	TOTAL	
Appendix III Parameters (total/ unfiltered)	Boron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Calcium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Appendix IV Parameters (total/ unfiltered)	Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Fluoride		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Lead		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Lithium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Mercury		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Molybdenum		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Selenium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Thallium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Radium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Field Parameters		Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	ORP	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Color	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Odor	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
Total (Unfiltered)	Alkalinity Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Alkalinity Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Arsenic			X	X												2
	Dissolved (Filtered)	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Lithium			X												3
		Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Molybdenum	X	X	X	X		X								X	6
	Field Parameters	Sulfide Field	X	X	X	X	X	X	X	X	X	X	X	X	X		13
Total Iron Field		X	X	X	X	X	X	X	X	X	X	X	X	X		13	
Ferrous Iron, Field		X	X	X	X	X	X	X	X	X	X	X	X	X		13	



Environment Testing
America



310-244102 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <i>SCS</i>			
City/State:	<small>CITY</small> <i>Madison</i>	<small>STATE</small> <i>WI</i>	Project:
Receipt Information			
Date/Time Received:	<small>DATE</small> <i>11-4-22</i>	<small>TIME</small> <i>1620</i>	Received By: <i>AL</i>
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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # ____ of ____	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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:	<i>R</i>	Correction Factor (°C):	<i>0</i>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<i>1.8</i>	Corrected Temp (°C):	<i>1.8</i>
• 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			

Client Information		Sambler SEAN VADZASZ		Lab PM Fredrick Sandie	Carrier Tracking No(s) 310-747 9 13916 2
Client Contact MEGHAN BLOODGETT		Phone 712-661-1682		E Mail Sandra.Fredrick@eurofins.com	Page Page 2 of 2
Company SCS Engineers		Address 2830 DAIRY DRIVE		City MADISON	State of Origin
City MADISON		State Zip WI 53733		Job #	
Phone 608-833-5326		Compliance Project Yes <input type="checkbox"/> No <input type="checkbox"/>		Preservation Codes	
Email m.bloodgett@scsengineers.com		PO # 25222077		A 4PL B MeOH C Ln Acetic D Nitric Acid E H2SO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K EDTA L FDA Other	
Project Name MIL KAPO 252-2077 MINA		WC #		M Hexane N None O AshtO2 P Na2O45 Q Na2SO4 R Na2S2O3 S H2S2O4 T TSP Dodecahydrate U MCA V pH 4.5 W Trama Z other spec(y)	
Site		Project # 011020		Special Instructions/Note	
		SSOW#		Total Number of Containers	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Soil, O=Other)	Field Filtered Sample (Yes or No)	Formaldehyde (Yes or No)	330B Alkalinity Carbicarb	6020A Total Metals (S)	6020A D Metals (S)	Analysis Requested	Preservation Codes	Special Instructions/Note
3-30	3-30	30	C	Water	X	X	X	X	X			
3-31A	3-31	20	C	Water	X	X	X	X	X			
3-31	3-31	40	C	Water	X	X	X	X	X			
3-31	3-31	45	C	Water	X	X	X	X	X			
3-31	3-31	45	C	Water	X	X	X	X	X			
3-31	3-31	45	C	Water	X	X	X	X	X			
3-31	3-31	45	C	Water	X	X	X	X	X			
3-31	3-31	45	C	Water	X	X	X	X	X			
3-31	3-31	45	C	Water	X	X	X	X	X			

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B
Deliverable Requested I II III IV Other (specify)		<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab
Empty Kit Relinquished by		Archive For _____ Months	
Relinquished by		Method of Shipment	
Relinquished by		Date/Time	
Relinquished by		Date/Time	
Relinquished by		Date/Time	
Custody Seal Intact		Cooler Temperature 5°C and Other Remarks	
A Yes <input type="checkbox"/> No <input type="checkbox"/>		11-4-22 1620	

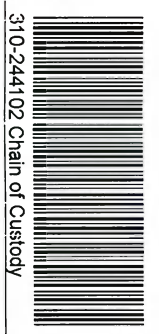


Table 1 Sampling Points and Parameters CCR Rule Sampling Program
Groundwater Monitoring M.L. Kapp Ash Pond/SCS Engineers Project #25220077.00

	Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	Field Blank	TOTAL	
COCs #1 (non-radium) & #2 (radium) CCR Rule Parameters	Appendix III Parameters (total/unfiltered)	Boron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Calcium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Appendix IV Parameters (total/unfiltered)	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
		Field Parameters	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X	
	pH (field)		X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Well Depth		X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Specific Conductance		X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Dissolved Oxygen		X	X	X	X	X	X	X	X	X	X	X	X	X		13
	ORP		X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Temperature		X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Turbidity		X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Color		X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Odor		X	X	X	X	X	X	X	X	X	X	X	X	X		13
	COC #3 Additional Parameters	Total (Unfiltered)	Alkalinity Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	
Alkalinity Bicarbonate			X	X	X	X	X	X	X	X	X	X	X	X	X		13
Iron			X	X	X	X	X	X	X	X	X	X	X	X	X		13
Magnesium			X	X	X	X	X	X	X	X	X	X	X	X	X		13
Manganese			X	X	X	X	X	X	X	X	X	X	X	X	X		13
Potassium			X	X	X	X	X	X	X	X	X	X	X	X	X		13
Dissolved (Filtered)		Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Arsenic			X	X											2
		Iron	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Lithium			X				X					X			3
Field Parameters		Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Molybdenum	X	X	X	X		X							X		6
		Sulfide Field	X	X	X	X	X	X	X	X	X	X	X	X	X		13
Field Parameters	Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Ferrous Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X		13	



Environment Testing
America



310-244102 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client:	SCS		
City/State:	CITY	STATE	Project:
	Madison	WI	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	11-4-22	1620	PL
Delivery Type:	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input checked="" type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
		<input type="checkbox"/> US Mail	<input type="checkbox"/> Spee-Dee
		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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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 checked="" type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? 1
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:	R		Correction Factor (°C):
			0
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	1.8		Corrected Temp (°C):
			1.8
• 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			

Table 1. Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - M.L. Kapp Ash Pond/SCS Engineers Project #252007.00

Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	Field Blank	TOTAL	
	Appendix III Parameters (Total/unfiltered)	Boron	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	14
	Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Fluoride (Total/unfiltered)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Alkalinity - Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Alkalinity - Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3
	Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6
	Sulfide, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Ferrous Ion, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13



310-244102 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

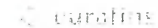
Client Information			
Client:	SCS		
City/State:	CITY Madison	STATE WI	Project:
Receipt Information			
Date/Time Received:	DATE 11-4-22	TIME 1620	Received By: ALK
Delivery Type:	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input checked="" type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
			<input type="checkbox"/> US Mail
			<input type="checkbox"/> Spee-Dee
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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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? <u>1</u>
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice	<input type="checkbox"/> Blue ice	<input type="checkbox"/> Dry ice
			<input type="checkbox"/> Other: _____
Thermometer ID:	R		Correction Factor (°C):
			Q
* Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature.			
Uncorrected Temp (°C):	1.8		Corrected Temp (°C):
			1.8
* 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			

Eurofins Cedar Falls

3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

**TestAmerica Des Moines SC
214**



Client Information		Sampler SEAN MARCZEWSKI		Lab PM: Fredrick, Sandie		Carrier Tracking No(s):		COC No 310-74719-18916.2			
Client Contact MEGHAN BLODGETT		Phone 712-661-9682		E-Mail Sandra.Fredrick@et.eurofinsus.com		State of Origin:		Page Page 2 of 2			
Company: SCS Engineers				PWSID:		Analysis Requested					
Address: 2830 DAIRY DRIVE		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MS/MS (Yes or No) 2320B - Alkalinity - Carb/Bicarb 6020A - Total Metals (5) 6020A - D. Metals (2-5)		Total Number of containers		Preservation Codes:			
City: MADISON		TAT Requested (days):						A - HCL		M - Hexane	
State, Zip: WI, 53718		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No						B - NaOH		N - None	
Phone:		PO #: 25222077						C - Zn Acetate		O - AsNaO2	
Email: M.BLODGETT@SCSENGINEERS.COM		WC #:						D - Nitric Acid		P - Na2O4S	
Project Name ML Kapp 25222077 MNA		Project # 31011020		E - NaHSO4		Q - Na2SO3		R - Na2S2O3			
Site:		SSOW#:		F - MeOH		S - H2SO4		T - TSP Dodecahydrate			
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, D=waste/soil, BT=Tissue, A=Air)			
						Preservation Code		Other:			
MW-311		11/3		1130		G		Water			
MW-311A		11/3		1220		G		Water			
MW-309		11/2		1640		G		Water			
MW-310		11/3		1000		G		Water			
MW-308		11/2		1530		G		Water			
MW-301		11/2		1410		G		Water			
MW-307		11/3		0745		G		Water			
MW-300		11/2		1235		G		Water			
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
<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					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:						
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by: SEAN MARCZEWSKI		Date/Time: 11/4/22 11:00		Company: SCS		Received by:		Date/Time:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:			
Relinquished by:		Date/Time:		Company:		Received by: <i>[Signature]</i>		Date/Time: 11-4-22 1620			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:							



Table 1. Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - M/L Kapp Ash Pond/ SCS Engineers Project #252007.00

	COCs #1 (non-radium) & #2 (radium) - CCR Rule Parameters													COC #3 - Additional Parameters		
	Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	Field Blank	TOTAL
Appendix III Parameters (total/unfiltered)	Boron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Calcium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Appendix IV Parameters (total/unfiltered)	Cobalt	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	14
Lead		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Lithium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Mercury		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Molybdenum		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Selenium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Thallium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Radium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Groundwater Elevation		X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
pH (field)		X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Well Depth		X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Specific Conductance		X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Field Parameters		Dissolved Oxygen	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	13
	Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Alkalinity - Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Alkalinity - Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Total (Unfiltered)	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	2	
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	3	
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	6	
	Sulfide, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Field Parameters	Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Ferrous Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	13	

15 Ent Testing A



310-244102 Chain of Custody

Cool Receipt and Temperature Log Form

Client: SCS

City/State: CITY Madison WI

Project:

Received Information

Date/Time Received:	DATE	TIME	Received By:
	<u>11-4</u>	<u>1620</u>	<u>AL</u>

Delivery Type: UPS FedEx Ground US Mail Spee-Dee

Lab Courier Client Drop-off Other:

Condition of Cooler/Containers

Sample(s) received in Cooler? No *If yes: Cooler ID:*

Multiple Coolers? No *If yes: Cooler # _____ of _____*

Cooler Custody Seals Present? No *If yes: Cooler custody seals intact?* Yes No

Sample Custody Seals Present? No *If yes: Sample custody seals intact?* Yes No

Trip Blank Present? No *If yes: Which VOA samples are in cooler?* 1

Temperature Record

Coolant: Wet ice Dry ice Other: _____ NONE

Thermometer ID: _____ Correction Factor (°C): 0

• Temp Blank Temperature – If no trip blank temperature above criteria, proceed to Sample Container Temperature:

Uncorrected Temp (°C): _____ Corrected Temp (°C): 1.8

• Sample Container Temperature

Container(s) used:	CONTAINER 1	CONTAINER 2
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria (s) received same day of sampling? Yes No

a) If yes: Is there evidence the process began? Yes No

2) If temperature is <0°C, are there signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked frozen solid?) Yes No

NOTE: If yes, contact PM before PM, proceed with login

Additional Comments



Environment Testing
America



310-244102 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY <u>Madison</u>	STATE <u>WI</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>11-4-22</u>	TIME <u>1620</u>	Received By: <u>AM</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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # ____ of ____	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>1.8</u>		Corrected Temp (°C): <u>1.8</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			

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Information Client Contact: MEGHAN BLODGETT Company: SCS Engineers Address: 2833 DAIRY DRIVE City: MADISON State Zip: WI 53713 Phone: 608-261-5373 Email: M.BLODGETT@SCSENG.COM		Lab P/N: Fredrick Sandie E Mail: Sandra.Fredrick@eurofins.com PMSID:	
Sampler: SEAN MAPLE Phone: 712-661-082		Carrier Tracking No(s): 310-74719-139162 Page: Page 2 of 2 Job #:	
Due Date Requested: TAT Requested (days): Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No PO #: 2522077 WO #: 31011020 Project #: 31011020 Site: SCDW#		Analysis Requested: Total Number of Containers:	
Sample Identification: Sample Date: 11-2-2013 Sample Time: 1300 Sample Type (C=Comp, G=Grab): U Matrix (M=Water, S=Soil, D=Dredge, T=Tissue, A=Air): Water		Field Filtered Sample (Yes or No): X Perform In-House Test (Yes or No): X 220B Alkalinity Carbinet: X 6020A Total Metals (5): X 6020A D Metals (5): X	
Possible Hazard Identification: <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		Special Instructions/Note: 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	
Deliverable Requested: <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV Other (specify)		Method of Shipment:	
Empty Kit Requisitioned by: SEAN MAPLE Date/Time: 11-2-2013		Received by: SCS Date/Time: 11-4-22 1620	
Requisitioned by: SEAN MAPLE Date/Time:		Received by: SCS Date/Time:	
Requisitioned by:		Received by:	
Custody Seal No: SCDW#		Custody Seal No:	

Table 1 Sampling Points and Parameters CCR Rule Sampling Program
Groundwater Monitoring M L Kapp Ash Pond/ SCS Engineers Project #25220077.00

	Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	Field Blank	TOTAL	
COCs #1 (non-radium) & #2 (radium) CCR Rule Parameters	Appendix III Parameters (total/unfiltered)	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
	Boron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Calcium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Appendix IV Parameters (total/unfiltered)	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Field Parameters	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13
Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
COC #3 Additional Parameters	Total (Unfiltered)	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	
	Alkalinity Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Alkalinity Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Dissolved (Filtered)	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6	
Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6		
Sulfide Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13		
Field Parameters	Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
Ferrous Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X		13	



Environment Testing
America



310-244102 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY <u>Madison</u>	STATE <u>WI</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>11-4-22</u>	TIME <u>1620</u>	Received By: <u>AM</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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # ____ of ____	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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>1.8</u>	Corrected Temp (°C):	<u>1.8</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			

Eurofins Cedar Falls
 3019 Venture Way
 Cedar Falls IA 50613
 Phone 319.277.2401 Fax 319.277.2425

Chain of Custody Record

TestAmerica Des Moines SC
214

Client Information Client Name: MEGHAN BLODGETT Address: 2833 DAIRY DRIVE City: MADISON State: IA 52246 Phone: 563-207-5373 Email: M.BLODGETT@SCS-EN-VERS.COM		Lab P/N: Fredrick Sandie E Mail: Sandra.Fredrick@eurofins.com PMSID:	
Sampler Name: SEAN MAPLE Phone: 712-661-082		Carrier Tracking No(s): 310-74719-139162 Page: Page 2 of 2 Job #:	
Company SCS Engineers Address: 2833 DAIRY DRIVE City: MADISON State: IA 52246 Phone: 563-207-5373 Email: M.BLODGETT@SCS-EN-VERS.COM Project Name: MIL Kapp 25772077 MMA Site:		Analysis Requested Due Date Requested: TAT Requested (days): Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No PO #: 2522077 WO #: 3504W# Project #: 31011020 Field Filtered Sample (Yes or No):	
Sample Identification Sample ID: W-3 Sample Date: 1/2/2013 Sample Time: 1300 Matrix: Water Sample Type: C=Comp, G=Grab Preservation Code: F		Total Number of Containers: 50 Special Instructions/Note:	
Possible Hazard Identification <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		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	
Deliverable Requested I II III IV Other (specify)		Special Instructions/QC Requirements	
Empy Kit Requisitioned by: Requisitioned by: SEAN MAPLE Requisitioned by:		Method of Shipment: Date/Time: 1/2/2013 Date/Time:	
Custody Seal No Yes <input type="checkbox"/> No <input type="checkbox"/>		Date/Time: 11-4-22 Date/Time: 1620 Company:	

Table 1 Sampling Points and Parameters CCR Rule Sampling Program
Groundwater Monitoring M L Kapp Ash Pond/ SCS Engineers Project #25220077.00

	Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	Field Blank	TOTAL	
COCs #1 (non-radium) & #2 (radium) CCR Rule Parameters	Appendix III Parameters (total/unfiltered)	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
	Boron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Calcium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Appendix IV Parameters (total/unfiltered)	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Field Parameters	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		ORP	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X		13
		Color	X	X	X	X	X	X	X	X	X	X	X	X	X		13
	Odor	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
COC #3 Additional Parameters	Total (Unfiltered)	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	
	Alkalinity Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Alkalinity Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Dissolved (Filtered)	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6	
Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6		
Sulfide Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13		
Field Parameters	Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X		13	
	Ferrous Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X		13	

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-244102-1

Login Number: 244102

List Number: 1

Creator: Muehling, Angela C

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Eurofins Cedar Falls

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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
11/17/2022 2:33:21 PM

Authorized for release by
Jodie Bracken, Project Management Assistant II
Jodie.Bracken@et.eurofinsus.com
Designee for
Sandie Fredrick, Project Manager II
Sandra.Fredrick@et.eurofinsus.com
(920)261-1660

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison Wisconsin 53718

Generated 11/21/2022 5:34:35 PM

JOB DESCRIPTION

ML Kapp 25222077 MNA

JOB NUMBER

310-244107-1



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Detection Summary	5
Client Sample Results	7
Definitions	12
QC Sample Results	13
QC Association	15
Chronicle	17
Certification Summary	19
Method Summary	20
Chain of Custody	21
Receipt Checklists	24
Appendix	25

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Job ID: 310-244107-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-244107-1

Comments

No additional comments.

Receipt

The samples were received on 11/4/2022 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.4° C.

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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-244107-1	MW-305	Water	11/02/22 11:20	11/04/22 16:20
310-244107-2	MW-303	Water	11/01/22 16:50	11/04/22 16:20
310-244107-3	MW-302	Water	11/01/22 15:00	11/04/22 16:20
310-244107-4	MW-304A	Water	11/02/22 08:10	11/04/22 16:20
310-244107-5	MW-304	Water	11/02/22 09:25	11/04/22 16:20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Client Sample ID: MW-305

Lab Sample ID: 310-244107-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	1600		100	36	ug/L	1		6020B	Total/NA
Magnesium	25000		500	150	ug/L	1		6020B	Total/NA
Manganese	2400		10	3.6	ug/L	1		6020B	Total/NA
Potassium	12000		500	150	ug/L	1		6020B	Total/NA
Sodium	120000		1000	610	ug/L	1		6020B	Total/NA
Iron	1300		100	36	ug/L	1		6020B	Dissolved
Manganese	2500		10	3.6	ug/L	1		6020B	Dissolved
Molybdenum	780		2.0	1.2	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO3	220		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	220		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-303

Lab Sample ID: 310-244107-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	15000		100	36	ug/L	1		6020B	Total/NA
Magnesium	4900		500	150	ug/L	1		6020B	Total/NA
Manganese	2200		10	3.6	ug/L	1		6020B	Total/NA
Potassium	16000		500	150	ug/L	1		6020B	Total/NA
Sodium	96000		1000	610	ug/L	1		6020B	Total/NA
Arsenic	7.5		2.0	0.75	ug/L	1		6020B	Dissolved
Iron	430		100	36	ug/L	1		6020B	Dissolved
Lithium	41		10	2.5	ug/L	1		6020B	Dissolved
Manganese	1700		10	3.6	ug/L	1		6020B	Dissolved
Molybdenum	210		2.0	1.2	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO3	170		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	170		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-302

Lab Sample ID: 310-244107-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	13000		500	150	ug/L	1		6020B	Total/NA
Manganese	330		10	3.6	ug/L	1		6020B	Total/NA
Potassium	9400		500	150	ug/L	1		6020B	Total/NA
Sodium	52000		1000	610	ug/L	1		6020B	Total/NA
Manganese	350		10	3.6	ug/L	1		6020B	Dissolved
Molybdenum	180		2.0	1.2	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO3	210		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	210		10	4.6	mg/L	1		SM 2320B	Total/NA

Client Sample ID: MW-304A

Lab Sample ID: 310-244107-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	480		100	36	ug/L	1		6020B	Total/NA
Magnesium	28000		500	150	ug/L	1		6020B	Total/NA
Manganese	610		10	3.6	ug/L	1		6020B	Total/NA
Potassium	1700		500	150	ug/L	1		6020B	Total/NA
Sodium	16000		1000	610	ug/L	1		6020B	Total/NA
Iron	480		100	36	ug/L	1		6020B	Dissolved
Manganese	610		10	3.6	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO3	280		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	280		10	4.6	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Client Sample ID: MW-304

Lab Sample ID: 310-244107-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	1200		100	36	ug/L	1		6020B	Total/NA
Magnesium	23000		500	150	ug/L	1		6020B	Total/NA
Manganese	620		10	3.6	ug/L	1		6020B	Total/NA
Potassium	13000		500	150	ug/L	1		6020B	Total/NA
Sodium	80000		1000	610	ug/L	1		6020B	Total/NA
Arsenic	1.8	J	2.0	0.75	ug/L	1		6020B	Dissolved
Manganese	660		10	3.6	ug/L	1		6020B	Dissolved
Molybdenum	1000		2.0	1.2	ug/L	1		6020B	Dissolved
Bicarbonate Alkalinity as CaCO3	180		10	4.6	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	180		10	4.6	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Client Sample ID: MW-305

Lab Sample ID: 310-244107-1

Date Collected: 11/02/22 11:20

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1600		100	36	ug/L		11/10/22 08:30	11/18/22 16:59	1
Magnesium	25000		500	150	ug/L		11/10/22 08:30	11/18/22 16:59	1
Manganese	2400		10	3.6	ug/L		11/10/22 08:30	11/18/22 16:59	1
Potassium	12000		500	150	ug/L		11/10/22 08:30	11/18/22 16:59	1
Sodium	120000		1000	610	ug/L		11/10/22 08:30	11/18/22 16:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1300		100	36	ug/L		11/09/22 09:00	11/11/22 15:36	1
Manganese	2500		10	3.6	ug/L		11/09/22 09:00	11/11/22 15:36	1
Molybdenum	780		2.0	1.2	ug/L		11/09/22 09:00	11/11/22 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	220		10	4.6	mg/L			11/15/22 10:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/15/22 10:47	1
Total Alkalinity as CaCO3 (SM 2320B)	220		10	4.6	mg/L			11/15/22 10:47	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Client Sample ID: MW-303

Lab Sample ID: 310-244107-2

Date Collected: 11/01/22 16:50

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	15000		100	36	ug/L		11/10/22 08:30	11/18/22 17:07	1
Magnesium	4900		500	150	ug/L		11/10/22 08:30	11/18/22 17:07	1
Manganese	2200		10	3.6	ug/L		11/10/22 08:30	11/18/22 17:07	1
Potassium	16000		500	150	ug/L		11/10/22 08:30	11/18/22 17:07	1
Sodium	96000		1000	610	ug/L		11/10/22 08:30	11/18/22 17:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.5		2.0	0.75	ug/L		11/09/22 09:00	11/11/22 15:39	1
Iron	430		100	36	ug/L		11/09/22 09:00	11/11/22 15:39	1
Lithium	41		10	2.5	ug/L		11/09/22 09:00	11/11/22 15:39	1
Manganese	1700		10	3.6	ug/L		11/09/22 09:00	11/11/22 15:39	1
Molybdenum	210		2.0	1.2	ug/L		11/09/22 09:00	11/11/22 15:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	170		10	4.6	mg/L			11/12/22 08:27	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/12/22 08:27	1
Total Alkalinity as CaCO3 (SM 2320B)	170		10	4.6	mg/L			11/12/22 08:27	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Client Sample ID: MW-302

Lab Sample ID: 310-244107-3

Date Collected: 11/01/22 15:00

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		11/10/22 08:30	11/18/22 17:10	1
Magnesium	13000		500	150	ug/L		11/10/22 08:30	11/18/22 17:10	1
Manganese	330		10	3.6	ug/L		11/10/22 08:30	11/18/22 17:10	1
Potassium	9400		500	150	ug/L		11/10/22 08:30	11/18/22 17:10	1
Sodium	52000		1000	610	ug/L		11/10/22 08:30	11/18/22 17:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	<36		100	36	ug/L		11/09/22 09:00	11/11/22 16:01	1
Manganese	350		10	3.6	ug/L		11/09/22 09:00	11/11/22 16:01	1
Molybdenum	180		2.0	1.2	ug/L		11/09/22 09:00	11/11/22 16:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	210		10	4.6	mg/L			11/12/22 08:27	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/12/22 08:27	1
Total Alkalinity as CaCO3 (SM 2320B)	210		10	4.6	mg/L			11/12/22 08:27	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Client Sample ID: MW-304A

Lab Sample ID: 310-244107-4

Date Collected: 11/02/22 08:10

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	480		100	36	ug/L		11/10/22 08:30	11/18/22 17:14	1
Magnesium	28000		500	150	ug/L		11/10/22 08:30	11/18/22 17:14	1
Manganese	610		10	3.6	ug/L		11/10/22 08:30	11/18/22 17:14	1
Potassium	1700		500	150	ug/L		11/10/22 08:30	11/18/22 17:14	1
Sodium	16000		1000	610	ug/L		11/10/22 08:30	11/18/22 17:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	480		100	36	ug/L		11/09/22 09:00	11/11/22 16:55	1
Manganese	610		10	3.6	ug/L		11/09/22 09:00	11/11/22 16:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	280		10	4.6	mg/L			11/15/22 10:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/15/22 10:47	1
Total Alkalinity as CaCO3 (SM 2320B)	280		10	4.6	mg/L			11/15/22 10:47	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Client Sample ID: MW-304

Lab Sample ID: 310-244107-5

Date Collected: 11/02/22 09:25

Matrix: Water

Date Received: 11/04/22 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	1200		100	36	ug/L		11/10/22 08:30	11/18/22 17:17	1
Magnesium	23000		500	150	ug/L		11/10/22 08:30	11/18/22 17:17	1
Manganese	620		10	3.6	ug/L		11/10/22 08:30	11/18/22 17:17	1
Potassium	13000		500	150	ug/L		11/10/22 08:30	11/18/22 17:17	1
Sodium	80000		1000	610	ug/L		11/10/22 08:30	11/18/22 17:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8	J	2.0	0.75	ug/L		11/09/22 09:00	11/11/22 16:58	1
Iron	<36		100	36	ug/L		11/09/22 09:00	11/11/22 16:58	1
Manganese	660		10	3.6	ug/L		11/09/22 09:00	11/11/22 16:58	1
Molybdenum	1000		2.0	1.2	ug/L		11/09/22 09:00	11/11/22 16:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	180		10	4.6	mg/L			11/15/22 10:47	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<4.6		10	4.6	mg/L			11/15/22 10:47	1
Total Alkalinity as CaCO3 (SM 2320B)	180		10	4.6	mg/L			11/15/22 10:47	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Qualifiers

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.

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: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-371364/1-A
Matrix: Water
Analysis Batch: 371883

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371364

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.75		2.0	0.75	ug/L		11/09/22 09:00	11/11/22 14:07	1
Iron	<36		100	36	ug/L		11/09/22 09:00	11/11/22 14:07	1
Lithium	<2.5		10	2.5	ug/L		11/09/22 09:00	11/11/22 14:07	1
Manganese	<3.6		10	3.6	ug/L		11/09/22 09:00	11/11/22 14:07	1
Molybdenum	<1.2		2.0	1.2	ug/L		11/09/22 09:00	11/11/22 14:07	1

Lab Sample ID: LCS 310-371364/2-A
Matrix: Water
Analysis Batch: 371883

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371364

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	200	232		ug/L		116	80 - 120
Lithium	200	236		ug/L		118	80 - 120
Manganese	100	98.8		ug/L		99	80 - 120
Molybdenum	200	209		ug/L		104	80 - 120

Lab Sample ID: MB 310-371511/1-A
Matrix: Water
Analysis Batch: 372484

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371511

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Magnesium	<150		500	150	ug/L		11/10/22 08:30	11/17/22 23:52	1
Iron	<36		100	36	ug/L		11/10/22 08:30	11/17/22 23:52	1
Potassium	<150		500	150	ug/L		11/10/22 08:30	11/17/22 23:52	1
Manganese	<3.6		10	3.6	ug/L		11/10/22 08:30	11/17/22 23:52	1
Sodium	<610		1000	610	ug/L		11/10/22 08:30	11/17/22 23:52	1

Lab Sample ID: LCS 310-371511/2-A
Matrix: Water
Analysis Batch: 372484

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371511

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	200	228		ug/L		114	80 - 120
Potassium	2000	2100		ug/L		105	80 - 120
Manganese	100	102		ug/L		102	80 - 120
Sodium	2000	2130		ug/L		106	80 - 120

Lab Sample ID: 310-244107-1 DU
Matrix: Water
Analysis Batch: 372598

Client Sample ID: MW-305
Prep Type: Total/NA
Prep Batch: 371511

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	
							RPD	Limit
Magnesium	25000		23500		ug/L		6	20
Iron	1600		1590		ug/L		0.2	20
Potassium	12000		11100		ug/L		4	20
Manganese	2400		2270		ug/L		5	20
Sodium	120000		117000		ug/L		5	20

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

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

Lab Sample ID: 310-244107-3 DU
Matrix: Water
Analysis Batch: 371883

Client Sample ID: MW-302
Prep Type: Dissolved
Prep Batch: 371364

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Arsenic	8.3		8.36		ug/L		0.7	20
Iron	<36		<36		ug/L		NC	20
Lithium	21		21.9		ug/L		2	20
Manganese	350		351		ug/L		0.06	20
Molybdenum	180		188		ug/L		2	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 310-371899/1
Matrix: Water
Analysis Batch: 371899

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/12/22 08:27	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/12/22 08:27	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/12/22 08:27	1

Lab Sample ID: LCS 310-371899/2
Matrix: Water
Analysis Batch: 371899

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Total Alkalinity as CaCO3	1000	968		mg/L		97	90 - 110

Lab Sample ID: MB 310-372098/1
Matrix: Water
Analysis Batch: 372098

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bicarbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/15/22 10:47	1
Carbonate Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/15/22 10:47	1
Total Alkalinity as CaCO3	<2.3		5.0	2.3	mg/L			11/15/22 10:47	1

Lab Sample ID: LCS 310-372098/2
Matrix: Water
Analysis Batch: 372098

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Total Alkalinity as CaCO3	1000	945		mg/L		94	90 - 110

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Metals

Prep Batch: 371364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244107-1	MW-305	Dissolved	Water	3005A	
310-244107-2	MW-303	Dissolved	Water	3005A	
310-244107-3	MW-302	Dissolved	Water	3005A	
310-244107-4	MW-304A	Dissolved	Water	3005A	
310-244107-5	MW-304	Dissolved	Water	3005A	
MB 310-371364/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-371364/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-244107-3 DU	MW-302	Dissolved	Water	3005A	

Prep Batch: 371511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244107-1	MW-305	Total/NA	Water	3005A	
310-244107-2	MW-303	Total/NA	Water	3005A	
310-244107-3	MW-302	Total/NA	Water	3005A	
310-244107-4	MW-304A	Total/NA	Water	3005A	
310-244107-5	MW-304	Total/NA	Water	3005A	
MB 310-371511/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-371511/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-244107-1 DU	MW-305	Total/NA	Water	3005A	

Analysis Batch: 371883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244107-1	MW-305	Dissolved	Water	6020B	371364
310-244107-2	MW-303	Dissolved	Water	6020B	371364
310-244107-3	MW-302	Dissolved	Water	6020B	371364
MB 310-371364/1-A	Method Blank	Total/NA	Water	6020B	371364
LCS 310-371364/2-A	Lab Control Sample	Total/NA	Water	6020B	371364
310-244107-3 DU	MW-302	Dissolved	Water	6020B	371364

Analysis Batch: 371941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244107-4	MW-304A	Dissolved	Water	6020B	371364
310-244107-5	MW-304	Dissolved	Water	6020B	371364

Analysis Batch: 372484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-371511/1-A	Method Blank	Total/NA	Water	6020B	371511
LCS 310-371511/2-A	Lab Control Sample	Total/NA	Water	6020B	371511

Analysis Batch: 372598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244107-1	MW-305	Total/NA	Water	6020B	371511
310-244107-2	MW-303	Total/NA	Water	6020B	371511
310-244107-3	MW-302	Total/NA	Water	6020B	371511
310-244107-4	MW-304A	Total/NA	Water	6020B	371511
310-244107-5	MW-304	Total/NA	Water	6020B	371511
310-244107-1 DU	MW-305	Total/NA	Water	6020B	371511

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

General Chemistry

Analysis Batch: 371899

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244107-2	MW-303	Total/NA	Water	SM 2320B	
310-244107-3	MW-302	Total/NA	Water	SM 2320B	
MB 310-371899/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-371899/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Analysis Batch: 372098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244107-1	MW-305	Total/NA	Water	SM 2320B	
310-244107-4	MW-304A	Total/NA	Water	SM 2320B	
310-244107-5	MW-304	Total/NA	Water	SM 2320B	
MB 310-372098/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-372098/2	Lab Control Sample	Total/NA	Water	SM 2320B	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Client Sample ID: MW-305

Lab Sample ID: 310-244107-1

Date Collected: 11/02/22 11:20

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 15:36
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372598	A6US	EET CF	11/18/22 16:59
Total/NA	Analysis	SM 2320B		1	372098	MAQ3	EET CF	11/15/22 10:47

Client Sample ID: MW-303

Lab Sample ID: 310-244107-2

Date Collected: 11/01/22 16:50

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 15:39
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372598	A6US	EET CF	11/18/22 17:07
Total/NA	Analysis	SM 2320B		1	371899	MAQ3	EET CF	11/12/22 08:27

Client Sample ID: MW-302

Lab Sample ID: 310-244107-3

Date Collected: 11/01/22 15:00

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371883	A6US	EET CF	11/11/22 16:01
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372598	A6US	EET CF	11/18/22 17:10
Total/NA	Analysis	SM 2320B		1	371899	MAQ3	EET CF	11/12/22 08:27

Client Sample ID: MW-304A

Lab Sample ID: 310-244107-4

Date Collected: 11/02/22 08:10

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371941	A6US	EET CF	11/11/22 16:55
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372598	A6US	EET CF	11/18/22 17:14
Total/NA	Analysis	SM 2320B		1	372098	MAQ3	EET CF	11/15/22 10:47

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Client Sample ID: MW-304

Lab Sample ID: 310-244107-5

Date Collected: 11/02/22 09:25

Matrix: Water

Date Received: 11/04/22 16:20

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Dissolved	Prep	3005A			371364	QTZ5	EET CF	11/09/22 09:00
Dissolved	Analysis	6020B		1	371941	A6US	EET CF	11/11/22 16:58
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372598	A6US	EET CF	11/18/22 17:17
Total/NA	Analysis	SM 2320B		1	372098	MAQ3	EET CF	11/15/22 10:47

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401



Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077 MNA

Job ID: 310-244107-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET CF
SM 2320B	Alkalinity	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

Protocol References:

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.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



310-244107 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client:	SCS		
City/State:	CITY	STATE	Project:
		WI	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	11/4/22	10:20	ST
Delivery Type:	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input checked="" type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
		<input type="checkbox"/> US Mail	<input type="checkbox"/> Spee-Dee
			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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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:	P		
Correction Factor (°C):	0		
* Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	24	Corrected Temp (°C):	24
* 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			



Table 1. Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - MLL Kapp Ash Pond/SCS Engineers Project #2522007.00

Parameter	MW-														Field	TOTAL		
	301	302	303	304	304A	305	307	308	309	310	311	311A	311A	Blank				
Appendix III Parameters (total/unfiltered)	Boron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Calcium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
	Appendix IV Parameters (total/unfiltered)	Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Fluoride		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Lead		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Lithium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Mercury		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Molybdenum		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Selenium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Thallium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Thalium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Radium		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Groundwater Elevation		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Field Parameters		pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
		Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
		Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Alkalinity- Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Alkalinity- Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13		
Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13		
Dissolved (Filtered)	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6	
	Sulfide, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Field Parameters	Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	Ferrous Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-244107-1

Login Number: 244107

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Costello, Mackenzie K

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Eurofins Cedar Falls

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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
11/21/2022 5:34:35 PM

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

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718
Generated 12/1/2022 4:57:43 PM Revision 1

JOB DESCRIPTION

ML Kapp 25222077

JOB NUMBER

310-244104-1

Eurofins Cedar Falls

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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
12/1/2022 4:57:43 PM
Revision 1

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



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Sample Summary	5
Detection Summary	6
Client Sample Results	8
Definitions	12
QC Sample Results	13
QC Association	15
Chronicle	17
Certification Summary	19
Method Summary	20
Chain of Custody	21
Receipt Checklists	24
Field Data Sheets	25

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Job ID: 310-244104-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-244104-1

Comments

No additional comments.

Revision

The report being provided is a revision of the original report sent on 11/22/2022. The report (revision 1) is being revised due to: Revision added to amend the Groundwater Elevation for MW-310.

Receipt

The samples were received on 11/4/2022 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -0.4° C.

HPLC/IC

Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-310 (310-244104-2), MW-311 (310-244104-3) and MW-311A (310-244104-4). 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.

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.

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-244104-1	Field Blank	Water	11/03/22 09:00	11/04/22 16:20
310-244104-2	MW-310	Water	11/03/22 10:00	11/04/22 16:20
310-244104-3	MW-311	Water	11/03/22 11:30	11/04/22 16:20
310-244104-4	MW-311A	Water	11/03/22 12:20	11/04/22 16:20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Client Sample ID: Field Blank

Lab Sample ID: 310-244104-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	38	J	50	26	mg/L	1		SM 2540C	Total/NA
pH	6.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: MW-310

Lab Sample ID: 310-244104-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	70		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	120		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	39		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	900		100	58	ug/L	1		6020B	Total/NA
Calcium	110		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.43	J	0.50	0.19	ug/L	1		6020B	Total/NA
Lithium	3.1	J	10	2.5	ug/L	1		6020B	Total/NA
Total Dissolved Solids	640		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	578.18				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	130.3				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.05				mg/L	1		Field Sampling	Total/NA
pH, Field	6.88				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	943				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	13.7				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.49				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-311

Lab Sample ID: 310-244104-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	120		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	44		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	6400		700	410	ug/L	7		6020B	Total/NA
Calcium	100		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	53		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	26		2.0	1.2	ug/L	1		6020B	Total/NA
Selenium	2.8	J	5.0	0.96	ug/L	1		6020B	Total/NA
Total Dissolved Solids	520		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.4	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	572.54				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	149.0				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	2.72				mg/L	1		Field Sampling	Total/NA
pH, Field	7.18				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	684				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	14.2				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.94				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-311A

Lab Sample ID: 310-244104-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	28		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	270		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	23		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	10000		700	410	ug/L	7		6020B	Total/NA
Calcium	100		0.50	0.19	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Client Sample ID: MW-311A (Continued)

Lab Sample ID: 310-244104-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	20		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	140		2.0	1.2	ug/L	1		6020B	Total/NA
Selenium	2.8	J	5.0	0.96	ug/L	1		6020B	Total/NA
Total Dissolved Solids	660		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.6	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	572.90				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	147.4				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.00				mg/L	1		Field Sampling	Total/NA
pH, Field	7.42				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	770				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	12.9				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.05				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Client Sample ID: Field Blank

Lab Sample ID: 310-244104-1

Date Collected: 11/03/22 09:00

Matrix: Water

Date Received: 11/04/22 16:20

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			11/22/22 00:05	1
Fluoride	<0.044		0.10	0.044	mg/L			11/22/22 00:05	1
Sulfate	<0.40		1.0	0.40	mg/L			11/22/22 00:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/18/22 16:45	1
Arsenic	<0.75		2.0	0.75	ug/L		11/10/22 08:30	11/18/22 16:45	1
Barium	<0.88		2.0	0.88	ug/L		11/10/22 08:30	11/18/22 16:45	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/18/22 16:45	1
Boron	<58		100	58	ug/L		11/10/22 08:30	11/21/22 16:18	1
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/18/22 16:45	1
Calcium	<0.19		0.50	0.19	mg/L		11/10/22 08:30	11/18/22 16:45	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/18/22 16:45	1
Cobalt	<0.19		0.50	0.19	ug/L		11/10/22 08:30	11/18/22 16:45	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/18/22 16:45	1
Lithium	<2.5		10	2.5	ug/L		11/10/22 08:30	11/18/22 16:45	1
Molybdenum	<1.2		2.0	1.2	ug/L		11/10/22 08:30	11/18/22 16:45	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/18/22 16:45	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/18/22 16:45	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		11/14/22 16:06	11/15/22 15:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	38	J	50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	6.3	HF	0.1	0.1	SU			11/04/22 19:15	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Client Sample ID: MW-310

Lab Sample ID: 310-244104-2

Date Collected: 11/03/22 10:00

Matrix: Water

Date Received: 11/04/22 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	70		5.0	2.3	mg/L			11/22/22 00:19	5
Fluoride	<0.22		0.50	0.22	mg/L			11/22/22 00:19	5
Sulfate	120		5.0	2.0	mg/L			11/22/22 00:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/18/22 16:48	1
Arsenic	<0.75		2.0	0.75	ug/L		11/10/22 08:30	11/18/22 16:48	1
Barium	39		2.0	0.88	ug/L		11/10/22 08:30	11/18/22 16:48	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/18/22 16:48	1
Boron	900		100	58	ug/L		11/10/22 08:30	11/21/22 16:21	1
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/18/22 16:48	1
Calcium	110		0.50	0.19	mg/L		11/10/22 08:30	11/18/22 16:48	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/18/22 16:48	1
Cobalt	0.43 J		0.50	0.19	ug/L		11/10/22 08:30	11/18/22 16:48	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/18/22 16:48	1
Lithium	3.1 J		10	2.5	ug/L		11/10/22 08:30	11/18/22 16:48	1
Molybdenum	<1.2		2.0	1.2	ug/L		11/10/22 08:30	11/18/22 16:48	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/18/22 16:48	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/18/22 16:48	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		11/14/22 16:06	11/15/22 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	640		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	7.3	HF	0.1	0.1	SU			11/04/22 19:17	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	578.18				ft			11/03/22 10:00	1
Oxidation Reduction Potential	130.3				millivolts			11/03/22 10:00	1
Oxygen, Dissolved, Client Supplied	0.05				mg/L			11/03/22 10:00	1
pH, Field	6.88				SU			11/03/22 10:00	1
Specific Conductance, Field	943				umhos/cm			11/03/22 10:00	1
Temperature, Field	13.7				Degrees C			11/03/22 10:00	1
Turbidity, Field	1.49				NTU			11/03/22 10:00	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Client Sample ID: MW-311

Lab Sample ID: 310-244104-3

Date Collected: 11/03/22 11:30

Matrix: Water

Date Received: 11/04/22 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16		5.0	2.3	mg/L			11/22/22 00:33	5
Fluoride	<0.22		0.50	0.22	mg/L			11/22/22 00:33	5
Sulfate	120		5.0	2.0	mg/L			11/22/22 00:33	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/18/22 16:52	1
Arsenic	<0.75		2.0	0.75	ug/L		11/10/22 08:30	11/18/22 16:52	1
Barium	44		2.0	0.88	ug/L		11/10/22 08:30	11/18/22 16:52	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/18/22 16:52	1
Boron	6400		700	410	ug/L		11/10/22 08:30	11/21/22 16:24	7
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/18/22 16:52	1
Calcium	100		0.50	0.19	mg/L		11/10/22 08:30	11/18/22 16:52	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/18/22 16:52	1
Cobalt	<0.19		0.50	0.19	ug/L		11/10/22 08:30	11/18/22 16:52	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/18/22 16:52	1
Lithium	53		10	2.5	ug/L		11/10/22 08:30	11/18/22 16:52	1
Molybdenum	26		2.0	1.2	ug/L		11/10/22 08:30	11/18/22 16:52	1
Selenium	2.8 J		5.0	0.96	ug/L		11/10/22 08:30	11/18/22 16:52	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/18/22 16:52	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		11/14/22 16:06	11/15/22 15:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	520		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	7.4	HF	0.1	0.1	SU			11/04/22 19:18	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	572.54				ft			11/03/22 11:30	1
Oxidation Reduction Potential	149.0				millivolts			11/03/22 11:30	1
Oxygen, Dissolved, Client Supplied	2.72				mg/L			11/03/22 11:30	1
pH, Field	7.18				SU			11/03/22 11:30	1
Specific Conductance, Field	684				umhos/cm			11/03/22 11:30	1
Temperature, Field	14.2				Degrees C			11/03/22 11:30	1
Turbidity, Field	1.94				NTU			11/03/22 11:30	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Client Sample ID: MW-311A

Lab Sample ID: 310-244104-4

Date Collected: 11/03/22 12:20

Matrix: Water

Date Received: 11/04/22 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28		5.0	2.3	mg/L			11/22/22 00:47	5
Fluoride	<0.22		0.50	0.22	mg/L			11/22/22 00:47	5
Sulfate	270		5.0	2.0	mg/L			11/22/22 00:47	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/18/22 16:55	1
Arsenic	<0.75		2.0	0.75	ug/L		11/10/22 08:30	11/18/22 16:55	1
Barium	23		2.0	0.88	ug/L		11/10/22 08:30	11/18/22 16:55	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/18/22 16:55	1
Boron	10000		700	410	ug/L		11/10/22 08:30	11/21/22 16:28	7
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/18/22 16:55	1
Calcium	100		0.50	0.19	mg/L		11/10/22 08:30	11/18/22 16:55	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/18/22 16:55	1
Cobalt	<0.19		0.50	0.19	ug/L		11/10/22 08:30	11/18/22 16:55	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/18/22 16:55	1
Lithium	20		10	2.5	ug/L		11/10/22 08:30	11/18/22 16:55	1
Molybdenum	140		2.0	1.2	ug/L		11/10/22 08:30	11/18/22 16:55	1
Selenium	2.8 J		5.0	0.96	ug/L		11/10/22 08:30	11/18/22 16:55	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/18/22 16:55	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		11/14/22 16:06	11/15/22 15:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	660		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	7.6	HF	0.1	0.1	SU			11/04/22 19:20	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	572.90				ft			11/03/22 12:20	1
Oxidation Reduction Potential	147.4				millivolts			11/03/22 12:20	1
Oxygen, Dissolved, Client Supplied	0.00				mg/L			11/03/22 12:20	1
pH, Field	7.42				SU			11/03/22 12:20	1
Specific Conductance, Field	770				umhos/cm			11/03/22 12:20	1
Temperature, Field	12.9				Degrees C			11/03/22 12:20	1
Turbidity, Field	1.05				NTU			11/03/22 12:20	1

Eurofins Cedar Falls

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Qualifiers

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	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	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: ML Kapp 25222077

Job ID: 310-244104-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-372872/36
Matrix: Water
Analysis Batch: 372872

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			11/22/22 10:41	1
Fluoride	<0.044		0.10	0.044	mg/L			11/22/22 10:41	1
Sulfate	<0.40		1.0	0.40	mg/L			11/22/22 10:41	1

Lab Sample ID: LCS 310-372872/37
Matrix: Water
Analysis Batch: 372872

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	9.58		mg/L		96	90 - 110
Fluoride	2.00	2.02		mg/L		101	90 - 110
Sulfate	10.0	9.88		mg/L		99	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-371511/1-A
Matrix: Water
Analysis Batch: 372484

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371511

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/17/22 23:52	1
Arsenic	<0.75		2.0	0.75	ug/L		11/10/22 08:30	11/17/22 23:52	1
Barium	<0.88		2.0	0.88	ug/L		11/10/22 08:30	11/17/22 23:52	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/17/22 23:52	1
Boron	<58		100	58	ug/L		11/10/22 08:30	11/17/22 23:52	1
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/17/22 23:52	1
Calcium	<0.19		0.50	0.19	mg/L		11/10/22 08:30	11/17/22 23:52	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/17/22 23:52	1
Cobalt	<0.19		0.50	0.19	ug/L		11/10/22 08:30	11/17/22 23:52	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/17/22 23:52	1
Molybdenum	<1.2		2.0	1.2	ug/L		11/10/22 08:30	11/17/22 23:52	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/17/22 23:52	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/17/22 23:52	1

Lab Sample ID: LCS 310-371511/2-A
Matrix: Water
Analysis Batch: 372484

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371511

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	200	224		ug/L		112	80 - 120
Arsenic	200	189		ug/L		94	80 - 120
Barium	100	105		ug/L		105	80 - 120
Beryllium	100	99.2		ug/L		99	80 - 120
Boron	200	199		ug/L		100	80 - 120
Cadmium	100	103		ug/L		103	80 - 120
Calcium	2.00	2.08		mg/L		104	80 - 120
Chromium	100	96.4		ug/L		96	80 - 120
Cobalt	100	102		ug/L		102	80 - 120
Lead	200	213		ug/L		106	80 - 120

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

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

Lab Sample ID: LCS 310-371511/2-A
Matrix: Water
Analysis Batch: 372484

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371511

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	200	214		ug/L		107	80 - 120
Selenium	400	377		ug/L		94	80 - 120
Thallium	200	212		ug/L		106	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-372026/1-A
Matrix: Water
Analysis Batch: 372178

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372026

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		11/14/22 16:06	11/15/22 14:22	1

Lab Sample ID: LCS 310-372026/2-A
Matrix: Water
Analysis Batch: 372178

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372026

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 310-371235/1
Matrix: Water
Analysis Batch: 371235

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	<26		50	26	mg/L			11/07/22 15:39	1

Lab Sample ID: LCS 310-371235/2
Matrix: Water
Analysis Batch: 371235

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	966		mg/L		97	90 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-370999/25
Matrix: Water
Analysis Batch: 370999

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	7.1		SU		101	98 - 102

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

HPLC/IC

Analysis Batch: 372872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-1	Field Blank	Total/NA	Water	9056A	
310-244104-2	MW-310	Total/NA	Water	9056A	
310-244104-3	MW-311	Total/NA	Water	9056A	
310-244104-4	MW-311A	Total/NA	Water	9056A	
MB 310-372872/36	Method Blank	Total/NA	Water	9056A	
LCS 310-372872/37	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 371511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-1	Field Blank	Total/NA	Water	3005A	
310-244104-2	MW-310	Total/NA	Water	3005A	
310-244104-3	MW-311	Total/NA	Water	3005A	
310-244104-4	MW-311A	Total/NA	Water	3005A	
MB 310-371511/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-371511/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 372026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-1	Field Blank	Total/NA	Water	7470A	
310-244104-2	MW-310	Total/NA	Water	7470A	
310-244104-3	MW-311	Total/NA	Water	7470A	
310-244104-4	MW-311A	Total/NA	Water	7470A	
MB 310-372026/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-372026/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 372178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-1	Field Blank	Total/NA	Water	7470A	372026
310-244104-2	MW-310	Total/NA	Water	7470A	372026
310-244104-3	MW-311	Total/NA	Water	7470A	372026
310-244104-4	MW-311A	Total/NA	Water	7470A	372026
MB 310-372026/1-A	Method Blank	Total/NA	Water	7470A	372026
LCS 310-372026/2-A	Lab Control Sample	Total/NA	Water	7470A	372026

Analysis Batch: 372484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-371511/1-A	Method Blank	Total/NA	Water	6020B	371511
LCS 310-371511/2-A	Lab Control Sample	Total/NA	Water	6020B	371511

Analysis Batch: 372598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-1	Field Blank	Total/NA	Water	6020B	371511
310-244104-2	MW-310	Total/NA	Water	6020B	371511
310-244104-3	MW-311	Total/NA	Water	6020B	371511
310-244104-4	MW-311A	Total/NA	Water	6020B	371511

Analysis Batch: 372722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-1	Field Blank	Total/NA	Water	6020B	371511

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Metals (Continued)

Analysis Batch: 372722 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-2	MW-310	Total/NA	Water	6020B	371511
310-244104-3	MW-311	Total/NA	Water	6020B	371511
310-244104-4	MW-311A	Total/NA	Water	6020B	371511

General Chemistry

Analysis Batch: 370999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-1	Field Blank	Total/NA	Water	SM 4500 H+ B	
310-244104-2	MW-310	Total/NA	Water	SM 4500 H+ B	
310-244104-3	MW-311	Total/NA	Water	SM 4500 H+ B	
310-244104-4	MW-311A	Total/NA	Water	SM 4500 H+ B	
LCS 310-370999/25	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 371235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-1	Field Blank	Total/NA	Water	SM 2540C	
310-244104-2	MW-310	Total/NA	Water	SM 2540C	
310-244104-3	MW-311	Total/NA	Water	SM 2540C	
310-244104-4	MW-311A	Total/NA	Water	SM 2540C	
MB 310-371235/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-371235/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 371501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-2	MW-310	Total/NA	Water	Field Sampling	
310-244104-3	MW-311	Total/NA	Water	Field Sampling	
310-244104-4	MW-311A	Total/NA	Water	Field Sampling	

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Client Sample ID: Field Blank

Lab Sample ID: 310-244104-1

Date Collected: 11/03/22 09:00

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	372872	J7CK	EET CF	11/22/22 00:05
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372598	A6US	EET CF	11/18/22 16:45
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372722	A6US	EET CF	11/21/22 16:18
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:07
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:15

Client Sample ID: MW-310

Lab Sample ID: 310-244104-2

Date Collected: 11/03/22 10:00

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/22/22 00:19
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372598	A6US	EET CF	11/18/22 16:48
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372722	A6US	EET CF	11/21/22 16:21
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:09
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:17
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/03/22 10:00

Client Sample ID: MW-311

Lab Sample ID: 310-244104-3

Date Collected: 11/03/22 11:30

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/22/22 00:33
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372598	A6US	EET CF	11/18/22 16:52
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		7	372722	A6US	EET CF	11/21/22 16:24
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:11
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:18
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/03/22 11:30

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Client Sample ID: MW-311A

Lab Sample ID: 310-244104-4

Date Collected: 11/03/22 12:20

Matrix: Water

Date Received: 11/04/22 16:20

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/22/22 00:47
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372598	A6US	EET CF	11/18/22 16:55
Total/NA	Prep	3005A			371511	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		7	372722	A6US	EET CF	11/21/22 16:28
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:13
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:20
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/03/22 12:20

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-1

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
Field Sampling	Field Sampling	EPA	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF

Protocol References:

EPA = US Environmental Protection Agency

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.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



310-244104 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client:	SCS		
City/State:	CITY	STATE	Project:
	Madison	WI	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	11-4-22	1620	RL
Delivery Type:	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input checked="" type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
		<input type="checkbox"/> US Mail	<input type="checkbox"/> Spee-Dee
		<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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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? <u>1</u>
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:	R		
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	-0.4		Corrected Temp (°C):
			-0.4
• 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			



Table 1. Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - M.L. Kapp Ash Pond/ SCS Engineers Project #2520077.00

Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-305	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	Field Blank	TOTAL
	Boiron	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	14
Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Alkalinity - Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Alkalinity - Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2
Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3
Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Sulfide, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6
Total Ion, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Ferrous Ion, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-244104-1

Login Number: 244104

List Number: 1

Creator: Muehling, Angela C

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.	True	
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	



Groundwater Monitoring Results - Field Parameters
M.L. Kapp Generating Station / SCS Engineers Project #25222077.00
November 2022

Sample	Sample Date/Time	GW Elevation (ft amsl)	Temperature (Deg. C)	pH (Std. Units)	Dissolved Oxygen (mg/L)	Specific Conductivity (µs/cm)	ORP (mV)	Turbidity
MW-301	11/2/2022 1410	576.16	15.3	6.43	0.05	840	90.1	2.76
MW-302	11/1/2022 1500	573.23	15.4	7.36	0.21	759	179.7	0.86
MW-303	11/1/2022 1650	574.26	14.3	7.26	0.20	894	102.8	83
MW-304	11/2/2022 925	573.39	13.6	6.69	0.09	920	103.1	84
MW-304A	11/2/2022 810	573.47	12.4	6.94	0.01	561	15.8	1.06
MW-305	11/2/2022 1120	573.30	13.9	7.22	0.00	1,178	74.8	3.39
MW-306	11/2/2022 1235	574.63	14.6	6.93	0.19	1,508	126.4	1.42
MW-307	11/3/2022 745	589.14	14.7	6.22	0.08	1,096	66.5	2.11
MW-308	11/2/2022 1530	573.80	16.0	6.14	0.21	730	137.7	12.50
MW-309	11/2/2022 1640	--	15.8	6.59	0.00	1,021	-126.9	2.89
MW-310	11/3/2022 1000	578.18	13.7	6.88	0.05	943	130.3	1.49
MW-311	11/3/2022 1130	572.54	14.2	7.18	2.72	684	149.0	1.94
MW-311A	11/3/2022 1220	572.90	12.9	7.42	0.00	770	147.4	1.05

Abbreviations:

mg/L = milligrams per liter

mV = millivolts

amsl = above mean sea level

Notes:

None

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

Date: 10/6/2021
 Date: 11/7/2022
 Date: 11/7/2022

C:\Users\hld0\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\USG3GGGC\[2211_M.L. Kapp_CCR_Field.xlsx]GW Field Parameters

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718
Generated 12/1/2022 9:38:04 PM Revision 1

JOB DESCRIPTION

ML Kapp 25222077

JOB NUMBER

310-244105-1

Eurofins Cedar Falls

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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
12/1/2022 9:38:04 PM
Revision 1

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



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Sample Summary	5
Detection Summary	6
Client Sample Results	8
Definitions	13
QC Sample Results	14
QC Association	17
Chronicle	20
Certification Summary	22
Method Summary	23
Chain of Custody	24
Receipt Checklists	27
Field Data Sheets	28

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Job ID: 310-244105-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-244105-1

Comments

No additional comments.

Revision

The report being provided is a revision of the original report sent on 11/22/2022. The report (revision 1) is being revised due to: Revision added to re-review boron results for samples 1-3 (MW-307, MW-308 and MW-309). Client requested only one final boron result.

Receipt

The samples were received on 11/4/2022 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.6° C.

HPLC/IC

Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-307 (310-244105-1), MW-309 (310-244105-2), MW-308 (310-244105-3), MW-301 (310-244105-4) and MW-306 (310-244105-5). 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.

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.

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-244105-1	MW-307	Water	11/03/22 07:45	11/04/22 16:20
310-244105-2	MW-309	Water	11/02/22 16:40	11/04/22 16:20
310-244105-3	MW-308	Water	11/02/22 15:30	11/04/22 16:20
310-244105-4	MW-301	Water	11/02/22 14:10	11/04/22 16:20
310-244105-5	MW-306	Water	11/02/22 12:35	11/04/22 16:20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Client Sample ID: MW-307

Lab Sample ID: 310-244105-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	62		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	24		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	1.1	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	320		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	63	J	100	58	ug/L	1		6020B	Total/NA
Calcium	170		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	5.5		0.50	0.19	ug/L	1		6020B	Total/NA
Lithium	7.0	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	5.1		2.0	1.2	ug/L	1		6020B	Total/NA
Total Dissolved Solids	770		50	26	mg/L	1		SM 2540C	Total/NA
pH	6.8	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	589.14				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	66.5				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.08				mg/L	1		Field Sampling	Total/NA
pH, Field	6.22				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1096				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	14.7				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	2.11				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-309

Lab Sample ID: 310-244105-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	55		5.0	2.3	mg/L	5		9056A	Total/NA
Arsenic	1.3	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	160		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	490		100	58	ug/L	1		6020B	Total/NA
Calcium	160		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.39	J	0.50	0.19	ug/L	1		6020B	Total/NA
Molybdenum	1.4	J	2.0	1.2	ug/L	1		6020B	Total/NA
Total Dissolved Solids	640		50	26	mg/L	1		SM 2540C	Total/NA
pH	6.9	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	-				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-126.9				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.00				mg/L	1		Field Sampling	Total/NA
pH, Field	6.59				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1021				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	15.8				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	2.89				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-308

Lab Sample ID: 310-244105-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	30		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	91		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	0.88	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	90		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	430		100	58	ug/L	1		6020B	Total/NA
Cadmium	0.090	J	0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	79		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.64		0.50	0.19	ug/L	1		6020B	Total/NA
Lithium	3.0	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	1.3	J	2.0	1.2	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: ML Kapp 25222077

Job ID: 310-244105-1

Client Sample ID: MW-308 (Continued)

Lab Sample ID: 310-244105-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	500		50	26	mg/L	1		SM 2540C	Total/NA
pH	6.6	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	573.80				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	137.7				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.21				mg/L	1		Field Sampling	Total/NA
pH, Field	6.14				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	730				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	16.0				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	12.50				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-301

Lab Sample ID: 310-244105-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	66		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	230		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	64		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	12000		1000	580	ug/L	10		6020B	Total/NA
Cadmium	0.26		0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	110		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	4.3		0.50	0.19	ug/L	1		6020B	Total/NA
Lithium	7.9	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	490		2.0	1.2	ug/L	1		6020B	Total/NA
Total Dissolved Solids	680		50	26	mg/L	1		SM 2540C	Total/NA
pH	6.8	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	576.16				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	90.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.05				mg/L	1		Field Sampling	Total/NA
pH, Field	6.43				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	840				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	15.3				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	2.76				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-306

Lab Sample ID: 310-244105-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	270		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	180		5.0	2.0	mg/L	5		9056A	Total/NA
Barium	110		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	10000		1000	580	ug/L	10		6020B	Total/NA
Calcium	160		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.21	J	0.50	0.19	ug/L	1		6020B	Total/NA
Lithium	100		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	25		2.0	1.2	ug/L	1		6020B	Total/NA
Total Dissolved Solids	1200		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	574.63				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	126.4				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.19				mg/L	1		Field Sampling	Total/NA
pH, Field	6.93				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1508				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	14.6				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.42				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Client Sample ID: MW-307

Lab Sample ID: 310-244105-1

Date Collected: 11/03/22 07:45

Matrix: Water

Date Received: 11/04/22 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	62		5.0	2.3	mg/L			11/22/22 01:01	5
Fluoride	<0.22		0.50	0.22	mg/L			11/22/22 01:01	5
Sulfate	24		5.0	2.0	mg/L			11/22/22 01:01	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/15/22 01:42	1
Arsenic	1.1	J	2.0	0.75	ug/L		11/10/22 08:30	11/15/22 01:42	1
Barium	320		2.0	0.88	ug/L		11/10/22 08:30	11/15/22 01:42	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/15/22 01:42	1
Boron	63	J	100	58	ug/L		11/10/22 08:30	11/15/22 17:25	1
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/15/22 01:42	1
Calcium	170		0.50	0.19	mg/L		11/10/22 08:30	11/15/22 01:42	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/15/22 01:42	1
Cobalt	5.5		0.50	0.19	ug/L		11/10/22 08:30	11/15/22 01:42	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/15/22 01:42	1
Lithium	7.0	J	10	2.5	ug/L		11/10/22 08:30	11/15/22 01:42	1
Molybdenum	5.1		2.0	1.2	ug/L		11/10/22 08:30	11/15/22 01:42	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/15/22 01:42	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/15/22 01:42	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		11/14/22 16:06	11/15/22 15:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	770		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	6.8	HF	0.1	0.1	SU			11/04/22 19:21	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	589.14				ft			11/03/22 07:45	1
Oxidation Reduction Potential	66.5				millivolts			11/03/22 07:45	1
Oxygen, Dissolved, Client Supplied	0.08				mg/L			11/03/22 07:45	1
pH, Field	6.22				SU			11/03/22 07:45	1
Specific Conductance, Field	1096				umhos/cm			11/03/22 07:45	1
Temperature, Field	14.7				Degrees C			11/03/22 07:45	1
Turbidity, Field	2.11				NTU			11/03/22 07:45	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Client Sample ID: MW-309

Lab Sample ID: 310-244105-2

Date Collected: 11/02/22 16:40

Matrix: Water

Date Received: 11/04/22 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	55		5.0	2.3	mg/L			11/22/22 01:15	5
Fluoride	<0.22		0.50	0.22	mg/L			11/22/22 01:15	5
Sulfate	<2.0		5.0	2.0	mg/L			11/22/22 01:15	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/15/22 01:46	1
Arsenic	1.3	J	2.0	0.75	ug/L		11/10/22 08:30	11/15/22 01:46	1
Barium	160		2.0	0.88	ug/L		11/10/22 08:30	11/15/22 01:46	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/15/22 01:46	1
Boron	490		100	58	ug/L		11/10/22 08:30	11/15/22 17:29	1
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/15/22 01:46	1
Calcium	160		0.50	0.19	mg/L		11/10/22 08:30	11/15/22 01:46	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/15/22 01:46	1
Cobalt	0.39	J	0.50	0.19	ug/L		11/10/22 08:30	11/15/22 01:46	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/15/22 01:46	1
Lithium	<2.5		10	2.5	ug/L		11/10/22 08:30	11/15/22 01:46	1
Molybdenum	1.4	J	2.0	1.2	ug/L		11/10/22 08:30	11/15/22 01:46	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/15/22 01:46	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/15/22 01:46	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		11/14/22 16:06	11/15/22 15:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	640		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	6.9	HF	0.1	0.1	SU			11/04/22 19:25	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	-				ft			11/02/22 16:40	1
Oxidation Reduction Potential	-126.9				millivolts			11/02/22 16:40	1
Oxygen, Dissolved, Client Supplied	0.00				mg/L			11/02/22 16:40	1
pH, Field	6.59				SU			11/02/22 16:40	1
Specific Conductance, Field	1021				umhos/cm			11/02/22 16:40	1
Temperature, Field	15.8				Degrees C			11/02/22 16:40	1
Turbidity, Field	2.89				NTU			11/02/22 16:40	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Client Sample ID: MW-308

Lab Sample ID: 310-244105-3

Date Collected: 11/02/22 15:30

Matrix: Water

Date Received: 11/04/22 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30		5.0	2.3	mg/L			11/22/22 01:56	5
Fluoride	<0.22		0.50	0.22	mg/L			11/22/22 01:56	5
Sulfate	91		5.0	2.0	mg/L			11/22/22 01:56	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/15/22 02:07	1
Arsenic	0.88	J	2.0	0.75	ug/L		11/10/22 08:30	11/15/22 02:07	1
Barium	90		2.0	0.88	ug/L		11/10/22 08:30	11/15/22 02:07	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/15/22 02:07	1
Boron	430		100	58	ug/L		11/10/22 08:30	11/15/22 17:32	1
Cadmium	0.090	J	0.10	0.055	ug/L		11/10/22 08:30	11/15/22 02:07	1
Calcium	79		0.50	0.19	mg/L		11/10/22 08:30	11/15/22 02:07	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/15/22 02:07	1
Cobalt	0.64		0.50	0.19	ug/L		11/10/22 08:30	11/15/22 02:07	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/15/22 02:07	1
Lithium	3.0	J	10	2.5	ug/L		11/10/22 08:30	11/15/22 02:07	1
Molybdenum	1.3	J	2.0	1.2	ug/L		11/10/22 08:30	11/15/22 02:07	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/15/22 02:07	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/15/22 02:07	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		11/14/22 16:06	11/15/22 15:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	500		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	6.6	HF	0.1	0.1	SU			11/04/22 19:28	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	573.80				ft			11/02/22 15:30	1
Oxidation Reduction Potential	137.7				millivolts			11/02/22 15:30	1
Oxygen, Dissolved, Client Supplied	0.21				mg/L			11/02/22 15:30	1
pH, Field	6.14				SU			11/02/22 15:30	1
Specific Conductance, Field	730				umhos/cm			11/02/22 15:30	1
Temperature, Field	16.0				Degrees C			11/02/22 15:30	1
Turbidity, Field	12.50				NTU			11/02/22 15:30	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Client Sample ID: MW-301

Lab Sample ID: 310-244105-4

Date Collected: 11/02/22 14:10

Matrix: Water

Date Received: 11/04/22 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	66		5.0	2.3	mg/L			11/22/22 02:10	5
Fluoride	<0.22		0.50	0.22	mg/L			11/22/22 02:10	5
Sulfate	230		5.0	2.0	mg/L			11/22/22 02:10	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/15/22 02:14	1
Arsenic	<0.75		2.0	0.75	ug/L		11/10/22 08:30	11/15/22 02:14	1
Barium	64		2.0	0.88	ug/L		11/10/22 08:30	11/15/22 02:14	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/15/22 02:14	1
Boron	12000		1000	580	ug/L		11/10/22 08:30	11/15/22 17:57	10
Cadmium	0.26		0.10	0.055	ug/L		11/10/22 08:30	11/15/22 02:14	1
Calcium	110		0.50	0.19	mg/L		11/10/22 08:30	11/15/22 02:14	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/15/22 02:14	1
Cobalt	4.3		0.50	0.19	ug/L		11/10/22 08:30	11/15/22 02:14	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/15/22 02:14	1
Lithium	7.9 J		10	2.5	ug/L		11/10/22 08:30	11/15/22 02:14	1
Molybdenum	490		2.0	1.2	ug/L		11/10/22 08:30	11/15/22 02:14	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/15/22 02:14	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/15/22 02:14	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		11/14/22 16:09	11/15/22 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	680		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	6.8	HF	0.1	0.1	SU			11/04/22 19:30	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	576.16				ft			11/02/22 14:10	1
Oxidation Reduction Potential	90.1				millivolts			11/02/22 14:10	1
Oxygen, Dissolved, Client Supplied	0.05				mg/L			11/02/22 14:10	1
pH, Field	6.43				SU			11/02/22 14:10	1
Specific Conductance, Field	840				umhos/cm			11/02/22 14:10	1
Temperature, Field	15.3				Degrees C			11/02/22 14:10	1
Turbidity, Field	2.76				NTU			11/02/22 14:10	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Client Sample ID: MW-306

Lab Sample ID: 310-244105-5

Date Collected: 11/02/22 12:35

Matrix: Water

Date Received: 11/04/22 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	270		5.0	2.3	mg/L			11/22/22 02:24	5
Fluoride	<0.22		0.50	0.22	mg/L			11/22/22 02:24	5
Sulfate	180		5.0	2.0	mg/L			11/22/22 02:24	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/15/22 02:11	1
Arsenic	<0.75		2.0	0.75	ug/L		11/10/22 08:30	11/15/22 02:11	1
Barium	110		2.0	0.88	ug/L		11/10/22 08:30	11/15/22 02:11	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/15/22 02:11	1
Boron	10000		1000	580	ug/L		11/10/22 08:30	11/15/22 17:54	10
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/15/22 02:11	1
Calcium	160		0.50	0.19	mg/L		11/10/22 08:30	11/15/22 02:11	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/15/22 02:11	1
Cobalt	0.21 J		0.50	0.19	ug/L		11/10/22 08:30	11/15/22 02:11	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/15/22 02:11	1
Lithium	100		10	2.5	ug/L		11/10/22 08:30	11/15/22 02:11	1
Molybdenum	25		2.0	1.2	ug/L		11/10/22 08:30	11/15/22 02:11	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/15/22 02:11	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/15/22 02:11	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		11/14/22 16:09	11/15/22 15:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1200		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	7.2 HF		0.1	0.1	SU			11/04/22 19:31	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	574.63				ft			11/02/22 12:35	1
Oxidation Reduction Potential	126.4				millivolts			11/02/22 12:35	1
Oxygen, Dissolved, Client Supplied	0.19				mg/L			11/02/22 12:35	1
pH, Field	6.93				SU			11/02/22 12:35	1
Specific Conductance, Field	1508				umhos/cm			11/02/22 12:35	1
Temperature, Field	14.6				Degrees C			11/02/22 12:35	1
Turbidity, Field	1.42				NTU			11/02/22 12:35	1

Eurofins Cedar Falls

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Qualifiers

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	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	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: ML Kapp 25222077

Job ID: 310-244105-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-372872/36
Matrix: Water
Analysis Batch: 372872

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	<0.45		1.0	0.45	mg/L			11/22/22 10:41	1
Fluoride	<0.044		0.10	0.044	mg/L			11/22/22 10:41	1
Sulfate	<0.40		1.0	0.40	mg/L			11/22/22 10:41	1

Lab Sample ID: LCS 310-372872/37
Matrix: Water
Analysis Batch: 372872

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.00	2.02		mg/L		101	90 - 110
Sulfate	10.0	9.88		mg/L		99	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-371503/1-A
Matrix: Water
Analysis Batch: 371783

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371503

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/11/22 03:40	1
Arsenic	<0.75		2.0	0.75	ug/L		11/10/22 08:30	11/11/22 03:40	1
Barium	<0.88		2.0	0.88	ug/L		11/10/22 08:30	11/11/22 03:40	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/11/22 03:40	1
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/11/22 03:40	1
Calcium	<0.19		0.50	0.19	mg/L		11/10/22 08:30	11/11/22 03:40	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/11/22 03:40	1
Cobalt	<0.19		0.50	0.19	ug/L		11/10/22 08:30	11/11/22 03:40	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/11/22 03:40	1
Molybdenum	<1.2		2.0	1.2	ug/L		11/10/22 08:30	11/11/22 03:40	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/11/22 03:40	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/11/22 03:40	1

Lab Sample ID: MB 310-371503/1-A
Matrix: Water
Analysis Batch: 372300

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371503

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Boron	<58		100	58	ug/L		11/10/22 08:30	11/16/22 13:05	1

Lab Sample ID: LCS 310-371503/2-A
Matrix: Water
Analysis Batch: 371783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	200	200		ug/L		100	80 - 120
Barium	100	104		ug/L		104	80 - 120
Beryllium	100	86.0		ug/L		86	80 - 120
Cadmium	100	109		ug/L		109	80 - 120

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

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

Lab Sample ID: LCS 310-371503/2-A
Matrix: Water
Analysis Batch: 371783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.00	1.94		mg/L		97	80 - 120
Chromium	100	93.6		ug/L		94	80 - 120
Cobalt	100	94.2		ug/L		94	80 - 120
Lead	200	211		ug/L		105	80 - 120
Molybdenum	200	204		ug/L		102	80 - 120
Selenium	400	410		ug/L		102	80 - 120
Thallium	200	207		ug/L		103	80 - 120

Lab Sample ID: LCS 310-371503/2-A
Matrix: Water
Analysis Batch: 372229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	200	161		ug/L		80	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-372026/1-A
Matrix: Water
Analysis Batch: 372178

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372026

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		11/14/22 16:06	11/15/22 14:22	1

Lab Sample ID: LCS 310-372026/2-A
Matrix: Water
Analysis Batch: 372178

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372026

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

Lab Sample ID: MB 310-372027/1-A
Matrix: Water
Analysis Batch: 372178

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.11		0.20	0.11	ug/L		11/14/22 16:09	11/15/22 15:26	1

Lab Sample ID: LCS 310-372027/2-A
Matrix: Water
Analysis Batch: 372178

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.67	1.44		ug/L		87	80 - 120

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 310-244105-5 MS
Matrix: Water
Analysis Batch: 372178

Client Sample ID: MW-306
Prep Type: Total/NA
Prep Batch: 372027

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	<0.11		1.67	1.65		ug/L		99	80 - 120

Lab Sample ID: 310-244105-5 MSD
Matrix: Water
Analysis Batch: 372178

Client Sample ID: MW-306
Prep Type: Total/NA
Prep Batch: 372027

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	<0.11		1.67	1.61		ug/L		97	80 - 120	2	20

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

Lab Sample ID: MB 310-371235/1
Matrix: Water
Analysis Batch: 371235

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	<26		50	26	mg/L			11/07/22 15:39	1

Lab Sample ID: LCS 310-371235/2
Matrix: Water
Analysis Batch: 371235

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	966		mg/L		97	90 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-370999/25
Matrix: Water
Analysis Batch: 370999

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
pH	7.00	7.1		SU		101	98 - 102

Lab Sample ID: 310-244105-2 DU
Matrix: Water
Analysis Batch: 370999

Client Sample ID: MW-309
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
pH	6.9	HF	6.9		SU		0.1	20

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

HPLC/IC

Analysis Batch: 372872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	9056A	
310-244105-2	MW-309	Total/NA	Water	9056A	
310-244105-3	MW-308	Total/NA	Water	9056A	
310-244105-4	MW-301	Total/NA	Water	9056A	
310-244105-5	MW-306	Total/NA	Water	9056A	
MB 310-372872/36	Method Blank	Total/NA	Water	9056A	
LCS 310-372872/37	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 371503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	3005A	
310-244105-2	MW-309	Total/NA	Water	3005A	
310-244105-3	MW-308	Total/NA	Water	3005A	
310-244105-4	MW-301	Total/NA	Water	3005A	
310-244105-5	MW-306	Total/NA	Water	3005A	
MB 310-371503/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-371503/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 371783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-371503/1-A	Method Blank	Total/NA	Water	6020B	371503
LCS 310-371503/2-A	Lab Control Sample	Total/NA	Water	6020B	371503

Prep Batch: 372026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	7470A	
310-244105-2	MW-309	Total/NA	Water	7470A	
310-244105-3	MW-308	Total/NA	Water	7470A	
MB 310-372026/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-372026/2-A	Lab Control Sample	Total/NA	Water	7470A	

Prep Batch: 372027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-4	MW-301	Total/NA	Water	7470A	
310-244105-5	MW-306	Total/NA	Water	7470A	
MB 310-372027/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-372027/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-244105-5 MS	MW-306	Total/NA	Water	7470A	
310-244105-5 MSD	MW-306	Total/NA	Water	7470A	

Analysis Batch: 372070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	6020B	371503
310-244105-2	MW-309	Total/NA	Water	6020B	371503
310-244105-3	MW-308	Total/NA	Water	6020B	371503
310-244105-4	MW-301	Total/NA	Water	6020B	371503
310-244105-5	MW-306	Total/NA	Water	6020B	371503

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Metals

Analysis Batch: 372178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	7470A	372026
310-244105-2	MW-309	Total/NA	Water	7470A	372026
310-244105-3	MW-308	Total/NA	Water	7470A	372026
310-244105-4	MW-301	Total/NA	Water	7470A	372027
310-244105-5	MW-306	Total/NA	Water	7470A	372027
MB 310-372026/1-A	Method Blank	Total/NA	Water	7470A	372026
MB 310-372027/1-A	Method Blank	Total/NA	Water	7470A	372027
LCS 310-372026/2-A	Lab Control Sample	Total/NA	Water	7470A	372026
LCS 310-372027/2-A	Lab Control Sample	Total/NA	Water	7470A	372027
310-244105-5 MS	MW-306	Total/NA	Water	7470A	372027
310-244105-5 MSD	MW-306	Total/NA	Water	7470A	372027

Analysis Batch: 372229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	6020B	371503
310-244105-2	MW-309	Total/NA	Water	6020B	371503
310-244105-3	MW-308	Total/NA	Water	6020B	371503
310-244105-4	MW-301	Total/NA	Water	6020B	371503
310-244105-5	MW-306	Total/NA	Water	6020B	371503
LCS 310-371503/2-A	Lab Control Sample	Total/NA	Water	6020B	371503

Analysis Batch: 372300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-371503/1-A	Method Blank	Total/NA	Water	6020B	371503

General Chemistry

Analysis Batch: 370999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	SM 4500 H+ B	
310-244105-2	MW-309	Total/NA	Water	SM 4500 H+ B	
310-244105-3	MW-308	Total/NA	Water	SM 4500 H+ B	
310-244105-4	MW-301	Total/NA	Water	SM 4500 H+ B	
310-244105-5	MW-306	Total/NA	Water	SM 4500 H+ B	
LCS 310-370999/25	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-244105-2 DU	MW-309	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 371235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	SM 2540C	
310-244105-2	MW-309	Total/NA	Water	SM 2540C	
310-244105-3	MW-308	Total/NA	Water	SM 2540C	
310-244105-4	MW-301	Total/NA	Water	SM 2540C	
310-244105-5	MW-306	Total/NA	Water	SM 2540C	
MB 310-371235/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-371235/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 371501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	Field Sampling	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Field Service / Mobile Lab (Continued)

Analysis Batch: 371501 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-2	MW-309	Total/NA	Water	Field Sampling	
310-244105-3	MW-308	Total/NA	Water	Field Sampling	
310-244105-4	MW-301	Total/NA	Water	Field Sampling	
310-244105-5	MW-306	Total/NA	Water	Field Sampling	

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Client Sample ID: MW-307

Date Collected: 11/03/22 07:45

Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/22/22 01:01
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 01:42
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372229	A6US	EET CF	11/15/22 17:25
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:15
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:21
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/03/22 07:45

Client Sample ID: MW-309

Date Collected: 11/02/22 16:40

Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/22/22 01:15
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 01:46
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372229	A6US	EET CF	11/15/22 17:29
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:17
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:25
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/02/22 16:40

Client Sample ID: MW-308

Date Collected: 11/02/22 15:30

Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/22/22 01:56
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 02:07
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372229	A6US	EET CF	11/15/22 17:32
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:19
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:28
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/02/22 15:30

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 2522077

Job ID: 310-244105-1

Client Sample ID: MW-301

Lab Sample ID: 310-244105-4

Date Collected: 11/02/22 14:10

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/22/22 02:10
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 02:14
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		10	372229	A6US	EET CF	11/15/22 17:57
Total/NA	Prep	7470A			372027	XXW3	EET CF	11/14/22 16:09
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:36
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:30
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/02/22 14:10

Client Sample ID: MW-306

Lab Sample ID: 310-244105-5

Date Collected: 11/02/22 12:35

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/22/22 02:24
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 02:11
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		10	372229	A6US	EET CF	11/15/22 17:54
Total/NA	Prep	7470A			372027	XXW3	EET CF	11/14/22 16:09
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:30
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:31
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/02/22 12:35

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-1

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
Field Sampling	Field Sampling	EPA	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF

Protocol References:

EPA = US Environmental Protection Agency

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.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



310-244105 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS
 City/State: Madison WI CITY STATE Project:

Receipt Information

Date/Time Received: 11-4-22 DATE TIME Received By: AW

Delivery Type: UPS FedEx FedEx Ground US Mail Spee-Dee
 Lab Courier Lab Field Services Client Drop-off Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? Yes No If yes: Cooler ID: _____

Multiple Coolers? Yes No If yes: Cooler # _____ of _____

Cooler Custody Seals Present? Yes No If yes: Cooler custody seals intact? Yes No

Sample Custody Seals Present? Yes No If yes: Sample custody seals intact? Yes No

Trip Blank Present? Yes No If yes: Which VOA samples are in cooler? 1

Temperature Record

Coolant: Wet ice Blue ice Dry ice Other: _____ NONE

Thermometer ID: R Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 3.6 Corrected Temp (°C): 3.6

• 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? Yes No
 - a) If yes: Is there evidence that the chilling process began? Yes 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?) Yes No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

Table 1. Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - M.L. Kapp Ash Pond/ SCS Engineers Project #25120077.00

Parameter	MNH-301	MNH-302	MNH-303	MNH-304	MNH-304A	MNH-305	MNH-306	MNH-307	MNH-308	MNH-309	MNH-310	MNH-311	MNH-311A	Field Blank	TOTAL	
	Appendix III Parameters (total/unfiltered)	Boron	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	14
	Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Chromium VI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Alkalinity - Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Alkalinity - Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6
	Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Sulfide, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Ferrous Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-244105-1

Login Number: 244105

List Number: 1

Creator: Muehling, Angela C

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.	True	
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	



Groundwater Monitoring Results - Field Parameters
M.L. Kapp Generating Station / SCS Engineers Project #25222077.00
November 2022

Sample	Sample Date/Time	GW Elevation (ft amsl)	Temperature (Deg. C)	pH (Std. Units)	Dissolved Oxygen (mg/L)	Specific Conductivity (µs/cm)	ORP (mV)	Turbidity
MW-301	11/2/2022 1410	576.16	15.3	6.43	0.05	840	90.1	2.76
MW-302	11/1/2022 1500	573.23	15.4	7.36	0.21	759	179.7	0.86
MW-303	11/1/2022 1650	574.26	14.3	7.26	0.20	894	102.8	83
MW-304	11/2/2022 925	573.39	13.6	6.69	0.09	920	103.1	84
MW-304A	11/2/2022 810	573.47	12.4	6.94	0.01	561	15.8	1.06
MW-305	11/2/2022 1120	573.30	13.9	7.22	0.00	1,178	74.8	3.39
MW-306	11/2/2022 1235	574.63	14.6	6.93	0.19	1,508	126.4	1.42
MW-307	11/3/2022 745	589.14	14.7	6.22	0.08	1,096	66.5	2.11
MW-308	11/2/2022 1530	573.80	16.0	6.14	0.21	730	137.7	12.50
MW-309	11/2/2022 1640	--	15.8	6.59	0.00	1,021	-126.9	2.89
MW-310	11/3/2022 1000	578.18	13.7	6.88	0.05	943	130.3	1.49
MW-311	11/3/2022 1130	572.54	14.2	7.18	2.72	684	149.0	1.94
MW-311A	11/3/2022 1220	572.90	12.9	7.42	0.00	770	147.4	1.05

Abbreviations:

mg/L = milligrams per liter

mV = millivolts

amsl = above mean sea level

Notes:

None

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

Date: 10/6/2021
 Date: 11/7/2022
 Date: 11/7/2022

C:\Users\hld0\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\USG3GGGC\[2211_M.L. Kapp_CCR_Field.xlsx]GW Field Parameters

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718
Generated 12/1/2022 5:26:17 PM Revision 1

JOB DESCRIPTION

ML Kapp 25222077

JOB NUMBER

310-244103-1

Eurofins Cedar Falls

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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
12/1/2022 5:26:17 PM
Revision 1

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



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Sample Summary	5
Detection Summary	6
Client Sample Results	9
Definitions	14
QC Sample Results	15
QC Association	18
Chronicle	20
Certification Summary	22
Method Summary	23
Chain of Custody	24
Receipt Checklists	27
Field Data Sheets	28

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Job ID: 310-244103-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-244103-1

Comments

No additional comments.

Revision

The report being provided is a revision of the original report sent on 11/22/2022. The report (revision 1) is being revised due to: Revision added to re-review boron results for sample 3 (MW-304A). Client requested only one final boron result..

Receipt

The samples were received on 11/4/2022 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.5° C.

HPLC/IC

Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-302 (310-244103-1), MW-303 (310-244103-2), MW-304A (310-244103-3), MW-304 (310-244103-4) and MW-305 (310-244103-5). 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.

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.

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-244103-1	MW-302	Water	11/01/22 15:00	11/04/22 16:20
310-244103-2	MW-303	Water	11/01/22 16:50	11/04/22 16:20
310-244103-3	MW-304A	Water	11/02/22 08:10	11/04/22 16:20
310-244103-4	MW-304	Water	11/02/22 09:25	11/04/22 16:20
310-244103-5	MW-305	Water	11/02/22 11:20	11/04/22 16:20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Client Sample ID: MW-302

Lab Sample ID: 310-244103-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.3		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	270		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	8.3		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	83		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	6300		700	410	ug/L	7		6020B	Total/NA
Cadmium	0.093	J	0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	110		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.38	J	0.50	0.19	ug/L	1		6020B	Total/NA
Lithium	25		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	170		2.0	1.2	ug/L	1		6020B	Total/NA
Total Dissolved Solids	640		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.7	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	573.23				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	179.7				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.21				mg/L	1		Field Sampling	Total/NA
pH, Field	7.36				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	759				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	15.4				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	0.86				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-303

Lab Sample ID: 310-244103-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	21		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	290		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	67		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	140		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	5800		700	410	ug/L	7		6020B	Total/NA
Cadmium	0.16		0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	85		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.78		0.50	0.19	ug/L	1		6020B	Total/NA
Lithium	53		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	200		2.0	1.2	ug/L	1		6020B	Total/NA
Selenium	2.6	J	5.0	0.96	ug/L	1		6020B	Total/NA
Total Dissolved Solids	720		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.6	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	574.26				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	102.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.20				mg/L	1		Field Sampling	Total/NA
pH, Field	7.26				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	894				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	14.3				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	83				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-304A

Lab Sample ID: 310-244103-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	71		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	1.5	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	110		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	480		100	58	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: ML Kapp 2522077

Job ID: 310-244103-1

Client Sample ID: MW-304A (Continued)

Lab Sample ID: 310-244103-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	82		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.36	J	0.50	0.19	ug/L	1		6020B	Total/NA
Molybdenum	3.8		2.0	1.2	ug/L	1		6020B	Total/NA
Total Dissolved Solids	390		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	573.47				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	15.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.01				mg/L	1		Field Sampling	Total/NA
pH, Field	6.94				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	561				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	12.4				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.06				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-304

Lab Sample ID: 310-244103-4

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	370		5.0	2.0	mg/L	5		9056A	Total/NA
Arsenic	3.5		2.0	0.75	ug/L	1		6020B	Total/NA
Barium	140		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	11000		1000	580	ug/L	10		6020B	Total/NA
Cadmium	0.29		0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	100		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	1.3		0.50	0.19	ug/L	1		6020B	Total/NA
Lithium	4.2	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	880		2.0	1.2	ug/L	1		6020B	Total/NA
Total Dissolved Solids	710		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	573.39				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	103.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.09				mg/L	1		Field Sampling	Total/NA
pH, Field	6.69				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	920				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	13.6				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	84				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-305

Lab Sample ID: 310-244103-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	18		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	600		20	8.0	mg/L	20		9056A	Total/NA
Arsenic	1.6	J	2.0	0.75	ug/L	1		6020B	Total/NA
Barium	82		2.0	0.88	ug/L	1		6020B	Total/NA
Boron	14000		1000	580	ug/L	10		6020B	Total/NA
Cadmium	0.19		0.10	0.055	ug/L	1		6020B	Total/NA
Calcium	160		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.62		0.50	0.19	ug/L	1		6020B	Total/NA
Lithium	20		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	690		2.0	1.2	ug/L	1		6020B	Total/NA
Total Dissolved Solids	1100		50	26	mg/L	1		SM 2540C	Total/NA
pH	7.4	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Ground Water Elevation	573.30				ft	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Client Sample ID: MW-305 (Continued)

Lab Sample ID: 310-244103-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Oxidation Reduction Potential	74.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved, Client Supplied	0.00				mg/L	1		Field Sampling	Total/NA
pH, Field	7.22				SU	1		Field Sampling	Total/NA
Specific Conductance, Field	1178				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field	13.9				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	3.39				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Client Sample ID: MW-302
Date Collected: 11/01/22 15:00
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244103-1
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.3		5.0	2.3	mg/L			11/21/22 22:14	5
Fluoride	<0.22		0.50	0.22	mg/L			11/21/22 22:14	5
Sulfate	270		5.0	2.0	mg/L			11/21/22 22:14	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/15/22 01:21	1
Arsenic	8.3		2.0	0.75	ug/L		11/10/22 08:30	11/15/22 01:21	1
Barium	83		2.0	0.88	ug/L		11/10/22 08:30	11/15/22 01:21	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/15/22 01:21	1
Boron	6300		700	410	ug/L		11/10/22 08:30	11/15/22 17:04	7
Cadmium	0.093	J	0.10	0.055	ug/L		11/10/22 08:30	11/15/22 01:21	1
Calcium	110		0.50	0.19	mg/L		11/10/22 08:30	11/15/22 01:21	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/15/22 01:21	1
Cobalt	0.38	J	0.50	0.19	ug/L		11/10/22 08:30	11/15/22 01:21	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/15/22 01:21	1
Lithium	25		10	2.5	ug/L		11/10/22 08:30	11/15/22 01:21	1
Molybdenum	170		2.0	1.2	ug/L		11/10/22 08:30	11/15/22 01:21	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/15/22 01:21	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/15/22 01:21	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		11/14/22 16:06	11/15/22 14:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	640		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	7.7	HF	0.1	0.1	SU			11/04/22 19:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	573.23				ft			11/01/22 15:00	1
Oxidation Reduction Potential	179.7				millivolts			11/01/22 15:00	1
Oxygen, Dissolved, Client Supplied	0.21				mg/L			11/01/22 15:00	1
pH, Field	7.36				SU			11/01/22 15:00	1
Specific Conductance, Field	759				umhos/cm			11/01/22 15:00	1
Temperature, Field	15.4				Degrees C			11/01/22 15:00	1
Turbidity, Field	0.86				NTU			11/01/22 15:00	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Client Sample ID: MW-303

Lab Sample ID: 310-244103-2

Date Collected: 11/01/22 16:50

Matrix: Water

Date Received: 11/04/22 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21		5.0	2.3	mg/L			11/21/22 22:28	5
Fluoride	<0.22		0.50	0.22	mg/L			11/21/22 22:28	5
Sulfate	290		5.0	2.0	mg/L			11/21/22 22:28	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/15/22 01:25	1
Arsenic	67		2.0	0.75	ug/L		11/10/22 08:30	11/15/22 01:25	1
Barium	140		2.0	0.88	ug/L		11/10/22 08:30	11/15/22 01:25	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/15/22 01:25	1
Boron	5800		700	410	ug/L		11/10/22 08:30	11/15/22 17:07	7
Cadmium	0.16		0.10	0.055	ug/L		11/10/22 08:30	11/15/22 01:25	1
Calcium	85		0.50	0.19	mg/L		11/10/22 08:30	11/15/22 01:25	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/15/22 01:25	1
Cobalt	0.78		0.50	0.19	ug/L		11/10/22 08:30	11/15/22 01:25	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/15/22 01:25	1
Lithium	53		10	2.5	ug/L		11/10/22 08:30	11/15/22 01:25	1
Molybdenum	200		2.0	1.2	ug/L		11/10/22 08:30	11/15/22 01:25	1
Selenium	2.6 J		5.0	0.96	ug/L		11/10/22 08:30	11/15/22 01:25	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/15/22 01:25	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		11/14/22 16:06	11/15/22 14:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	720		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	7.6	HF	0.1	0.1	SU			11/04/22 19:34	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	574.26				ft			11/01/22 16:50	1
Oxidation Reduction Potential	102.8				millivolts			11/01/22 16:50	1
Oxygen, Dissolved, Client Supplied	0.20				mg/L			11/01/22 16:50	1
pH, Field	7.26				SU			11/01/22 16:50	1
Specific Conductance, Field	894				umhos/cm			11/01/22 16:50	1
Temperature, Field	14.3				Degrees C			11/01/22 16:50	1
Turbidity, Field	83				NTU			11/01/22 16:50	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Client Sample ID: MW-304A

Lab Sample ID: 310-244103-3

Date Collected: 11/02/22 08:10

Matrix: Water

Date Received: 11/04/22 16:20

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			11/21/22 22:42	5
Fluoride	<0.22		0.50	0.22	mg/L			11/21/22 22:42	5
Sulfate	71		5.0	2.0	mg/L			11/21/22 22:42	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/15/22 01:32	1
Arsenic	1.5	J	2.0	0.75	ug/L		11/10/22 08:30	11/15/22 01:32	1
Barium	110		2.0	0.88	ug/L		11/10/22 08:30	11/15/22 01:32	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/15/22 01:32	1
Boron	480		100	58	ug/L		11/10/22 08:30	11/15/22 17:14	1
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/15/22 01:32	1
Calcium	82		0.50	0.19	mg/L		11/10/22 08:30	11/15/22 01:32	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/15/22 01:32	1
Cobalt	0.36	J	0.50	0.19	ug/L		11/10/22 08:30	11/15/22 01:32	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/15/22 01:32	1
Lithium	<2.5		10	2.5	ug/L		11/10/22 08:30	11/15/22 01:32	1
Molybdenum	3.8		2.0	1.2	ug/L		11/10/22 08:30	11/15/22 01:32	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/15/22 01:32	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/15/22 01:32	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		11/14/22 16:06	11/15/22 15:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	390		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	7.3	HF	0.1	0.1	SU			11/04/22 19:36	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	573.47				ft			11/02/22 08:10	1
Oxidation Reduction Potential	15.8				millivolts			11/02/22 08:10	1
Oxygen, Dissolved, Client Supplied	0.01				mg/L			11/02/22 08:10	1
pH, Field	6.94				SU			11/02/22 08:10	1
Specific Conductance, Field	561				umhos/cm			11/02/22 08:10	1
Temperature, Field	12.4				Degrees C			11/02/22 08:10	1
Turbidity, Field	1.06				NTU			11/02/22 08:10	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Client Sample ID: MW-304

Lab Sample ID: 310-244103-4

Date Collected: 11/02/22 09:25

Matrix: Water

Date Received: 11/04/22 16:20

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			11/21/22 23:24	5
Fluoride	<0.22		0.50	0.22	mg/L			11/21/22 23:24	5
Sulfate	370		5.0	2.0	mg/L			11/21/22 23:24	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/15/22 01:36	1
Arsenic	3.5		2.0	0.75	ug/L		11/10/22 08:30	11/15/22 01:36	1
Barium	140		2.0	0.88	ug/L		11/10/22 08:30	11/15/22 01:36	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/15/22 01:36	1
Boron	11000		1000	580	ug/L		11/10/22 08:30	11/15/22 17:18	10
Cadmium	0.29		0.10	0.055	ug/L		11/10/22 08:30	11/15/22 01:36	1
Calcium	100		0.50	0.19	mg/L		11/10/22 08:30	11/15/22 01:36	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/15/22 01:36	1
Cobalt	1.3		0.50	0.19	ug/L		11/10/22 08:30	11/15/22 01:36	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/15/22 01:36	1
Lithium	4.2 J		10	2.5	ug/L		11/10/22 08:30	11/15/22 01:36	1
Molybdenum	880		2.0	1.2	ug/L		11/10/22 08:30	11/15/22 01:36	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/15/22 01:36	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/15/22 01:36	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		11/14/22 16:06	11/15/22 15:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	710		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	7.1	HF	0.1	0.1	SU			11/04/22 19:37	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	573.39				ft			11/02/22 09:25	1
Oxidation Reduction Potential	103.1				millivolts			11/02/22 09:25	1
Oxygen, Dissolved, Client Supplied	0.09				mg/L			11/02/22 09:25	1
pH, Field	6.69				SU			11/02/22 09:25	1
Specific Conductance, Field	920				umhos/cm			11/02/22 09:25	1
Temperature, Field	13.6				Degrees C			11/02/22 09:25	1
Turbidity, Field	84				NTU			11/02/22 09:25	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Client Sample ID: MW-305

Lab Sample ID: 310-244103-5

Date Collected: 11/02/22 11:20

Matrix: Water

Date Received: 11/04/22 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18		5.0	2.3	mg/L			11/21/22 23:38	5
Fluoride	<0.22		0.50	0.22	mg/L			11/21/22 23:38	5
Sulfate	600		20	8.0	mg/L			11/21/22 23:52	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/15/22 01:39	1
Arsenic	1.6	J	2.0	0.75	ug/L		11/10/22 08:30	11/15/22 01:39	1
Barium	82		2.0	0.88	ug/L		11/10/22 08:30	11/15/22 01:39	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/15/22 01:39	1
Boron	14000		1000	580	ug/L		11/10/22 08:30	11/15/22 17:22	10
Cadmium	0.19		0.10	0.055	ug/L		11/10/22 08:30	11/15/22 01:39	1
Calcium	160		0.50	0.19	mg/L		11/10/22 08:30	11/15/22 01:39	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/15/22 01:39	1
Cobalt	0.62		0.50	0.19	ug/L		11/10/22 08:30	11/15/22 01:39	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/15/22 01:39	1
Lithium	20		10	2.5	ug/L		11/10/22 08:30	11/15/22 01:39	1
Molybdenum	690		2.0	1.2	ug/L		11/10/22 08:30	11/15/22 01:39	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/15/22 01:39	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/15/22 01:39	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		11/14/22 16:06	11/15/22 15:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1100		50	26	mg/L			11/07/22 15:39	1
pH (SM 4500 H+ B)	7.4	HF	0.1	0.1	SU			11/04/22 19:39	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ground Water Elevation	573.30				ft			11/02/22 11:20	1
Oxidation Reduction Potential	74.8				millivolts			11/02/22 11:20	1
Oxygen, Dissolved, Client Supplied	0.00				mg/L			11/02/22 11:20	1
pH, Field	7.22				SU			11/02/22 11:20	1
Specific Conductance, Field	1178				umhos/cm			11/02/22 11:20	1
Temperature, Field	13.9				Degrees C			11/02/22 11:20	1
Turbidity, Field	3.39				NTU			11/02/22 11:20	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Qualifiers

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	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	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: ML Kapp 25222077

Job ID: 310-244103-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-372872/36
Matrix: Water
Analysis Batch: 372872

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			11/22/22 10:41	1
Fluoride	<0.044		0.10	0.044	mg/L			11/22/22 10:41	1
Sulfate	<0.40		1.0	0.40	mg/L			11/22/22 10:41	1

Lab Sample ID: LCS 310-372872/37
Matrix: Water
Analysis Batch: 372872

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	9.58		mg/L		96	90 - 110
Fluoride	2.00	2.02		mg/L		101	90 - 110
Sulfate	10.0	9.88		mg/L		99	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-371503/1-A
Matrix: Water
Analysis Batch: 371783

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371503

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.69		2.0	0.69	ug/L		11/10/22 08:30	11/11/22 03:40	1
Arsenic	<0.75		2.0	0.75	ug/L		11/10/22 08:30	11/11/22 03:40	1
Barium	<0.88		2.0	0.88	ug/L		11/10/22 08:30	11/11/22 03:40	1
Beryllium	<0.27		1.0	0.27	ug/L		11/10/22 08:30	11/11/22 03:40	1
Cadmium	<0.055		0.10	0.055	ug/L		11/10/22 08:30	11/11/22 03:40	1
Calcium	<0.19		0.50	0.19	mg/L		11/10/22 08:30	11/11/22 03:40	1
Chromium	<1.1		5.0	1.1	ug/L		11/10/22 08:30	11/11/22 03:40	1
Cobalt	<0.19		0.50	0.19	ug/L		11/10/22 08:30	11/11/22 03:40	1
Lead	<0.24		0.50	0.24	ug/L		11/10/22 08:30	11/11/22 03:40	1
Molybdenum	<1.2		2.0	1.2	ug/L		11/10/22 08:30	11/11/22 03:40	1
Selenium	<0.96		5.0	0.96	ug/L		11/10/22 08:30	11/11/22 03:40	1
Thallium	<0.26		1.0	0.26	ug/L		11/10/22 08:30	11/11/22 03:40	1

Lab Sample ID: MB 310-371503/1-A
Matrix: Water
Analysis Batch: 372300

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 371503

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<58		100	58	ug/L		11/10/22 08:30	11/16/22 13:05	1

Lab Sample ID: LCS 310-371503/2-A
Matrix: Water
Analysis Batch: 371783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	200	225		ug/L		112	80 - 120
Arsenic	200	200		ug/L		100	80 - 120
Barium	100	104		ug/L		104	80 - 120
Beryllium	100	86.0		ug/L		86	80 - 120
Cadmium	100	109		ug/L		109	80 - 120

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

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

Lab Sample ID: LCS 310-371503/2-A
Matrix: Water
Analysis Batch: 371783

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.00	1.94		mg/L		97	80 - 120
Chromium	100	93.6		ug/L		94	80 - 120
Cobalt	100	94.2		ug/L		94	80 - 120
Lead	200	211		ug/L		105	80 - 120
Molybdenum	200	204		ug/L		102	80 - 120
Selenium	400	410		ug/L		102	80 - 120
Thallium	200	207		ug/L		103	80 - 120

Lab Sample ID: LCS 310-371503/2-A
Matrix: Water
Analysis Batch: 372229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	200	161		ug/L		80	80 - 120

Lab Sample ID: 310-244103-2 DU
Matrix: Water
Analysis Batch: 372070

Client Sample ID: MW-303
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Sample Result	Sample Qualifier	DU		Unit	D	RPD	
			Result	Qualifier			RPD	Limit
Antimony	<0.69		<0.69		ug/L		NC	20
Arsenic	67		66.1		ug/L		1	20
Barium	140		140		ug/L		2	20
Beryllium	<0.27		<0.27		ug/L		NC	20
Cadmium	0.16		0.169		ug/L		6	20
Calcium	85		83.6		mg/L		1	20
Chromium	<1.1		<1.1		ug/L		NC	20
Cobalt	0.78		0.774		ug/L		0.8	20
Lead	<0.24		<0.24		ug/L		NC	20
Lithium	53		49.9		ug/L		6	20
Molybdenum	200		198		ug/L		2	20
Selenium	2.6 J		2.52 J		ug/L		3	20
Thallium	<0.26		<0.26		ug/L		NC	20

Lab Sample ID: 310-244103-2 DU
Matrix: Water
Analysis Batch: 372229

Client Sample ID: MW-303
Prep Type: Total/NA
Prep Batch: 371503

Analyte	Sample Result	Sample Qualifier	DU		Unit	D	RPD	
			Result	Qualifier			RPD	Limit
Boron	5800		5970		ug/L		3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-372026/1-A
Matrix: Water
Analysis Batch: 372178

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372026

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.11		0.20	0.11	ug/L		11/14/22 16:06	11/15/22 14:22	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 310-372026/2-A
Matrix: Water
Analysis Batch: 372178

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372026

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 310-371235/1
Matrix: Water
Analysis Batch: 371235

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	<26		50	26	mg/L			11/07/22 15:39	1

Lab Sample ID: LCS 310-371235/2
Matrix: Water
Analysis Batch: 371235

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	966		mg/L		97	90 - 110

Lab Sample ID: 310-244103-5 DU
Matrix: Water
Analysis Batch: 371235

Client Sample ID: MW-305
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1100		1080		mg/L		0.2	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-370999/25
Matrix: Water
Analysis Batch: 370999

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	7.1		SU		101	98 - 102

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

HPLC/IC

Analysis Batch: 372872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	9056A	
310-244103-2	MW-303	Total/NA	Water	9056A	
310-244103-3	MW-304A	Total/NA	Water	9056A	
310-244103-4	MW-304	Total/NA	Water	9056A	
310-244103-5	MW-305	Total/NA	Water	9056A	
310-244103-5	MW-305	Total/NA	Water	9056A	
MB 310-372872/36	Method Blank	Total/NA	Water	9056A	
LCS 310-372872/37	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 371503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	3005A	
310-244103-2	MW-303	Total/NA	Water	3005A	
310-244103-3	MW-304A	Total/NA	Water	3005A	
310-244103-4	MW-304	Total/NA	Water	3005A	
310-244103-5	MW-305	Total/NA	Water	3005A	
MB 310-371503/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-371503/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-244103-2 DU	MW-303	Total/NA	Water	3005A	

Analysis Batch: 371783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-371503/1-A	Method Blank	Total/NA	Water	6020B	371503
LCS 310-371503/2-A	Lab Control Sample	Total/NA	Water	6020B	371503

Prep Batch: 372026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	7470A	
310-244103-2	MW-303	Total/NA	Water	7470A	
310-244103-3	MW-304A	Total/NA	Water	7470A	
310-244103-4	MW-304	Total/NA	Water	7470A	
310-244103-5	MW-305	Total/NA	Water	7470A	
MB 310-372026/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-372026/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 372070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	6020B	371503
310-244103-2	MW-303	Total/NA	Water	6020B	371503
310-244103-3	MW-304A	Total/NA	Water	6020B	371503
310-244103-4	MW-304	Total/NA	Water	6020B	371503
310-244103-5	MW-305	Total/NA	Water	6020B	371503
310-244103-2 DU	MW-303	Total/NA	Water	6020B	371503

Analysis Batch: 372178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	7470A	372026
310-244103-2	MW-303	Total/NA	Water	7470A	372026
310-244103-3	MW-304A	Total/NA	Water	7470A	372026

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Metals (Continued)

Analysis Batch: 372178 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-4	MW-304	Total/NA	Water	7470A	372026
310-244103-5	MW-305	Total/NA	Water	7470A	372026
MB 310-372026/1-A	Method Blank	Total/NA	Water	7470A	372026
LCS 310-372026/2-A	Lab Control Sample	Total/NA	Water	7470A	372026

Analysis Batch: 372229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	6020B	371503
310-244103-2	MW-303	Total/NA	Water	6020B	371503
310-244103-3	MW-304A	Total/NA	Water	6020B	371503
310-244103-4	MW-304	Total/NA	Water	6020B	371503
310-244103-5	MW-305	Total/NA	Water	6020B	371503
LCS 310-371503/2-A	Lab Control Sample	Total/NA	Water	6020B	371503
310-244103-2 DU	MW-303	Total/NA	Water	6020B	371503

Analysis Batch: 372300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-371503/1-A	Method Blank	Total/NA	Water	6020B	371503

General Chemistry

Analysis Batch: 370999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	SM 4500 H+ B	
310-244103-2	MW-303	Total/NA	Water	SM 4500 H+ B	
310-244103-3	MW-304A	Total/NA	Water	SM 4500 H+ B	
310-244103-4	MW-304	Total/NA	Water	SM 4500 H+ B	
310-244103-5	MW-305	Total/NA	Water	SM 4500 H+ B	
LCS 310-370999/25	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 371235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	SM 2540C	
310-244103-2	MW-303	Total/NA	Water	SM 2540C	
310-244103-3	MW-304A	Total/NA	Water	SM 2540C	
310-244103-4	MW-304	Total/NA	Water	SM 2540C	
310-244103-5	MW-305	Total/NA	Water	SM 2540C	
MB 310-371235/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-371235/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-244103-5 DU	MW-305	Total/NA	Water	SM 2540C	

Field Service / Mobile Lab

Analysis Batch: 371501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	Field Sampling	
310-244103-2	MW-303	Total/NA	Water	Field Sampling	
310-244103-3	MW-304A	Total/NA	Water	Field Sampling	
310-244103-4	MW-304	Total/NA	Water	Field Sampling	
310-244103-5	MW-305	Total/NA	Water	Field Sampling	

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Client Sample ID: MW-302

Date Collected: 11/01/22 15:00

Date Received: 11/04/22 16:20

Lab Sample ID: 310-244103-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/21/22 22:14
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 01:21
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		7	372229	A6US	EET CF	11/15/22 17:04
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 14:52
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:33
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/01/22 15:00

Client Sample ID: MW-303

Date Collected: 11/01/22 16:50

Date Received: 11/04/22 16:20

Lab Sample ID: 310-244103-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/21/22 22:28
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 01:25
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		7	372229	A6US	EET CF	11/15/22 17:07
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 14:54
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:34
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/01/22 16:50

Client Sample ID: MW-304A

Date Collected: 11/02/22 08:10

Date Received: 11/04/22 16:20

Lab Sample ID: 310-244103-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/21/22 22:42
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 01:32
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372229	A6US	EET CF	11/15/22 17:14
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:00
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:36
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/02/22 08:10

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Client Sample ID: MW-304

Lab Sample ID: 310-244103-4

Date Collected: 11/02/22 09:25

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/21/22 23:24
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 01:36
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		10	372229	A6US	EET CF	11/15/22 17:18
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:02
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:37
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/02/22 09:25

Client Sample ID: MW-305

Lab Sample ID: 310-244103-5

Date Collected: 11/02/22 11:20

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	372872	J7CK	EET CF	11/21/22 23:38
Total/NA	Analysis	9056A		20	372872	J7CK	EET CF	11/21/22 23:52
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		1	372070	A6US	EET CF	11/15/22 01:39
Total/NA	Prep	3005A			371503	QTZ5	EET CF	11/10/22 08:30
Total/NA	Analysis	6020B		10	372229	A6US	EET CF	11/15/22 17:22
Total/NA	Prep	7470A			372026	XXW3	EET CF	11/14/22 16:06
Total/NA	Analysis	7470A		1	372178	XXW3	EET CF	11/15/22 15:04
Total/NA	Analysis	SM 2540C		1	371235	ENB7	EET CF	11/07/22 15:39
Total/NA	Analysis	SM 4500 H+ B		1	370999	DN3P	EET CF	11/04/22 19:39
Total/NA	Analysis	Field Sampling		1	371501	BJ0R	EET CF	11/02/22 11:20

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-1

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
Field Sampling	Field Sampling	EPA	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF

Protocol References:

EPA = US Environmental Protection Agency

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.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401





Environment Testing
America



310-244103 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client:	SCS		
City/State:	CITY	STATE	Project:
	Madison	WI	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	11-4-22	1610	ML
Delivery Type:	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input checked="" type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
			<input type="checkbox"/> US Mail
			<input type="checkbox"/> Spee-Dee
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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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 checked="" type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? <input type="checkbox"/> 1
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:	R		Correction Factor (°C):
			0
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	2.5		Corrected Temp (°C):
			2.5
• 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			

Table 1. Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - M.L. Kepp Ash Pond/ SC5 Engineers Project #25220077.00

Appendix III Parameters (total/unfiltered)	Parameter	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	MW-	Field Blank	Field TOTAL	
		301	302	303	304	304A	305	306	307	308	309	310	311	311A	311A	311A	311A	311A	311A	311A	X	X
Appendix III Parameters (total/unfiltered)	Boron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	
Field Parameters	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
	pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Alkalinity- Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Alkalinity- Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2	
Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3	
Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6	
Sulfide	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	
Ferrous Ion, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13	

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-244103-1

Login Number: 244103

List Number: 1

Creator: Muehling, Angela C

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.	True	
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	



Groundwater Monitoring Results - Field Parameters
M.L. Kapp Generating Station / SCS Engineers Project #25222077.00
November 2022

Sample	Sample Date/Time	GW Elevation (ft amsl)	Temperature (Deg. C)	pH (Std. Units)	Dissolved Oxygen (mg/L)	Specific Conductivity (µs/cm)	ORP (mV)	Turbidity
MW-301	11/2/2022 1410	576.16	15.3	6.43	0.05	840	90.1	2.76
MW-302	11/1/2022 1500	573.23	15.4	7.36	0.21	759	179.7	0.86
MW-303	11/1/2022 1650	574.26	14.3	7.26	0.20	894	102.8	83
MW-304	11/2/2022 925	573.39	13.6	6.69	0.09	920	103.1	84
MW-304A	11/2/2022 810	573.47	12.4	6.94	0.01	561	15.8	1.06
MW-305	11/2/2022 1120	573.30	13.9	7.22	0.00	1,178	74.8	3.39
MW-306	11/2/2022 1235	574.63	14.6	6.93	0.19	1,508	126.4	1.42
MW-307	11/3/2022 745	589.14	14.7	6.22	0.08	1,096	66.5	2.11
MW-308	11/2/2022 1530	573.80	16.0	6.14	0.21	730	137.7	12.50
MW-309	11/2/2022 1640	--	15.8	6.59	0.00	1,021	-126.9	2.89
MW-310	11/3/2022 1000	578.18	13.7	6.88	0.05	943	130.3	1.49
MW-311	11/3/2022 1130	572.54	14.2	7.18	2.72	684	149.0	1.94
MW-311A	11/3/2022 1220	572.90	12.9	7.42	0.00	770	147.4	1.05

Abbreviations:

mg/L = milligrams per liter

mV = millivolts

amsl = above mean sea level

Notes:

None

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

Date: 10/6/2021
 Date: 11/7/2022
 Date: 11/7/2022

C:\Users\hld0\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\USG3GGGC\[2211_M.L. Kapp_CCR_Field.xlsx]GW Field Parameters

ANALYTICAL REPORT

PREPARED FOR

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Generated 12/5/2022 2:56:59 PM

JOB DESCRIPTION

ML Kapp 25222077

JOB NUMBER

310-244103-2

Eurofins Cedar Falls

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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
12/5/2022 2:56:59 PM

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



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Sample Summary	5
Detection Summary	6
Client Sample Results	7
Definitions	12
QC Sample Results	13
QC Association	14
Chronicle	15
Certification Summary	17
Method Summary	18
Chain of Custody	19
Receipt Checklists	23
Tracer Carrier Summary	25

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Job ID: 310-244103-2

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-244103-2

Comments

No additional comments.

Receipt

The samples were received on 11/4/2022 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.5° C.

RAD

Methods 903.0, 9315: Radium-226 batch 589597

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-302 (310-244103-1), MW-303 (310-244103-2), MW-304A (310-244103-3), MW-304 (310-244103-4), MW-305 (310-244103-5), (LCS 160-589597/2-A), (MB 160-589597/1-A), (280-168675-A-5-A) and (280-168675-B-5-A DU)

Methods 904.0, 9320: Radium-228 batch 589599

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-302 (310-244103-1), MW-303 (310-244103-2), MW-304A (310-244103-3), MW-304 (310-244103-4), MW-305 (310-244103-5), (LCS 160-589599/2-A), (MB 160-589599/1-A), (280-168675-A-5-B) and (280-168675-B-5-B DU)

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

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-244103-1	MW-302	Water	11/01/22 15:00	11/04/22 16:20
310-244103-2	MW-303	Water	11/01/22 16:50	11/04/22 16:20
310-244103-3	MW-304A	Water	11/02/22 08:10	11/04/22 16:20
310-244103-4	MW-304	Water	11/02/22 09:25	11/04/22 16:20
310-244103-5	MW-305	Water	11/02/22 11:20	11/04/22 16:20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Client Sample ID: MW-302

Lab Sample ID: 310-244103-1

No Detections.

Client Sample ID: MW-303

Lab Sample ID: 310-244103-2

No Detections.

Client Sample ID: MW-304A

Lab Sample ID: 310-244103-3

No Detections.

Client Sample ID: MW-304

Lab Sample ID: 310-244103-4

No Detections.

Client Sample ID: MW-305

Lab Sample ID: 310-244103-5

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Client Sample ID: MW-302
Date Collected: 11/01/22 15:00
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244103-1
Matrix: Water

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	0.200		0.112	0.113	1.00	0.129	pCi/L	11/10/22 09:49	12/04/22 13:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	89.9		40 - 110					11/10/22 09:49	12/04/22 13:18	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	0.141	U	0.299	0.300	1.00	0.527	pCi/L	11/10/22 10:28	12/01/22 14:14	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	89.9		40 - 110					11/10/22 10:28	12/01/22 14:14	1
Y Carrier	85.2		40 - 110					11/10/22 10:28	12/01/22 14:14	1

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	0.341	U	0.319	0.321	5.00	0.527	pCi/L		12/05/22 13:11	1



Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Client Sample ID: MW-303
 Date Collected: 11/01/22 16:50
 Date Received: 11/04/22 16:20

Lab Sample ID: 310-244103-2
 Matrix: Water

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		0.154	0.159	1.00	0.144	pCi/L	11/10/22 09:49	12/04/22 13:18	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	88.9		40 - 110					11/10/22 09:49	12/04/22 13:18	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	0.598		0.388	0.392	1.00	0.574	pCi/L	11/10/22 10:28	12/01/22 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	88.9		40 - 110					11/10/22 10:28	12/01/22 14:15	1
Y Carrier	84.1		40 - 110					11/10/22 10:28	12/01/22 14:15	1

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	1.02		0.417	0.423	5.00	0.574	pCi/L		12/05/22 13:11	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Client Sample ID: MW-304A
Date Collected: 11/02/22 08:10
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244103-3
Matrix: Water

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	0.0633	U	0.0853	0.0855	1.00	0.143	pCi/L	11/10/22 09:49	12/04/22 13:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	88.9		40 - 110					11/10/22 09:49	12/04/22 13:19	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	0.751		0.444	0.450	1.00	0.657	pCi/L	11/10/22 10:28	12/01/22 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	88.9		40 - 110					11/10/22 10:28	12/01/22 14:15	1
Y Carrier	86.0		40 - 110					11/10/22 10:28	12/01/22 14:15	1

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	0.814		0.452	0.458	5.00	0.657	pCi/L		12/05/22 13:11	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Client Sample ID: MW-304

Lab Sample ID: 310-244103-4

Date Collected: 11/02/22 09:25

Matrix: Water

Date Received: 11/04/22 16:20

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	0.381		0.156	0.160	1.00	0.164	pCi/L	11/10/22 09:49	12/04/22 13:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	86.0		40 - 110					11/10/22 09:49	12/04/22 13:19	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	0.960		0.445	0.453	1.00	0.607	pCi/L	11/10/22 10:28	12/01/22 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	86.0		40 - 110					11/10/22 10:28	12/01/22 14:15	1
Y Carrier	84.9		40 - 110					11/10/22 10:28	12/01/22 14:15	1

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	1.34		0.472	0.480	5.00	0.607	pCi/L		12/05/22 13:11	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Client Sample ID: MW-305

Lab Sample ID: 310-244103-5

Date Collected: 11/02/22 11:20

Matrix: Water

Date Received: 11/04/22 16:20

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	0.173	U	0.126	0.127	1.00	0.180	pCi/L	11/10/22 09:49	12/04/22 13:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	90.1		40 - 110					11/10/22 09:49	12/04/22 13:19	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	0.144	U	0.264	0.265	1.00	0.461	pCi/L	11/10/22 10:28	12/01/22 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	90.1		40 - 110					11/10/22 10:28	12/01/22 14:15	1
Y Carrier	85.2		40 - 110					11/10/22 10:28	12/01/22 14:15	1

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	0.317	U	0.293	0.294	5.00	0.461	pCi/L		12/05/22 13:11	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Qualifiers

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: ML Kapp 25222077

Job ID: 310-244103-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-589597/1-A
Matrix: Water
Analysis Batch: 592179

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589597

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium 226	0.09266	U	0.0932	0.0936	1.00	0.145	pCi/L	11/10/22 09:49	12/04/22 13:16	1
Carrier	MB %Yield	MB Qualifier	Limits				Prepared		Analyzed	Dil Fac
Ba	93.7		40 - 110				11/10/22 09:49		12/04/22 13:16	1

Lab Sample ID: LCS 160-589597/2-A
Matrix: Water
Analysis Batch: 592179

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589597

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium 226	11.3	10.26		1.15	1.00	0.142	pCi/L	91	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba	92.3		40 - 110						

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-589599/1-A
Matrix: Water
Analysis Batch: 591880

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589599

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium 228	0.8657		0.427	0.434	1.00	0.595	pCi/L	11/10/22 10:28	12/01/22 14:13	1
Carrier	MB %Yield	MB Qualifier	Limits				Prepared		Analyzed	Dil Fac
Ba	93.7		40 - 110				11/10/22 10:28		12/01/22 14:13	1
Y Carrier	81.1		40 - 110				11/10/22 10:28		12/01/22 14:13	1

Lab Sample ID: LCS 160-589599/2-A
Matrix: Water
Analysis Batch: 591880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589599

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium 228	8.40	9.154		1.28	1.00	0.615	pCi/L	109	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba	92.3		40 - 110						
Y Carrier	83.7		40 - 110						

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Rad

Prep Batch: 589597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	PrecSep-21	
310-244103-2	MW-303	Total/NA	Water	PrecSep-21	
310-244103-3	MW-304A	Total/NA	Water	PrecSep-21	
310-244103-4	MW-304	Total/NA	Water	PrecSep-21	
310-244103-5	MW-305	Total/NA	Water	PrecSep-21	
MB 160-589597/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-589597/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 589599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244103-1	MW-302	Total/NA	Water	PrecSep_0	
310-244103-2	MW-303	Total/NA	Water	PrecSep_0	
310-244103-3	MW-304A	Total/NA	Water	PrecSep_0	
310-244103-4	MW-304	Total/NA	Water	PrecSep_0	
310-244103-5	MW-305	Total/NA	Water	PrecSep_0	
MB 160-589599/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-589599/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Client Sample ID: MW-302

Lab Sample ID: 310-244103-1

Date Collected: 11/01/22 15:00

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589597	BMP	EET SL	11/10/22 09:49
Total/NA	Analysis	903.0		1	592179	FLC	EET SL	12/04/22 13:18
Total/NA	Prep	PrecSep_0			589599	BMP	EET SL	11/10/22 10:28
Total/NA	Analysis	904.0		1	591880	FLC	EET SL	12/01/22 14:14
Total/NA	Analysis	Ra226_Ra228 Pos		1	592390	SCB	EET SL	12/05/22 13:11

Client Sample ID: MW-303

Lab Sample ID: 310-244103-2

Date Collected: 11/01/22 16:50

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589597	BMP	EET SL	11/10/22 09:49
Total/NA	Analysis	903.0		1	592179	FLC	EET SL	12/04/22 13:18
Total/NA	Prep	PrecSep_0			589599	BMP	EET SL	11/10/22 10:28
Total/NA	Analysis	904.0		1	591880	FLC	EET SL	12/01/22 14:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	592390	SCB	EET SL	12/05/22 13:11

Client Sample ID: MW-304A

Lab Sample ID: 310-244103-3

Date Collected: 11/02/22 08:10

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589597	BMP	EET SL	11/10/22 09:49
Total/NA	Analysis	903.0		1	592179	FLC	EET SL	12/04/22 13:19
Total/NA	Prep	PrecSep_0			589599	BMP	EET SL	11/10/22 10:28
Total/NA	Analysis	904.0		1	591880	FLC	EET SL	12/01/22 14:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	592390	SCB	EET SL	12/05/22 13:11

Client Sample ID: MW-304

Lab Sample ID: 310-244103-4

Date Collected: 11/02/22 09:25

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589597	BMP	EET SL	11/10/22 09:49
Total/NA	Analysis	903.0		1	592179	FLC	EET SL	12/04/22 13:19
Total/NA	Prep	PrecSep_0			589599	BMP	EET SL	11/10/22 10:28
Total/NA	Analysis	904.0		1	591880	FLC	EET SL	12/01/22 14:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	592390	SCB	EET SL	12/05/22 13:11

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Client Sample ID: MW-305

Lab Sample ID: 310-244103-5

Date Collected: 11/02/22 11:20

Matrix: Water

Date Received: 11/04/22 16:20

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	PrecSep-21			589597	BMP	EET SL	11/10/22 09:49
Total/NA	Analysis	903.0		1	592179	FLC	EET SL	12/04/22 13:19
Total/NA	Prep	PrecSep_0			589599	BMP	EET SL	11/10/22 10:28
Total/NA	Analysis	904.0		1	591880	FLC	EET SL	12/01/22 14:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	592390	SCB	EET SL	12/05/22 13:11

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Accreditation/Certification Summary

Client: SCS Engineers
 Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

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	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-22 *
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244103-2

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228 Pos	Combined Radium-226 and Radium-228	TAL-STL	EET SL
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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15



Environment Testing
America



310-244103 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client:	SCS		
City/State:	CITY	STATE	Project:
	Madison	WI	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	11-4-22	1610	PL
Delivery Type:	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input checked="" type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
			<input type="checkbox"/> US Mail
			<input type="checkbox"/> Spee-Dee
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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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 checked="" type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? <input type="checkbox"/> 1
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:	R		Correction Factor (°C):
			0
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	2.5		Corrected Temp (°C):
			2.5
• 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			

Table 1. Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - M.L. Kepp Ash Pond/ SC5 Engineers Project #2520077.00

Parameter	MW- 301 - 311													MW- 311A	Field Blank	Field TOTAL		
	301	302	303	304	304A	305	306	307	308	309	310	311						
Boron	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
Antimony	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 (field)	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	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	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Alkalinity- Bicarbonate	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	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sodium	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
Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Manganese	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
Sulfide	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ferrous Ion, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-244103-2

Login Number: 244103

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Muehling, Angela C

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.	True	
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: 310-244103-2

Login Number: 244103

List Number: 2

Creator: Bohlmann, Jessica M

List Source: Eurofins St. Louis

List Creation: 11/08/22 12:31 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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 <6mm (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: ML Kapp 25222077

Job ID: 310-244103-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)
310-244103-1	MW-302	89.9
310-244103-2	MW-303	88.9
310-244103-3	MW-304A	88.9
310-244103-4	MW-304	86.0
310-244103-5	MW-305	90.1
LCS 160-589597/2-A	Lab Control Sample	92.3
MB 160-589597/1-A	Method Blank	93.7

Tracer/Carrier Legend

Ba = Ba

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-244103-1	MW-302	89.9	85.2
310-244103-2	MW-303	88.9	84.1
310-244103-3	MW-304A	88.9	86.0
310-244103-4	MW-304	86.0	84.9
310-244103-5	MW-305	90.1	85.2
LCS 160-589599/2-A	Lab Control Sample	92.3	83.7
MB 160-589599/1-A	Method Blank	93.7	81.1

Tracer/Carrier Legend

Ba = Ba

Y = Y Carrier

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Generated 12/6/2022 4:10:05 PM

JOB DESCRIPTION

ML Kapp 25222077

JOB NUMBER

310-244105-2

Eurofins Cedar Falls

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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
12/6/2022 4:10:05 PM

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



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Sample Summary	5
Detection Summary	6
Client Sample Results	7
Definitions	12
QC Sample Results	13
QC Association	15
Chronicle	16
Certification Summary	18
Method Summary	19
Chain of Custody	20
Receipt Checklists	24
Tracer Carrier Summary	26

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Job ID: 310-244105-2

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-244105-2

Comments

No additional comments.

Receipt

The samples were received on 11/4/2022 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.6° C.

RAD

Method 903.0: Radium-226 batch 589611

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-307 (310-244105-1), MW-309 (310-244105-2), MW-308 (310-244105-3), MW-301 (310-244105-4), MW-306 (310-244105-5), (LCS 160-589611/2-A), (MB 160-589611/1-A) and (310-244105-E-3-A DU)

Method 904.0: Radium-228 batch 589624

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date MW-307 (310-244105-1), MW-309 (310-244105-2), MW-308 (310-244105-3), MW-301 (310-244105-4), MW-306 (310-244105-5), (LCS 160-589624/2-A), (MB 160-589624/1-A) and (310-244105-E-3-B DU)

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

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-244105-1	MW-307	Water	11/03/22 07:45	11/04/22 16:20
310-244105-2	MW-309	Water	11/02/22 16:40	11/04/22 16:20
310-244105-3	MW-308	Water	11/02/22 15:30	11/04/22 16:20
310-244105-4	MW-301	Water	11/02/22 14:10	11/04/22 16:20
310-244105-5	MW-306	Water	11/02/22 12:35	11/04/22 16:20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Client Sample ID: MW-307

Lab Sample ID: 310-244105-1

No Detections.

Client Sample ID: MW-309

Lab Sample ID: 310-244105-2

No Detections.

Client Sample ID: MW-308

Lab Sample ID: 310-244105-3

No Detections.

Client Sample ID: MW-301

Lab Sample ID: 310-244105-4

No Detections.

Client Sample ID: MW-306

Lab Sample ID: 310-244105-5

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Client Sample ID: MW-307
Date Collected: 11/03/22 07:45
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-1
Matrix: Water

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	0.322		0.143	0.146	1.00	0.157	pCi/L	11/10/22 12:42	12/04/22 13:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	89.4		40 - 110					11/10/22 12:42	12/04/22 13:22	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	0.541	U	0.391	0.394	1.00	0.593	pCi/L	11/10/22 13:37	12/01/22 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	89.4		40 - 110					11/10/22 13:37	12/01/22 14:19	1
Y Carrier	80.7		40 - 110					11/10/22 13:37	12/01/22 14:19	1

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	0.863		0.416	0.420	5.00	0.593	pCi/L		12/06/22 16:04	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Client Sample ID: MW-309
Date Collected: 11/02/22 16:40
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-2
Matrix: Water

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	0.455		0.167	0.172	1.00	0.167	pCi/L	11/10/22 12:42	12/04/22 13:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	89.6		40 - 110					11/10/22 12:42	12/04/22 13:22	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	0.776		0.389	0.396	1.00	0.524	pCi/L	11/10/22 13:37	12/01/22 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	89.6		40 - 110					11/10/22 13:37	12/01/22 14:19	1
Y Carrier	83.0		40 - 110					11/10/22 13:37	12/01/22 14:19	1

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	1.23		0.423	0.432	5.00	0.524	pCi/L		12/06/22 16:04	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Client Sample ID: MW-308
Date Collected: 11/02/22 15:30
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-3
Matrix: Water

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	0.172	U	0.125	0.126	1.00	0.178	pCi/L	11/10/22 12:42	12/04/22 13:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	83.3		40 - 110					11/10/22 12:42	12/04/22 13:22	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	0.719	U	0.490	0.495	1.00	0.747	pCi/L	11/10/22 13:37	12/01/22 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	83.3		40 - 110					11/10/22 13:37	12/01/22 14:19	1
Y Carrier	83.0		40 - 110					11/10/22 13:37	12/01/22 14:19	1

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	0.890		0.506	0.511	5.00	0.747	pCi/L		12/06/22 16:04	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Client Sample ID: MW-301
Date Collected: 11/02/22 14:10
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-4
Matrix: Water

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	0.226		0.136	0.138	1.00	0.185	pCi/L	11/10/22 12:42	12/04/22 13:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	95.2		40 - 110					11/10/22 12:42	12/04/22 13:22	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	0.675		0.387	0.392	1.00	0.554	pCi/L	11/10/22 13:37	12/01/22 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	95.2		40 - 110					11/10/22 13:37	12/01/22 14:19	1
Y Carrier	83.7		40 - 110					11/10/22 13:37	12/01/22 14:19	1

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	0.900		0.410	0.416	5.00	0.554	pCi/L		12/06/22 16:04	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Client Sample ID: MW-306

Lab Sample ID: 310-244105-5

Date Collected: 11/02/22 12:35

Matrix: Water

Date Received: 11/04/22 16:20

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	0.120	U	0.108	0.108	1.00	0.166	pCi/L	11/10/22 12:42	12/04/22 13:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	101		40 - 110					11/10/22 12:42	12/04/22 13:24	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	-0.135	U	0.263	0.264	1.00	0.530	pCi/L	11/10/22 13:37	12/01/22 14:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	101		40 - 110					11/10/22 13:37	12/01/22 14:19	1
Y Carrier	85.2		40 - 110					11/10/22 13:37	12/01/22 14:19	1

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	0.120	U	0.284	0.285	5.00	0.530	pCi/L		12/06/22 16:04	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Qualifiers

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: ML Kapp 25222077

Job ID: 310-244105-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-589611/1-A
Matrix: Water
Analysis Batch: 592181

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589611

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium 226	-0.01917	U	0.0633	0.0633	1.00	0.149	pCi/L	11/10/22 12:42	12/04/22 13:22	1
Carrier	MB	MB	Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba	93.2		40 - 110			11/10/22 12:42	12/04/22 13:22	1		

Lab Sample ID: LCS 160-589611/2-A
Matrix: Water
Analysis Batch: 592181

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589611

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium 226	11.3	10.17		1.14	1.00	0.160	pCi/L	90	75 - 125
Carrier	LCS	LCS	Limits			Prepared	Analyzed	Dil Fac	
	%Yield	Qualifier							
Ba	94.0		40 - 110						

Lab Sample ID: 310-244105-3 DU
Matrix: Water
Analysis Batch: 592181

Client Sample ID: MW-308
Prep Type: Total/NA
Prep Batch: 589611

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium 226	0.172	U	0.2276		0.133	1.00	0.169	pCi/L	0.21	1
Carrier	DU	DU	Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba	88.4		40 - 110							

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-589624/1-A
Matrix: Water
Analysis Batch: 591879

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589624

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium 228	-0.1733	U	0.245	0.246	1.00	0.519	pCi/L	11/10/22 13:37	12/01/22 14:17	1
Carrier	MB	MB	Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba	93.2		40 - 110			11/10/22 13:37	12/01/22 14:17	1		
Y Carrier	86.7		40 - 110			11/10/22 13:37	12/01/22 14:17	1		

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-589624/2-A
Matrix: Water
Analysis Batch: 591879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589624

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	
Radium 228	8.40	7.944		1.14	1.00	0.496	pCi/L	95	75 - 125	
LCS LCS										
Carrier	%Yield	Qualifier	Limits							
Ba	94.0		40 - 110							
Y Carrier	88.2		40 - 110							

Lab Sample ID: 310-244105-3 DU
Matrix: Water
Analysis Batch: 591877

Client Sample ID: MW-308
Prep Type: Total/NA
Prep Batch: 589624

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
										1
Radium 228	0.719	U	0.1523	U	0.359	1.00	0.630	pCi/L	0.66	1
DU DU										
Carrier	%Yield	Qualifier	Limits							
Ba	88.4		40 - 110							
Y Carrier	80.4		40 - 110							

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Rad

Prep Batch: 589611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	PrecSep-21	
310-244105-2	MW-309	Total/NA	Water	PrecSep-21	
310-244105-3	MW-308	Total/NA	Water	PrecSep-21	
310-244105-4	MW-301	Total/NA	Water	PrecSep-21	
310-244105-5	MW-306	Total/NA	Water	PrecSep-21	
MB 160-589611/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-589611/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-244105-3 DU	MW-308	Total/NA	Water	PrecSep-21	

Prep Batch: 589624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244105-1	MW-307	Total/NA	Water	PrecSep_0	
310-244105-2	MW-309	Total/NA	Water	PrecSep_0	
310-244105-3	MW-308	Total/NA	Water	PrecSep_0	
310-244105-4	MW-301	Total/NA	Water	PrecSep_0	
310-244105-5	MW-306	Total/NA	Water	PrecSep_0	
MB 160-589624/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-589624/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-244105-3 DU	MW-308	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Client Sample ID: MW-307
Date Collected: 11/03/22 07:45
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589611	BMP	EET SL	11/10/22 12:42
Total/NA	Analysis	903.0		1	592181	FLC	EET SL	12/04/22 13:22
Total/NA	Prep	PrecSep_0			589624	BMP	EET SL	11/10/22 13:37
Total/NA	Analysis	904.0		1	591877	FLC	EET SL	12/01/22 14:19
Total/NA	Analysis	Ra226_Ra228 Pos		1	592610	MLK	EET SL	12/06/22 16:04

Client Sample ID: MW-309
Date Collected: 11/02/22 16:40
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589611	BMP	EET SL	11/10/22 12:42
Total/NA	Analysis	903.0		1	592181	FLC	EET SL	12/04/22 13:22
Total/NA	Prep	PrecSep_0			589624	BMP	EET SL	11/10/22 13:37
Total/NA	Analysis	904.0		1	591877	FLC	EET SL	12/01/22 14:19
Total/NA	Analysis	Ra226_Ra228 Pos		1	592610	MLK	EET SL	12/06/22 16:04

Client Sample ID: MW-308
Date Collected: 11/02/22 15:30
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589611	BMP	EET SL	11/10/22 12:42
Total/NA	Analysis	903.0		1	592181	FLC	EET SL	12/04/22 13:22
Total/NA	Prep	PrecSep_0			589624	BMP	EET SL	11/10/22 13:37
Total/NA	Analysis	904.0		1	591877	FLC	EET SL	12/01/22 14:19
Total/NA	Analysis	Ra226_Ra228 Pos		1	592610	MLK	EET SL	12/06/22 16:04

Client Sample ID: MW-301
Date Collected: 11/02/22 14:10
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589611	BMP	EET SL	11/10/22 12:42
Total/NA	Analysis	903.0		1	592181	FLC	EET SL	12/04/22 13:22
Total/NA	Prep	PrecSep_0			589624	BMP	EET SL	11/10/22 13:37
Total/NA	Analysis	904.0		1	591877	FLC	EET SL	12/01/22 14:19
Total/NA	Analysis	Ra226_Ra228 Pos		1	592610	MLK	EET SL	12/06/22 16:04

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Client Sample ID: MW-306
Date Collected: 11/02/22 12:35
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244105-5
Matrix: Water

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	PrecSep-21			589611	BMP	EET SL	11/10/22 12:42
Total/NA	Analysis	903.0		1	592180	FLC	EET SL	12/04/22 13:24
Total/NA	Prep	PrecSep_0			589624	BMP	EET SL	11/10/22 13:37
Total/NA	Analysis	904.0		1	591877	FLC	EET SL	12/01/22 14:19
Total/NA	Analysis	Ra226_Ra228 Pos		1	592610	MLK	EET SL	12/06/22 16:04

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Accreditation/Certification Summary

Client: SCS Engineers
 Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

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	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-22 *
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244105-2

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228 Pos	Combined Radium-226 and Radium-228	TAL-STL	EET SL
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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566





Environment Testing
America



310-244105 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client:	SCS		
City/State:	CITY Madison	STATE WI	Project:
Receipt Information			
Date/Time Received:	DATE 11-4-22	TIME 1620	Received By: ML
Delivery Type:	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input checked="" type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
		<input type="checkbox"/> US Mail	<input type="checkbox"/> Spee-Dee
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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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 checked="" type="checkbox"/> No
Trip Blank Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? <input type="checkbox"/> 1
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:	R		Correction Factor (°C):
			0
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	3.6		Corrected Temp (°C):
			3.6
• 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			

Table 1. Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - M.L. Kapp Ash Pond/ SCS Engineers Project #25220077.00

Parameter	MNH-301	MNH-302	MNH-303	MNH-304	MNH-304A	MNH-305	MNH-306	MNH-307	MNH-308	MNH-309	MNH-310	MNH-311	MNH-312A	MNH-313A	Field Blank	TOTAL	
	Appendix III Parameters (total/unfiltered)	Boron	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	14
	Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Chromium VI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Alkalinity - Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Alkalinity - Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2
	Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6
	Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Sulfide, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Total Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	Ferrous Iron, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-244105-2

Login Number: 244105

List Number: 1

Creator: Muehling, Angela C

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
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 <6mm (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: 310-244105-2

Login Number: 244105

List Number: 2

Creator: Bohlmann, Jessica M

List Source: Eurofins St. Louis

List Creation: 11/08/22 12:28 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: ML Kapp 25222077

Job ID: 310-244105-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)
310-244105-1	MW-307	89.4
310-244105-2	MW-309	89.6
310-244105-3	MW-308	83.3
310-244105-3 DU	MW-308	88.4
310-244105-4	MW-301	95.2
310-244105-5	MW-306	101
LCS 160-589611/2-A	Lab Control Sample	94.0
MB 160-589611/1-A	Method Blank	93.2

Tracer/Carrier Legend

Ba = Ba

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-244105-1	MW-307	89.4	80.7
310-244105-2	MW-309	89.6	83.0
310-244105-3	MW-308	83.3	83.0
310-244105-3 DU	MW-308	88.4	80.4
310-244105-4	MW-301	95.2	83.7
310-244105-5	MW-306	101	85.2
LCS 160-589624/2-A	Lab Control Sample	94.0	88.2
MB 160-589624/1-A	Method Blank	93.2	86.7

Tracer/Carrier Legend

Ba = Ba

Y = Y Carrier



ANALYTICAL REPORT

PREPARED FOR

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Generated 12/5/2022 2:59:14 PM

JOB DESCRIPTION

ML Kapp 25222077

JOB NUMBER

310-244104-2

Eurofins Cedar Falls

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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
12/5/2022 2:59:14 PM

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



Table of Contents

Cover Page	1
Table of Contents	3
Case Narrative	4
Sample Summary	5
Detection Summary	6
Client Sample Results	7
Definitions	11
QC Sample Results	12
QC Association	13
Chronicle	14
Certification Summary	15
Method Summary	16
Chain of Custody	17
Receipt Checklists	21
Tracer Carrier Summary	23

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Job ID: 310-244104-2

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-244104-2

Comments

No additional comments.

Receipt

The samples were received on 11/4/2022 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -0.4° C.

RAD

Methods 903.0, 9315: Radium-226 batch 589597

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. Field Blank (310-244104-1), MW-310 (310-244104-2), MW-311 (310-244104-3), MW-311A (310-244104-4), (LCS 160-589597/2-A), (MB 160-589597/1-A), (280-168675-A-5-A) and (280-168675-B-5-A DU)

Methods 904.0, 9320: Radium-228 batch 589599

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. Field Blank (310-244104-1), MW-310 (310-244104-2), MW-311 (310-244104-3), MW-311A (310-244104-4), (LCS 160-589599/2-A), (MB 160-589599/1-A), (280-168675-A-5-B) and (280-168675-B-5-B DU)

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

Sample Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-244104-1	Field Blank	Water	11/03/22 09:00	11/04/22 16:20
310-244104-2	MW-310	Water	11/03/22 10:00	11/04/22 16:20
310-244104-3	MW-311	Water	11/03/22 11:30	11/04/22 16:20
310-244104-4	MW-311A	Water	11/03/22 12:20	11/04/22 16:20

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Client Sample ID: Field Blank

Lab Sample ID: 310-244104-1

No Detections.

Client Sample ID: MW-310

Lab Sample ID: 310-244104-2

No Detections.

Client Sample ID: MW-311

Lab Sample ID: 310-244104-3

No Detections.

Client Sample ID: MW-311A

Lab Sample ID: 310-244104-4

No Detections.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
 Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Client Sample ID: Field Blank

Lab Sample ID: 310-244104-1

Date Collected: 11/03/22 09:00

Matrix: Water

Date Received: 11/04/22 16:20

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	-0.0223	U	0.0703	0.0703	1.00	0.162	pCi/L	11/10/22 09:49	12/04/22 13:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	87.4		40 - 110					11/10/22 09:49	12/04/22 13:19	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	0.169	U	0.293	0.293	1.00	0.506	pCi/L	11/10/22 10:28	12/01/22 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	87.4		40 - 110					11/10/22 10:28	12/01/22 14:15	1
Y Carrier	84.1		40 - 110					11/10/22 10:28	12/01/22 14:15	1

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	0.169	U	0.301	0.301	5.00	0.506	pCi/L		12/05/22 13:11	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Client Sample ID: MW-310
Date Collected: 11/03/22 10:00
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244104-2
Matrix: Water

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	0.159	U	0.122	0.123	1.00	0.175	pCi/L	11/10/22 09:49	12/04/22 13:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	86.2		40 - 110					11/10/22 09:49	12/04/22 13:20	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	0.225	U	0.333	0.333	1.00	0.563	pCi/L	11/10/22 10:28	12/01/22 14:15	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	86.2		40 - 110					11/10/22 10:28	12/01/22 14:15	1
Y Carrier	87.1		40 - 110					11/10/22 10:28	12/01/22 14:15	1

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	0.384	U	0.355	0.355	5.00	0.563	pCi/L		12/05/22 13:11	1



Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Client Sample ID: MW-311
Date Collected: 11/03/22 11:30
Date Received: 11/04/22 16:20

Lab Sample ID: 310-244104-3
Matrix: Water

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	0.0251	U	0.0919	0.0919	1.00	0.175	pCi/L	11/10/22 09:49	12/04/22 13:20	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	91.5		40 - 110					11/10/22 09:49	12/04/22 13:20	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	0.0105	U	0.258	0.258	1.00	0.485	pCi/L	11/10/22 10:28	12/01/22 14:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	91.5		40 - 110					11/10/22 10:28	12/01/22 14:16	1
Y Carrier	91.2		40 - 110					11/10/22 10:28	12/01/22 14:16	1

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	0.0356	U	0.274	0.274	5.00	0.485	pCi/L		12/05/22 13:11	1



Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Client Sample ID: MW-311A

Lab Sample ID: 310-244104-4

Date Collected: 11/03/22 12:20

Matrix: Water

Date Received: 11/04/22 16:20

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	0.0539	U	0.109	0.109	1.00	0.194	pCi/L	11/10/22 09:49	12/04/22 13:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	88.9		40 - 110					11/10/22 09:49	12/04/22 13:21	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	0.564		0.338	0.342	1.00	0.480	pCi/L	11/10/22 10:28	12/01/22 14:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba	88.9		40 - 110					11/10/22 10:28	12/01/22 14:16	1
Y Carrier	88.6		40 - 110					11/10/22 10:28	12/01/22 14:16	1

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	0.618		0.355	0.359	5.00	0.480	pCi/L		12/05/22 13:11	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Qualifiers

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: ML Kapp 25222077

Job ID: 310-244104-2

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-589597/1-A
Matrix: Water
Analysis Batch: 592179

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589597

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium 226	0.09266	U	0.0932	0.0936	1.00	0.145	pCi/L	11/10/22 09:49	12/04/22 13:16	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba	93.7		40 - 110		11/10/22 09:49	12/04/22 13:16	1			

Lab Sample ID: LCS 160-589597/2-A
Matrix: Water
Analysis Batch: 592179

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589597

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium 226	11.3	10.26		1.15	1.00	0.142	pCi/L	91	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba	92.3		40 - 110						

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-589599/1-A
Matrix: Water
Analysis Batch: 591880

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589599

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium 228	0.8657		0.427	0.434	1.00	0.595	pCi/L	11/10/22 10:28	12/01/22 14:13	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba	93.7		40 - 110		11/10/22 10:28	12/01/22 14:13	1			
Y Carrier	81.1		40 - 110		11/10/22 10:28	12/01/22 14:13	1			

Lab Sample ID: LCS 160-589599/2-A
Matrix: Water
Analysis Batch: 591880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589599

Analyte	Spike Added	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec Limits
		Result	Qual	Uncert. (2σ+/-)					
Radium 228	8.40	9.154		1.28	1.00	0.615	pCi/L	109	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba	92.3		40 - 110						
Y Carrier	83.7		40 - 110						

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Rad

Prep Batch: 589597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-1	Field Blank	Total/NA	Water	PrecSep-21	
310-244104-2	MW-310	Total/NA	Water	PrecSep-21	
310-244104-3	MW-311	Total/NA	Water	PrecSep-21	
310-244104-4	MW-311A	Total/NA	Water	PrecSep-21	
MB 160-589597/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-589597/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 589599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-244104-1	Field Blank	Total/NA	Water	PrecSep_0	
310-244104-2	MW-310	Total/NA	Water	PrecSep_0	
310-244104-3	MW-311	Total/NA	Water	PrecSep_0	
310-244104-4	MW-311A	Total/NA	Water	PrecSep_0	
MB 160-589599/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-589599/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Client Sample ID: Field Blank

Lab Sample ID: 310-244104-1

Date Collected: 11/03/22 09:00

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589597	BMP	EET SL	11/10/22 09:49
Total/NA	Analysis	903.0		1	592179	FLC	EET SL	12/04/22 13:19
Total/NA	Prep	PrecSep_0			589599	BMP	EET SL	11/10/22 10:28
Total/NA	Analysis	904.0		1	591880	FLC	EET SL	12/01/22 14:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	592390	SCB	EET SL	12/05/22 13:11

Client Sample ID: MW-310

Lab Sample ID: 310-244104-2

Date Collected: 11/03/22 10:00

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589597	BMP	EET SL	11/10/22 09:49
Total/NA	Analysis	903.0		1	592181	FLC	EET SL	12/04/22 13:20
Total/NA	Prep	PrecSep_0			589599	BMP	EET SL	11/10/22 10:28
Total/NA	Analysis	904.0		1	591880	FLC	EET SL	12/01/22 14:15
Total/NA	Analysis	Ra226_Ra228 Pos		1	592390	SCB	EET SL	12/05/22 13:11

Client Sample ID: MW-311

Lab Sample ID: 310-244104-3

Date Collected: 11/03/22 11:30

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589597	BMP	EET SL	11/10/22 09:49
Total/NA	Analysis	903.0		1	592181	FLC	EET SL	12/04/22 13:20
Total/NA	Prep	PrecSep_0			589599	BMP	EET SL	11/10/22 10:28
Total/NA	Analysis	904.0		1	591879	FLC	EET SL	12/01/22 14:16
Total/NA	Analysis	Ra226_Ra228 Pos		1	592390	SCB	EET SL	12/05/22 13:11

Client Sample ID: MW-311A

Lab Sample ID: 310-244104-4

Date Collected: 11/03/22 12:20

Matrix: Water

Date Received: 11/04/22 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			589597	BMP	EET SL	11/10/22 09:49
Total/NA	Analysis	903.0		1	592181	FLC	EET SL	12/04/22 13:21
Total/NA	Prep	PrecSep_0			589599	BMP	EET SL	11/10/22 10:28
Total/NA	Analysis	904.0		1	591879	FLC	EET SL	12/01/22 14:16
Total/NA	Analysis	Ra226_Ra228 Pos		1	592390	SCB	EET SL	12/05/22 13:11

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: SCS Engineers
 Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

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	12-08-22
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-22 *
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25222077

Job ID: 310-244104-2

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228 Pos	Combined Radium-226 and Radium-228	TAL-STL	EET SL
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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15



Environment Testing
America



310-244104 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client:	SCS		
City/State:	CITY	STATE	Project:
	Madison	WI	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	11-4-22	1620	RL
Delivery Type:	<input type="checkbox"/> UPS	<input type="checkbox"/> FedEx	<input type="checkbox"/> FedEx Ground
	<input checked="" type="checkbox"/> Lab Courier	<input type="checkbox"/> Lab Field Services	<input type="checkbox"/> Client Drop-off
			<input type="checkbox"/> US Mail
			<input type="checkbox"/> Spee-Dee
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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" 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? <u>1</u>
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:	R		
Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	-0.4		Corrected Temp (°C):
			-0.4
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			

Table 1. Sampling Points and Parameters - CCR Rule Sampling Program
Groundwater Monitoring - M.L. Kapp Ash Pond/ SCS Engineers Project #2520077.00

Parameter	MW-301	MW-302	MW-303	MW-304	MW-304A	MW-305	MW-306	MW-307	MW-308	MW-309	MW-310	MW-311	MW-311A	Field Blank	Field TOTAL
	Boiron	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	14
Chloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
pH	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
TDS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Antimony	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Barium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Beryllium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Cadmium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Chromium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Cobalt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Fluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Lead	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Mercury	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Selenium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Thallium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Radium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Alkalinity - Carbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Alkalinity - Bicarbonate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Magnesium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Potassium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Sodium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Arsenic															2
Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Manganese	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Sulfide, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	6
Total Ion, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13
Ferrous Ion, Field	X	X	X	X	X	X	X	X	X	X	X	X	X	X	13

Chain of Custody Record



Client Information (Sub Contract Lab)
 Shipping/Receiving: Sandria Fedrick, Sandria Fedrick@eurofins.com, 319-277-2401
 Company: TestAmerica Laboratories, Inc. State Program - Iowa
 Address: 13715 Rider Trail North, Cedar Falls, IA 50613
 City: Cedar Falls, IA 50613
 State: IA
 Earth City: Cedar Falls, IA 50613
 State Zip: MO 63045
 Phone: 314-298-9586 (Tel) 314-298-8757 (Fax)
 Email: TestAmerica@eurofins.com
 Project # 31011020
 MLKapp 25222077
 Site: 8500W

Sampler
 Name: Fredrick, Sandria
 Phone: 319-277-2401
 Email: Sandria.Fedrick@eurofins.com
 State of Origin: Iowa
 Carrier Tracking Note: 310-56552 1
 Page: 1 of 1
 Job # 310-244104-2

Due Date Requested: 12/7/2022
TAT Requested (days): 1

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soil, Air, etc.)	Field Filtered Sample (Yes or No)	Perform M/MSD (Yes or No)	903 (Precep, 0 Radium-226 (GFC))	904 (Precep, 0 Radium-228 (GFC))	Radium-226/228 (GFC)	Special Instructions/Note:
Field Blank (310-244104-1)	11/3/22	09:00 Central		Water	X	X	X	X		DO NOT SHIP ON ICE TO ST. LOUIS
MW-310 (310-244104-2)	11/3/22	10:00 Central		Water	X	X	X	X		DO NOT SHIP ON ICE TO ST. LOUIS
MW-311 (310-244104-3)	11/3/22	11:30 Central		Water	X	X	X	X		DO NOT SHIP ON ICE TO ST. LOUIS
MW-311A (310-244104-4)	11/3/22	12:20 Central		Water	X	X	X	X		DO NOT SHIP ON ICE TO ST. LOUIS

Preservation Codes:
 A - HCL
 B - NaOH
 C - Nitric Acid
 D - Nitric Acid
 E - Nitric Acid
 F - Misch
 G - H2SO4
 H - Acetic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EPA
 M - Other
 N - None
 O - AAAD02
 P - NH4OH
 Q - NH4OH
 R - NH4OH
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - Ice
 W - pH 4.5
 X - EPA
 Y - Trama
 Z - other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For Months

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested I, II, III, IV, Other (Specify) Primary Deliverable Rank 2
 Empty Kit Relinquished by: [Signature]
 Relinquished by: [Signature] Date: 11/22/22
 Relinquished by: FEDEX Date/Time: 11/25/22
 Relinquished by: FEDEX Date/Time: 11/25/22
 Custody Seal No.: [Signature] Date/Time: 11/25/22
 Custody Seal Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks: FEDEX NOV 18 2022 09:00

Ver: 06/08/2021



Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-244104-2

Login Number: 244104

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Muehling, Angela C

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.	True	
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: 310-244104-2

Login Number: 244104

List Number: 2

Creator: Bohlmann, Jessica M

List Source: Eurofins St. Louis

List Creation: 11/08/22 12:28 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: ML Kapp 25222077

Job ID: 310-244104-2

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)
310-244104-1	Field Blank	87.4
310-244104-2	MW-310	86.2
310-244104-3	MW-311	91.5
310-244104-4	MW-311A	88.9
LCS 160-589597/2-A	Lab Control Sample	92.3
MB 160-589597/1-A	Method Blank	93.7

Tracer/Carrier Legend

Ba = Ba

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA


Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-244104-1	Field Blank	87.4	84.1
310-244104-2	MW-310	86.2	87.1
310-244104-3	MW-311	91.5	91.2
310-244104-4	MW-311A	88.9	88.6
LCS 160-589599/2-A	Lab Control Sample	92.3	83.7
MB 160-589599/1-A	Method Blank	93.7	81.1

Tracer/Carrier Legend

Ba = Ba

Y = Y Carrier



Appendix D

Historical Monitoring Results

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-301		Number of Sampling Dates: 18																		
Parameter Name	Units	3/28/2018	5/22/2018	6/25/2018	7/25/2018	10/5/2018	11/29/2018	1/10/2019	2/13/2019	4/9/2019	10/7/2019	12/10/2019	2/4/2020	4/29/2020	10/22/2020	4/5/2021	10/19/2021	4/18/2022	11/2/2022	
Boron	ug/L	15700	12500	2280	2040	3620	10900	13000	13800	15000	13000	12000	13000	10000	13000	14000	13000	12000	12000	
Calcium	mg/L	131	123	105	118	114	121	140	137	150	140	140	110	130	130	130	130	120	110	
Chloride	mg/L	21.7	24.3	67.1	75.5	63.5	32.1	23	25.6	21	28	37	37	48	50	51	53	53	66	
Field pH	Std. Units	6.83	6.94	7.25	8.39	7.05	6.79	6.95	6.52	6.66	6.28	6.38	6.54	7.08	6.7	7/6.52	6.69	6.69	6.43	
Fluoride	mg/L	0.32	0.25	0.23	0.22	0.3	0.25	0.22	0.23	<0.23	0.32	<0.23	--	0.35	<0.23	0.39	<0.28	<0.22	<0.22	
Sulfate	mg/L	475	456	61	54.3	130	306	418	450	360	350	320	360	250	310	250	310	240	230	
Total Dissolved Solids	mg/L	776	833	567	611	608	762	892	826	820	840	760	790	720	820	690	630	660	680	
Antimony	ug/L	0.092	<0.15	<0.15	0.21	0.1	<0.078	0.17	0.086	--	--	<2.1	--	<0.58	--	<1.1	<1.1	<2.8	<0.69	
Arsenic	ug/L	0.66	0.82	0.67	1	0.99	1.2	0.94	0.76	--	--	<0.75	<0.88	0.95	<3.5	<0.75	1.7	<3	<0.75	
Barium	ug/L	72.9	116	167	193	165	208	149	119	--	--	120	72	140	76	79	77	71	64	
Beryllium	ug/L	<0.012	<0.12	<0.12	0.13	<0.089	<0.089	<0.089	<0.089	--	--	<0.27	--	<0.27	--	<0.27	<0.27	<1.1	<0.27	
Cadmium	ug/L	0.14	0.13	<0.07	0.16	0.05	0.044	0.11	0.15	--	--	0.1	0.11	0.095	0.28	0.44	0.22	0.23	0.26	
Chromium	ug/L	0.24	0.32	0.25	0.3	0.13	0.58	0.35	0.14	--	--	<0.98	--	<1.1	--	<1.1	<1.1	<4.4	<1.1	
Cobalt	ug/L	3.3	1.7	0.17	0.29	0.22	2	3.6	4.7	--	--	5.2	4.5	3.5	4.4	4.6	5.1	3.4	4.3	
Lead	ug/L	0.059	0.12	<0.12	0.28	<0.13	<0.13	<0.13	<0.13	--	--	<0.27	<0.27	<0.27	<0.44	<0.21	0.48	<0.96	<0.24	
Lithium	ug/L	9.7	<4.6	6.5	6.1	5.8	10.1	4.9	8.7	--	--	<11	4.4	7.4	<10	6.9	5.8	<10	7.9	
Mercury	ug/L	<0.09	<0.09	<0.09	<0.09	0.15	<0.09	<0.09	<0.037	--	--	<0.1	--	<0.1	--	<0.15	<0.15	<0.11	<0.11	
Molybdenum	ug/L	345	251	33.1	31.1	42.8	237	294	242	--	--	310	300	250	510	430	430	380	490	
Selenium	ug/L	<0.086	<0.16	<0.16	0.23	0.086	<0.085	0.12	<0.085	--	--	<1	<1	<1	--	<0.96	1.4	<3.8	<0.96	
Thallium	ug/L	<0.036	<0.14	<0.14	0.19	<0.099	<0.099	<0.099	<0.099	--	--	<0.27	--	<0.26	--	<0.26	0.29	<1	<0.26	
Total Radium	pCi/L	1.19	0.872	0.813	1.18	1.31	1.67	1.99	0.966	--	--	0.321	0.413	0.538	0.388	0.414	0.861	0.472	0.9	
Radium-226	pCi/L	0.676	0.573	0.481	0.589	0.281	0.973	1.01	0.39	--	--	0.0849	0.187	0.156	0.0134	0.192	0.128	0.167	0.226	
Radium-228	pCi/L	0.514	0.299	0.332	0.587	1.03	0.701	0.978	0.576	--	--	0.236	0.226	0.382	0.374	0.222	0.732	0.305	0.675	
Field Specific Conductance	umhos/cm	930	1060	902	953	780	690	725	938	1139	1058	1026	1054	1069	979	991	1012	885	840	
Field Temperature	deg C	11.1	11.3	13	13.3	13.8	13.57	12.65	11.5	11.2	13.96	11.7	10.92	10.5	14.6	12.7	15.4	9.5	15.3	
Groundwater Elevation	feet	577.65	579.2	578.57	577.83	580.04	577.55	577.36	577.23	585.25	580.97	577.39	578.07	578.76	577.42	577.3	576.35	577.53	576.16	
Turbidity	NTU	0.73	3.16	4.13	9.4	3.94	0.91	1.75	6.68	20	2.97	5.02	3.15	9.87	3.84	4.5	57	26.3	2.76	
Field Oxidation Potential	millivolts	-8.8	-106	-153	-180	-110	-89.7	0	-33.2 mV	-19.4	-39.5	-42.3	-4.2	-44.1	-19.6	49.4	107.4	24.9	90.1	
Oxygen, Dissolved	mg/L	0.2	0.27	0.47	0.09	0.18	0.22	0.2	0.09	0.09	0.37	0.48	0.56	0.13	0.1	0.2	0.42	0.37	0.05	
pH at 25 Degrees C	Std. Units	7.1	6.8	7	7	7	7	6.6	6.8	6.8	6.8	6.9	7	7.2	7.5	--	6.7	6.8	6.8	
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	220	240	240	200	
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.3	<4.6	<4.6	<4.6	
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	670	250	200	410	
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1000	1900	2600	570	
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	33000	33000	30000	29000	
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	750	830	900	750	
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	750	840	780	730	
Molybdenum, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	430	430	460	550	
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3300	3200	2500	2900	
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	46000	46000	44000	48000	
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	220	240	240	200	

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-302		Number of Sampling Dates: 18																		
Parameter Name	Units	3/28/2018	5/22/2018	6/25/2018	7/25/2018	10/5/2018	11/29/2018	1/10/2019	2/13/2019	4/9/2019	10/7/2019	12/10/2019	2/4/2020	4/29/2020	10/22/2020	4/5/2021	10/19/2021	4/18/2022	11/1/2022	
Boron	ug/L	5620	4720	4100	4950	5190	6300	5940	6420	4700	4600	6100	5900	4700	5700	5500	6200	5800	6300	
Calcium	mg/L	67.9	73	46.7	54.8	58.9	63.7	77.4	94.5	120	75	70	64	61	65	96	100	120	110	
Chloride	mg/L	18.8	17.6	19.4	19	18.2	15	13.9	10.9	8.9	14	14	16	17	14	11	13	10	9.3	
Field pH	Std. Units	8.32	9.11	10.11	10.64	7.83	8.16	8.51	7.75	7	7.97	7.97	7.79	8.45	8.37	7.8/7.56	7.47	7.42	7.36	
Fluoride	mg/L	0.45	0.39	0.5	0.43	0.45	0.3	0.19	<0.19	<0.23	0.33	<0.23	--	0.37	<0.23	<0.28	<0.28	<0.22	<0.22	
Sulfate	mg/L	221	199	201	208	215	203	214	211	200	180	240	250	230	260	210	260	240	270	
Total Dissolved Solids	mg/L	430	494	426	442	467	505	534	564	620	510	530	550	490	580	580	510	590	640	
Antimony	ug/L	0.27	0.33	0.29	0.32	0.25	0.3	0.37	0.35	--	--	<1.1	--	<0.58	--	<1.1	<1.1	<2.8	<0.69	
Arsenic	ug/L	8.5	8.8	10.3	8.7	8.7	9.3	7.7	7.1	--	--	6.7	6.1	8.6	7.3	7.1	7.5	6.6	8.3	
Barium	ug/L	41.6	60.4	43.4	50.1	42.3	47.1	55.7	63.1	--	--	80	58	66	63	92	73	83	83	
Beryllium	ug/L	<0.012	<0.12	<0.12	<0.12	<0.089	<0.089	<0.089	<0.089	--	--	<0.27	--	<0.27	--	<0.27	<0.27	<1.1	<0.27	
Cadmium	ug/L	0.046	0.12	0.084	0.087	0.087	0.052	0.087	0.14	--	--	0.13	0.13	0.12	0.16	<0.2	0.11	<0.22	0.093	
Chromium	ug/L	0.27	1.4	0.59	<0.19	0.29	0.32	0.64	0.36	--	--	<0.98	--	<1.1	--	<1.1	<1.1	<4.4	<1.1	
Cobalt	ug/L	0.14	0.46	0.24	<0.15	0.12	0.24	0.14	0.29	--	--	0.67	0.16	0.23	0.29	0.19	0.3	<0.76	0.38	
Lead	ug/L	0.068	0.6	0.13	<0.12	<0.13	0.28	<0.13	0.38	--	--	0.6	<0.27	<0.27	<0.11	<0.21	<0.21	<0.96	<0.24	
Lithium	ug/L	17.2	14.2	<4.6	7.2	9.9	19.5	21	31.8	--	--	19	12	4	12	18	20	19	25	
Mercury	ug/L	<0.09	<0.09	<0.09	<0.09	0.14	<0.09	<0.09	<0.037	--	--	<0.1	--	<0.1	--	<0.15	<0.15	<0.11	<0.11	
Molybdenum	ug/L	281	235	274	260	212	185	214	127	--	--	260	280	360	320	170	200	140	170	
Selenium	ug/L	5.1	6.7	0.5	1.1	0.4	1.5	2.9	8.1	--	--	<1	<1	<1	--	6.9	<0.96	46	<0.96	
Thallium	ug/L	<0.036	<0.14	<0.14	<0.14	<0.099	<0.099	<0.099	0.12	--	--	<0.27	--	<0.26	--	<0.26	<0.26	<1	<0.26	
Total Radium	pCi/L	1.02	0.987	0.611	0.367	0.63	0.644	1.69	0.663	--	--	0.659	0.122	0.577	1.13	0.178	0.624	0.598	0.341	
Radium-226	pCi/L	0.495	0.399	0.37	0.367	0.0932	0.344	0.887	0.499	--	--	0.342	0.115	0.0158	0.232	0.178	0.229	0.194	0.2	
Radium-228	pCi/L	0.523	0.588	0.241	-0.106	0.537	0.3	0.802	0.164	--	--	0.317	0.00694	0.562	0.894	-0.0548	0.395	0.404	0.141	
Field Specific Conductance	umhos/cm	492	687	633	641	11	495	503	713	870	714	727	781	785	743	834	832	815	759	
Field Temperature	deg C	11	10.9	12.4	13.2	14.9	13.76	12.23	10.8	9.9	14.3	12	11.14	9.9	13.7	10.4	14.1	9.8	15.4	
Groundwater Elevation	feet	576.62	579.37	578.04	577.62	579.88	576.52	577.05	576.51	585.29	580.74	577.41	577.74	579.38	574.64	577.47	573.32	577.59	573.23	
Turbidity	NTU	1.83	38.63	1.74	4.32	3.65	9.12	1.37	5.54	11.89	1.21	61.54	1.94	1.33	0.02	0.02	11	4.51	0.86	
Field Oxidation Potential	millivolts	-132.7	-27	-183	-45	194	-179.8	-75.9	-62.4 mV	116.5	12.3	21.1	37.7	2.7	-64.1	122.6	118.8	119.2	179.7	
Oxygen, Dissolved	mg/L	1.02	0.28	0.21	0.19	3.79	0.47	0.33	0.61	1.99	0.38	0.42	1.49	0.14	0.11	0.98	0.23	0.14	0.21	
pH at 25 Degrees C	Std. Units	8.6	8.2	9.1	8.6	8.4	8.4	7.5	7.8	7.2	8.2	8.1	7.8	8.5	8.3	--	7.7	7.5	7.7	
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	250	190	250	210	
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<2.3	<4.6	<4.6	<4.6	
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<36	<36	<36	<36	
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<36	<36	<140	<36	
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8100	10000	9800	13000	
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	120	260	140	350	
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	110	290	130	330	
Molybdenum, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	170	200	150	180	
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13000	9500	11000	9400	
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	63000	50000	52000	52000	
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	250	190	250	210	

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-303		Number of Sampling Dates: 18																		
Parameter Name	Units	3/28/2018	5/22/2018	6/25/2018	7/25/2018	10/5/2018	11/29/2018	1/10/2019	2/13/2019	4/9/2019	10/7/2019	12/10/2019	2/4/2020	4/29/2020	10/22/2020	4/5/2021	10/18/2021	4/18/2022	11/12/2022	
Boron	ug/L	2510	3080	3500	1910	3980	3080	3720	3780	2600	2900	3200	4000	4200	3800	5200	5300	5800	5800	
Calcium	mg/L	72	84.5	109	69.3	129	116	213	198	150	200	110	130	220	71	170	70	230	85	
Chloride	mg/L	24.7	23.5	19.7	23.9	14.7	14.6	7.3	8.4	19	5.6	16	11	6	23	11	24	13	21	
Field pH	Std. Units	10.41	9.05	9.86	10.74	8.7	9.28	7.39	8.54	7.43	6.76	9.35	7.26	7.33	9.97	7.5/7.19	8.89	6.81	7.26	
Fluoride	mg/L	0.45	0.39	0.31	0.66	0.35	0.37	<0.19	<0.19	<0.23	0.32	<0.23	--	<0.23	0.67	<0.28	<0.28	<0.22	<0.22	
Sulfate	mg/L	256	308	379	243	459	378	644	659	440	480	350	380	590	260	470	240	600	290	
Total Dissolved Solids	mg/L	438	562	690	452	753	703	1080	968	790	1000	620	760	1000	510	920	430	1300	720	
Antimony	ug/L	0.24	0.64	0.26	0.27	0.26	0.22	0.23	0.22	--	--	<0.53	--	<0.58	--	<1.1	<1.1	<2.8	<0.69	
Arsenic	ug/L	6.6	6.2	6.4	8.8	5.6	7.9	4.1	4.4	--	--	9.2	4	5.8	20	14	81	34	67	
Barium	ug/L	28.5	25.7	35.8	21.7	39	44.2	64	53.8	--	--	47	48	96	52	81	220	140	140	
Beryllium	ug/L	<0.012	0.35	<0.12	<0.12	<0.089	<0.089	<0.089	<0.089	--	--	<0.27	--	<0.27	--	<0.27	<0.27	<1.1	<0.27	
Cadmium	ug/L	<0.018	0.46	<0.07	<0.07	0.12	<0.033	0.044	<0.033	--	--	0.045	<0.039	<0.039	0.093	<0.051	0.064	<0.22	0.16	
Chromium	ug/L	0.11	0.52	0.45	<0.19	0.2	<0.078	0.38	0.15	--	--	<0.98	--	<1.1	--	<1.1	<1.1	<4.4	<1.1	
Cobalt	ug/L	0.18	0.57	0.44	<0.15	0.33	0.18	0.47	0.41	--	--	0.36	0.46	0.77	0.3	1	0.74	2	0.78	
Lead	ug/L	0.039	0.42	0.18	<0.12	<0.13	<0.13	1.4	<0.13	--	--	0.57	<0.27	<0.27	<0.11	<0.21	<0.21	<0.96	<0.24	
Lithium	ug/L	10.1	9.8	13.6	<4.6	15.6	17.2	23.6	24.4	--	--	17	26	44	14	47	14	67	53	
Mercury	ug/L	<0.09	<0.09	<0.09	<0.09	0.15	<0.09	<0.09	<0.037	--	--	<0.1	--	<0.1	--	<0.15	<0.15	<0.11	<0.11	
Molybdenum	ug/L	135	152	122	145	110	127	55.9	67.1	--	--	140	96	74	180	150	190	96	200	
Selenium	ug/L	8.6	1.4	1.7	6.5	0.72	3	0.69	0.86	--	--	2	2.3	<1	--	<0.96	2.7	<3.8	2.6	
Thallium	ug/L	<0.036	0.36	<0.14	<0.14	<0.099	<0.099	<0.099	<0.099	--	--	<0.27	--	<0.26	--	<0.26	<0.26	<1	<0.26	
Total Radium	pCi/L	0.821	0.614	0.876	0.581	1.09	0.202	0.49	1.04	--	--	0.242	0.409	0.348	0.676	0.415	3.8	1.72	1.02	
Radium-226	pCi/L	0.519	0.0661	0.0823	0.276	0.424	-0.248	0.095	0.566	--	--	0.112	0.123	0.154	0.234	0.214	1.35	0.427	0.424	
Radium-228	pCi/L	0.302	0.548	0.794	0.305	0.668	0.202	0.394	0.47	--	--	0.131	0.286	0.194	0.442	0.201	2.45	1.29	0.598	
Field Specific Conductance	umhos/cm	608.7	797	927	706	872	668	948	1092	1024	1220	861	1057	1484	723	1306	768	1592	894	
Field Temperature	deg C	12.6	12.3	14	13.8	13.9	13.58	12.82	12.1	12.2	14.11	12	11.93	10.9	13.1	11.6	14.3	10.8	14.3	
Groundwater Elevation	feet	577.37	580	577.24	577.83	579.74	578.74	579.06	578.9	584.61	581.39	578.9	579.58	580.82	575.82	578.57	573.97	577.7	574.26	
Turbidity	NTU	0.77	1.32	2.97	2.17	4.61	0.58	6.53	6.13	12.01	1.91	30.09	1.64	41.9	35.2	45.4	110	565	83	
Field Oxidation Potential	millivolts	-42.7	-180	-257	-98	-211.8	-286.5	13.8	-160.8 mV	-47	39.5	42.3	34	-97.7	-32.1	-57.8	61.5	132	102.8	
Oxygen, Dissolved	mg/L	0.77	0.19	0.23	0.11	0.09	0.2	0.47	0.1	0.08	1.32	0.47	1.73	0.22	0.19	0.3	0.25	0.2	0.2	
pH at 25 Degrees C	Std. Units	9.7	9	8.9	10.6	8.7	9	7	8.5	7.6	7.2	9.2	7.6	7.8	9.6	--	9.6	6.9	7.6	
Arsenic, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.1	11	2.9	7.5	
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	230	69	320	170	
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<4.6	79	<4.6	<4.6	
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	790	130	810	430	
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7000	40000	16000	15000	
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16000	1700	24000	4900	
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3000	180	9800	1700	
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3000	1600	9800	2200	
Molybdenum, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	140	200	110	210	
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22000	14000	22000	16000	
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	81000	80000	110000	96000	
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	230	150	320	170	
Lithium, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13	67	41	

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-304		Number of Sampling Dates: 19																			
Parameter Name	Units	3/28/2018	5/22/2018	6/25/2018	7/25/2018	10/5/2018	11/29/2018	1/10/2019	2/13/2019	4/9/2019	10/7/2019	12/10/2019	2/4/2020	4/29/2020	7/7/2020	10/22/2020	4/5/2021	10/18/2021	4/18/2022	11/2/2022	
Boron	ug/L	10900	6880	8530	8330	8820	9140	8920	9920	10000	10000	10000	10000	8900	--	9400	11000	8900	10000	11000	
Calcium	mg/L	63.2	49.4	52	48.5	56	70.9	85	79.3	54	92	89	85	81	--	86	130	78	130	100	
Chloride	mg/L	28.4	31.4	28.4	28.7	35.3	28	25.6	26.5	28	24	23	25	26	--	23	20	26	20	22	
Field pH	Std. Units	7.87	7.65	7.81	7.64	7.47	7.51	7.34	7.24	7.97	7.08	7.31	7.31	6.48	6.81	7.07	7.1/6.8	7.4	6.97	6.69	
Fluoride	mg/L	0.2	0.26	0.25	0.28	0.36	0.24	0.31	0.2	<0.23	0.34	<0.23	--	0.32	--	<0.23	0.45	<0.28	<0.22	<0.22	
Sulfate	mg/L	213	188	186	177	206	286	349	319	200	330	330	310	290	--	340	490	300	380	370	
Total Dissolved Solids	mg/L	441	419	443	443	459	601	645	602	440	660	660	620	590	--	660	920	520	830	710	
Antimony	ug/L	0.035	<0.15	<0.15	0.23	<0.078	<0.078	0.082	<0.078	--	--	<2.1	--	<0.58	--	--	<1.1	<1.1	<2.8	<0.69	
Arsenic	ug/L	3.1	3	3.7	4.5	3.3	4.5	3.8	3.1	--	3	--	4.5	3.7	18	4.4	4.5	6.6	3.1	3.3	
Barium	ug/L	59.4	39.1	55.7	60.2	47.7	73.3	78.1	64.6	--	--	86	78	420	--	95	180	100	93	140	
Beryllium	ug/L	<0.012	<0.12	0.13	0.15	<0.089	<0.089	<0.089	<0.089	--	--	<0.27	--	<0.27	--	--	<0.27	<0.27	<1.1	<0.27	
Cadmium	ug/L	0.11	0.48	0.24	0.38	0.25	0.17	0.19	0.29	--	--	0.28	0.31	0.43	--	0.39	<0.2	0.33	<0.22	0.29	
Chromium	ug/L	0.49	0.68	3.9	1.8	0.33	0.1	0.23	0.18	--	--	<0.98	--	<1.1	--	--	<1.1	<1.1	<4.4	<1.1	
Cobalt	ug/L	0.44	0.56	1.9	1.4	0.56	0.73	0.75	0.83	--	--	1.1	0.92	1.2	--	1	1.2	1.1	0.78	1.3	
Lead	ug/L	0.19	0.6	2.3	2.6	0.26	<0.13	<0.13	<0.13	--	--	0.4	<0.27	0.51	--	<0.44	<0.21	<0.21	<0.96	<0.24	
Lithium	ug/L	4.7	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6	5.8	--	--	<11	<2.3	2.9	--	<10	3.2	<2.5	<10	4.2	
Mercury	ug/L	<0.09	<0.09	<0.09	<0.09	0.14	<0.09	<0.09	<0.037	--	--	<0.1	--	<0.1	--	--	<0.15	<0.15	<0.11	<0.11	
Molybdenum	ug/L	1530	1260	807	828	788	790	778	640	--	--	820	950	1200	--	930	650	1200	500	880	
Selenium	ug/L	<0.086	<0.16	1	0.79	0.11	<0.085	0.14	<0.085	--	--	<1	<1	<1	--	--	<0.96	<0.96	<3.8	<0.96	
Thallium	ug/L	<0.036	<0.14	<0.14	<0.14	<0.099	<0.099	<0.099	<0.099	--	--	<0.27	--	<0.26	--	--	<0.26	<0.26	<1	<0.26	
Total Radium	pCi/L	1.1	1.64	0.641	0.645	0.466	1.2	0.978	0.869	--	--	0.277	0.622	4.39	--	0.839	2.95	4.77	0.898	1.34	
Radium-226	pCi/L	0.659	0.867	0.266	0.249	0.0953	0.501	0	0.588	--	--	0.277	0.189	2.31	--	0.363	1.29	2.54	0.368	0.381	
Radium-228	pCi/L	0.437	0.769	0.375	0.396	0.371	0.702	0.978	0.281	--	--	0.155	0.434	2.08	--	0.476	1.66	2.23	0.53	0.96	
Field Specific Conductance	umhos/cm	579.5	611	629	607	560.5	587	630	757	707	909	932	934	924	1004	918	1289	868	1154	920	
Field Temperature	deg C	12	11.8	13.7	13.6	13.6	13.55	12.68	12.2	11.7	14.62	12.1	12.02	10.8	13.4	13.2	12.1	15.3	10.5	13.6	
Groundwater Elevation	feet	577.05	579.47	570.77	577.56	579.32	578.43	578.56	578.26	585.25	581.62	578.85	578.73	580.95	577.15	575.32	577.25	573.33	576.47	573.39	
Turbidity	NTU	2.9	11.84	78.2	51.08	13.86	18.9	3.65	4.16	2.12	3.5	13.5	2.94	49.9	12.8	1.05	22	110	56.5	84	
Field Oxidation Potential	millivolts	-130.3	-121	-113	-117	-96.7	-69	34.9	-36.8 mV	18.7	-37.4	-42	36.3	74.5	-23.6	-65.2	-18.1	84	-42.2	103.1	
Oxygen, Dissolved	mg/L	0.1	0.57	0.41	0.12	0.1	0.36	0.2	0.06	0.07	0.25	0.28	0.82	0.13	0.28	0.1	0.11	0.1	0.14	0.09	
pH at 25 Degrees C	Std. Units	7.5	7.7	7.4	7.7	7.4	7.6	6.8	7.3	7.5	7.3	7.3	7.3	7.5	--	7.7	--	7.3	7.1	7.1	
Arsenic, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.2	2.3	3.7	1.8	
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	160	130	250	180	
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<4.6	<4.6	<4.6	<4.6	
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	640	<36	<36	<36	
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3100	1100	330	1200	
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22000	20000	18000	23000	
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2300	450	1600	660	
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2300	460	1600	620	
Molybdenum, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	640	1200	640	1000	
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25000	10000	21000	13000	
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100000	62000	90000	80000	
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	160	130	250	180	

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-304A						
Number of Sampling Dates: 5						
Parameter Name	Units	2/22/2021	4/5/2021	10/18/2021	4/18/2022	11/2/2022
Boron	ug/L	380	490	470	460	480
Calcium	mg/L	87	89	85	89	82
Chloride	mg/L	9.7	11	11	10	11
Field pH	Std. Units	7.08	7.4/6.99	7.09	7.12	6.94
Fluoride	mg/L	<0.28	<0.28	<0.28	<0.22	<0.22
Sulfate	mg/L	65	64	72	66	71
Total Dissolved Solids	mg/L	390	390	350	360	390
Antimony	ug/L	<1.1	<1.1	<1.1	<0.69	<0.69
Arsenic	ug/L	2.7	1.8	1.7	1.4	1.5
Barium	ug/L	150	140	110	100	110
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	<0.051	<0.051	<0.051	<0.055	<0.055
Chromium	ug/L	3.1	<1.1	<1.1	<1.1	<1.1
Cobalt	ug/L	1.3	0.54	0.35	0.33	0.36
Lead	ug/L	1.1	0.24	<0.21	<0.24	<0.24
Lithium	ug/L	3.9	2.5	<2.5	<2.5	<2.5
Mercury	ug/L	<0.15	<0.15	<0.15	<0.11	<0.11
Molybdenum	ug/L	3.1	17	6	3.2	3.8
Selenium	ug/L	<0.96	<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	1.02	0.747	0.773	0.566	0.814
Radium-226	pCi/L	0.291	0.175	0.137	0.16	0.0633
Radium-228	pCi/L	0.727	0.572	0.636	0.406	0.751
Field Specific Conductance	umhos/cm	628.1	650	654	596	561
Field Temperature	deg C	12.1	12.6	13.2	11.2	12.4
Groundwater Elevation	feet	573.91	577.35	573.41	576.65	573.47
Turbidity	NTU	33.1	2.31	9.6	6.7	1.06
Field Oxidation Potential	millivolts	-153.5	-11.2	10.2	83.9	15.8
Oxygen, Dissolved	mg/L	0.23	0.45	0.15	0.17	0.01
pH at 25 Degrees C	Std. Units	7.4	--	7.3	7.3	7.3
Bicarbonate Alkalinity as CaCO3	mg/L	--	300	430	290	280
Carbonate Alkalinity as CaCO3	mg/L	--	<4.6	<4.6	<4.6	<4.6
Iron, dissolved	ug/L	--	330	330	420	480
Iron, total	ug/L	--	530	350	400	480
Magnesium, total	ug/L	--	30000	28000	28000	28000
Manganese, dissolved	ug/L	--	680	670	700	610
Manganese, total	ug/L	--	680	660	680	610
Potassium, total	ug/L	--	2300	1800	1900	1700
Sodium, total	ug/L	--	13000	18000	19000	16000
Total Alkalinity as CaCO3	mg/L	--	300	430	290	280

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-305																					
Number of Sampling Dates: 19																					
Parameter Name	Units	3/28/2018	5/22/2018	6/25/2018	7/25/2018	10/5/2018	11/29/2018	1/10/2019	2/13/2019	4/9/2019	9/6/2019	10/7/2019	12/10/2019	2/4/2020	4/29/2020	10/22/2020	4/5/2021	10/18/2021	4/18/2022	11/2/2022	
Boron	ug/L	16800	14000	16400	11900	16500	18500	18800	18700	1600	17000	20000	15000	15000	16000	16000	16000	13000	16000	14000	
Calcium	mg/L	131	122	148	88.4	137	150	172	167	170	--	210	160	160	190	190	190	130	200	160	
Chloride	mg/L	20.2	21.7	17.7	25.5	19.6	16.3	15.7	16.9	20	--	14	17	19	18	15	18	23	15	18	
Field pH	Std. Units	6.28	7.27	9.01	7.6	7.31	7.27	7.38	7.12	7.53	8.02	7.04	7.19	7.2	6.41	7.3	7.6/7.31	7.49	7.36	7.22	
Fluoride	mg/L	0.17	0.21	0.39	0.32	0.31	0.22	0.36	0.29	2.3	3.2	0.41	<0.23	--	0.33	<0.23	<0.28	<0.28	<0.22	<0.22	
Sulfate	mg/L	623	468	673	341	472	<0.24	689	619	480	--	690	620	590	690	760	710	470	810	600	
Total Dissolved Solids	mg/L	885	872	1080	690	941	1040	1140	1110	1100	--	1300	1100	1100	1200	1300	1200	810	1200	1100	
Antimony	ug/L	0.23	<0.15	0.27	0.2	0.088	<0.078	<0.078	<0.078	--	--	--	<2.1	--	<0.58	--	<1.1	<1.1	<2.8	<0.69	
Arsenic	ug/L	0.62	0.86	2.1	1.2	1.1	1.4	1.4	1.3	--	--	--	1.4	1.4	3.1	<3.5	1.6	3.1	<3	1.6	
Barium	ug/L	83.9	81.7	89.5	61	78.6	95.9	97.8	92.6	--	--	--	92	90	120	100	100	74	82	82	
Beryllium	ug/L	<0.012	<0.12	<0.12	<0.12	<0.089	<0.089	<0.089	<0.089	--	--	--	<0.27	--	<0.27	--	<0.27	<0.27	<1.1	<0.27	
Cadmium	ug/L	0.16	0.3	0.15	0.18	0.23	0.17	0.21	0.26	--	--	--	0.25	0.24	0.26	0.34	<0.36	0.18	<0.22	0.19	
Chromium	ug/L	0.44	0.2	0.93	<0.19	<0.079	<0.078	0.24	0.45	--	--	--	<0.98	--	<1.1	--	<1.1	<1.1	<4.4	<1.1	
Cobalt	ug/L	0.62	0.49	0.8	0.29	0.38	0.4	0.54	0.61	--	--	--	0.57	0.55	0.68	0.69	0.8	0.33	<0.76	0.62	
Lead	ug/L	0.099	0.24	0.58	0.15	<0.13	<0.13	<0.13	0.14	--	--	--	<0.27	<0.27	<0.27	<0.44	<0.21	<0.21	<0.96	<0.24	
Lithium	ug/L	21.4	13.6	17.9	10.9	16.6	21.8	18.1	23.4	--	--	--	19	16	20	22	23	13	21	20	
Mercury	ug/L	<0.09	<0.09	<0.09	<0.09	0.15	<0.09	<0.09	<0.037	--	--	--	<0.1	--	<0.1	--	<0.15	<0.15	<0.11	<0.11	
Molybdenum	ug/L	613	671	724	886	666	670	663	468	--	--	--	650	680	720	580	650	810	560	690	
Selenium	ug/L	0.19	0.5	0.23	0.23	0.088	<0.085	0.094	0.13	--	--	--	<1	<1	<1	--	<0.96	<0.96	<3.8	<0.96	
Thallium	ug/L	<0.036	<0.14	0.21	<0.14	<0.099	<0.099	<0.099	<0.099	--	--	--	<0.27	--	<0.26	--	<0.26	<0.26	<1	<0.26	
Total Radium	pCi/L	0.962	0.189	1.67	0.702	2.01	0.616	0.987	0.817	--	--	--	0.634	0.28	0.0301	0.75	0.429	0.849	0.496	0.317	
Radium-226	pCi/L	0.425	0.189	0.649	0.134	0.398	0.157	0.417	0.178	--	--	--	0.0928	0.151	0.0301	0.181	0.135	0.142	0.143	0.173	
Radium-228	pCi/L	0.537	-0.038	1.02	0.568	1.61	0.459	0.57	0.639	--	--	--	0.541	0.129	-0.0563	0.57	0.295	0.707	0.353	0.144	
Field Specific Conductance	umhos/cm	934	1155	1405	954	1069	950	958	1272	1425	1590	1604	1391	1415	1545	1354	1585	1224	1438	1178	
Field Temperature	deg C	10.9	11.4	14.3	13.7	14.3	13.73	12.3	11.3	10.5	15.3	15.33	11.8	10.63	10.1	13.7	12.1	18.9	10.1	13.9	
Groundwater Elevation	feet	576.58	579.34	571.28	577.52	579.15	578.69	578.84	578.45	585.23	577.42	581.88	578.89	578.85	580.4	575.25	577.16	573.2	576.1	573.3	
Turbidity	NTU	11.92	4.18	41.01	3.29	4.18	0.69	2.91	5.26	4.23	19.31	5.04	11.4	1.72	11.9	3.2	2.63	28.5	6.78	3.39	
Field Oxidation Potential	millivolts	63.9 mV	17	-83	-36	-50.2	-72	30.3	-47.7 mV	115.9	157 mV	-41.8	-67.4	14	-50.8	-8.4	-82.4	-85	-34.8	74.8	
Oxygen, Dissolved	mg/L	1.9	0.64	0.54	0.15	0.14	0.2	0.27	0.09	0.08	0.39	0.33	0.83	1.12	0.16	0.13	0.16	0.29	0.17	0	
pH at 25 Degrees C	Std. Units	7.2	7.2	7.6	7.4	7.3	7.6	7.4	7.3	6.9	--	7.2	7.5	7.4	7.6	7.9	--	7.4	7.5	7.4	
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	190	170	250	220	
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<4.6	<4.6	<4.6	<4.6	
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	880	1200	1200	1300	
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1200	2600	1200	1600	
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30000	21000	28000	25000	
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3200	1100	3600	2500	
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3200	1100	3100	2400	
Molybdenum, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	630	800	700	780	
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13000	11000	12000	12000	
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	140000	97000	130000	120000	
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	190	170	250	220	

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-306		Number of Sampling Dates: 18																		
Parameter Name	Units	3/28/2018	5/22/2018	6/25/2018	7/25/2018	10/5/2018	11/29/2018	1/10/2019	2/13/2019	4/9/2019	10/7/2019	12/10/2019	2/4/2020	4/29/2020	10/22/2020	4/5/2021	10/18/2021	4/19/2022	11/2/2022	
Boron	ug/L	17600	18600	15600	17900	17000	17600	17300	18900	14000	12000	15000	20000	22000	14000	15000	15000	9300	10000	
Calcium	mg/L	168	164	165	155	154	141	152	154	150	160	130	120	130	150	150	160	210	160	
Chloride	mg/L	52.1	59.9	78.5	63.7	83.8	79.4	97.4	93.5	100	83	74	75	76	110	120	190	210	270	
Field pH	Std. Units	7.42	7.33	8.13	8.31	7.33	7.3	7.46	7.25	7.64	7.01	7.31	7.5	6.59	7.21	7.47.05	7.24	6.88	6.93	
Fluoride	mg/L	0.27	0.18	0.27	0.29	0.26	<0.19	<0.19	<0.19	<0.23	0.3	<0.23	--	<0.46	<0.23	<0.28	<0.28	<0.22	<0.22	
Sulfate	mg/L	488	600	396	454	419	416	452	457	340	270	390	500	560	340	270	320	170	180	
Total Dissolved Solids	mg/L	1100	1130	1080	1090	1020	1030	1110	1070	1000	910	960	1100	1200	1000	970	1000	1100	1200	
Antimony	ug/L	0.13	0.16	<0.15	0.17	0.14	0.092	0.24	0.12	--	--	<2.1	--	<0.58	--	<1.1	<1.1	3.1	<0.69	
Arsenic	ug/L	0.054	0.42	0.33	0.49	0.37	0.53	0.65	0.37	--	--	<0.75	<0.88	<0.88	<3.5	<0.75	<0.75	<3	<0.75	
Barium	ug/L	53.6	56.8	55.5	53.8	51.1	54.7	57.9	55.9	--	--	49	53	59	71	84	84	76	110	
Beryllium	ug/L	<0.012	<0.12	<0.12	<0.12	<0.089	<0.089	<0.089	<0.089	--	--	<0.27	--	<0.27	--	<0.27	<0.27	<1.1	<0.27	
Cadmium	ug/L	0.025	0.08	<0.07	0.07	0.041	<0.033	0.094	0.05	--	--	<0.039	0.072	<0.039	<0.2	<0.051	<0.051	<0.22	<0.055	
Chromium	ug/L	0.22	<0.19	<0.19	<0.19	0.13	0.16	0.3	0.16	--	--	<0.98	--	<1.1	--	<1.1	<1.1	<4.4	<1.1	
Cobalt	ug/L	0.1	0.16	<0.15	0.17	0.13	0.09	0.24	0.19	--	--	0.18	0.26	0.2	<0.36	<0.091	0.19	<0.76	0.21	
Lead	ug/L	0.033	<0.12	<0.12	<0.12	<0.13	<0.13	<0.13	0.19	--	--	<0.27	<0.27	<0.27	<0.44	<0.21	<0.21	<0.96	<0.24	
Lithium	ug/L	58	63.5	56.4	60.2	65.4	72.6	76.9	81.4	--	--	68	69	80	60	70	89	51	100	
Mercury	ug/L	<0.09	<0.09	<0.09	<0.09	0.14	<0.09	<0.09	<0.037	--	--	<0.1	--	<0.1	--	<0.15	<0.15	<0.11	<0.11	
Molybdenum	ug/L	46.4	75.3	53.3	92	87.6	96.1	97.6	89.5	--	--	88	100	120	49	46	57	8.8	25	
Selenium	ug/L	2.9	0.51	1.2	1	2.8	2.3	0.73	0.68	--	--	1.6	<1	<1	--	1	<0.96	7.1	<0.96	
Thallium	ug/L	<0.036	<0.14	<0.14	<0.14	<0.099	<0.099	0.13	<0.099	--	--	<0.27	--	<0.26	--	<0.26	<0.26	<1	<0.26	
Total Radium	pCi/L	0.666	0	0.267	0.175	0.577	0.638	1	0.221	--	--	0.61	0.068	0.137	0.189	0.0138	0.216	0.154	0.12	
Radium-226	pCi/L	0.0948	0	0.267	0.168	0.37	0.275	0.417	0.221	--	--	0.0472	0.068	0.03	0.138	0.0138	0.0797	0.0258	0.12	
Radium-228	pCi/L	0.571	-0.204	-0.0597	0.00726	0.207	0.363	0.585	-0.115	--	--	0.563	-0.0785	0.107	0.0513	-0.0349	0.136	0.128	-0.135	
Field Specific Conductance	umhos/cm	1355	1511	1498	1431	15.4	936	980	1344	1499	1290	1304	1557	1683	1427	1461	1594	1588	1508	
Field Temperature	deg C	10	10.6	11.9	13.2	13.8	13.22	11.78	10.4	9.8	14.56	11.3	11.08	9.9	13.7	11.1	15.3	9.5	14.6	
Groundwater Elevation	feet	577.93	579.47	576.93	577.97	579.46	579.28	579.47	579.4	585.29	582.28	579.49	579.31	580.7	576.82	578.15	567.49	577.24	574.63	
Turbidity	NTU	3.95	1.12	0.88	3.58	8.14	0.64	0.44	4.61	3.01	0.57	3.34	0.71	1.47	0.02	0.02	10	4.35	1.42	
Field Oxidation Potential	millivolts	59.9	87	83	99	228.1	-7.7	34.7	-12.2 mV	104.6	19.7	22.4	26	105.4	-3.5	141.9	134.4	114.2	126.4	
Oxygen, Dissolved	mg/L	2.33	0.44	0.4	0.14	5.3	0.26	0.29	0.07	0.08	0.3	0.58	1.87	0.11	0.1	0.18	0.7	1.56	0.19	
pH at 25 Degrees C	Std. Units	7.2	7.4	7.1	7.4	7.3	7.6	7.4	7.4	7.5	7.3	7.6	7.7	7.8	7.8	--	7.3	7	7.2	
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	380	300	510	350	
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<4.6	<4.6	<4.6	<4.6	
Iron, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<36	<36	<140	<36	
Iron, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<36	<36	<140	<36	
Magnesium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27000	21000	35000	25000	
Manganese, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	370	500	<3.6	540	
Manganese, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	410	560	<14	470	
Potassium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13000	13000	11000	11000	
Sodium, total	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	120000	150000	110000	130000	
Total Alkalinity as CaCO3	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	380	300	510	350	
Lithium, dissolved	ug/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	84	57	95	

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-307											
Number of Sampling Dates: 10											
Parameter Name	Units	7/7/2020	8/7/2020	10/22/2020	2/22/2021	4/5/2021	6/17/2021	7/22/2021	10/19/2021	4/19/2022	11/3/2022
Boron	ug/L	280	<80	130	<58	<230	<58	<58	<58	<58	63
Calcium	mg/L	260	260	230	230	230	210	240	200	180	170
Chloride	mg/L	53	55	52	53	63	77	82	71	64	62
Field pH	Std. Units	6.57	7.45	6.63	6.58	6.9/6.64	7/6.66	6.7/7.71	6.63	6.52	6.22
Fluoride	mg/L	<0.23	<0.23	<0.23	<0.28	<0.28	<0.28	<0.28	<0.28	<0.22	<0.22
Sulfate	mg/L	15	17	21	19	19	19	18	22	23	24
Total Dissolved Solids	mg/L	1100	980	940	860	930	750	710	770	680	770
Antimony	ug/L	<0.51	<0.51	--	<1.1	<1.1	<1.1	<1.1	<1.1	<0.69	<0.69
Arsenic	ug/L	1.7	1.1	0.92	<0.75	0.96	<0.75	0.98	0.99	1	1.1
Barium	ug/L	320	330	330	310	310	310	290	330	290	320
Beryllium	ug/L	<0.27	<0.27	--	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	0.098	0.13	0.13	0.21	<0.2	0.11	0.083	0.085	0.07	<0.055
Chromium	ug/L	<1.1	<1.1	--	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Cobalt	ug/L	6.3	1.9	2.4	3	3.4	3.1	1.6	4.8	5	5.5
Lead	ug/L	0.12	<0.11	<0.11	<0.21	<0.21	<0.21	<0.21	<0.21	<0.24	<0.24
Lithium	ug/L	<2.5	<2.5	3	3.3	2.5	<2.5	<2.5	4.8	5.3	7
Mercury	ug/L	<0.1	<0.1	--	<0.15	<0.15	<0.15	<0.15	<0.15	<0.11	<0.11
Molybdenum	ug/L	2.5	<1.1	<1.1	<1.3	3.4	<1.3	<1.3	<1.3	<1.2	5.1
Selenium	ug/L	<1	<1	--	<0.96	<0.96	<0.96	<0.96	<0.96	1.1	<0.96
Thallium	ug/L	<0.26	<0.26	--	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26
Total Radium	pCi/L	0.841	0.666	0.623	3.46	0.54	0.629	0.238	1.46	0.549	0.863
Radium-226	pCi/L	0.381	0.21	0.177	3.28	0.227	0.331	0.111	1.2	0.109	0.322
Radium-228	pCi/L	0.461	0.455	0.447	0.18	0.313	0.298	0.127	0.262	0.44	0.541
Field Specific Conductance	umhos/cm	1911	1759	1590	1563	1627	1565	1712	1501	1199	1096
Field Temperature	deg C	14.2	15.6	15.7	12.46	10.3	12.4	16	15.3	9.8	14.7
Groundwater Elevation	feet	593.85	593.06	592.77	592.12	594.32	593.33	592.65	590.84	592.46	589.14
Turbidity	NTU	3.5	6.61	2.68	0	0.77	0.71	0	13.1	6.6	2.11
Field Oxidation Potential	millivolts	-0.4	31.8	22.4	55.4	62.7	90	69.5	50.4	11.2	66.5
Oxygen, Dissolved	mg/L	0.39	0.13	0.09	0.2	0.17	0.2	0.74	1.15	0.12	0.08
pH at 25 Degrees C	Std. Units	6.7	6.9	7.4	7.7	--	--	--	6.7	6.7	6.8
Bicarbonate Alkalinity as CaCO3	mg/L	--	--	--	--	930	--	860	800	690	660
Carbonate Alkalinity as CaCO3	mg/L	--	--	--	--	<4.6	--	<4.2	<4.6	<4.6	<4.6
Iron, dissolved	ug/L	--	--	--	--	460	--	85	620	1900	1500
Iron, total	ug/L	--	--	--	--	460	--	65	620	1600	980
Magnesium, total	ug/L	--	--	--	--	97000	--	92000	80000	69000	66000
Manganese, dissolved	ug/L	--	--	--	--	3000	--	1000	2200	3400	2700
Manganese, total	ug/L	--	--	--	--	3000	--	1100	2200	3200	2600
Potassium, total	ug/L	--	--	--	--	430	--	320	630	700	730
Sodium, total	ug/L	--	--	--	--	16000	--	17000	14000	13000	13000
Total Alkalinity as CaCO3	mg/L	--	--	--	--	930	--	860	800	690	660

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-308					
Number of Sampling Dates: 4					
Parameter Name	Units	6/17/2021	10/19/2021	4/19/2022	11/2/2022
Boron	ug/L	400	460	380	430
Calcium	mg/L	84	92	87	79
Chloride	mg/L	33	36	34	30
Field pH	Std. Units	6.7/6.51	6.52	6.46	6.14
Fluoride	mg/L	<0.28	<0.28	<0.22	<0.22
Sulfate	mg/L	74	86	81	91
Total Dissolved Solids	mg/L	530	470	470	500
Antimony	ug/L	<1.1	<1.1	<0.69	<0.69
Arsenic	ug/L	<0.75	<0.75	<0.75	0.88
Barium	ug/L	92	77	69	90
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	0.14	0.052	0.065	0.09
Chromium	ug/L	<1.1	<1.1	<1.1	<1.1
Cobalt	ug/L	1.3	1.2	0.4	0.64
Lead	ug/L	0.46	<0.21	<0.24	<0.24
Lithium	ug/L	<2.5	<2.5	<2.5	3
Mercury	ug/L	<0.15	<0.15	<0.11	<0.11
Molybdenum	ug/L	<1.3	<1.3	<1.2	1.3
Selenium	ug/L	<0.96	<0.96	<0.96	<0.96
Thallium	ug/L	<0.26	<0.26	<0.26	<0.26
Total Radium	pCi/L	0.893	1.1	0.444	0.89
Radium-226	pCi/L	0.245	0.858	0.0503	0.172
Radium-228	pCi/L	0.648	0.241	0.394	0.719
Field Specific Conductance	umhos/cm	863	959	817	730
Field Temperature	deg C	12.1	16.2	9.8	16
Groundwater Elevation	feet	576.05	573.43	576.93	573.8
Turbidity	NTU	48.2	22.7	6.06	12.5
Field Oxidation Potential	millivolts	101	61.8	103.2	137.7
Oxygen, Dissolved	mg/L	0.3	1.06	1.02	0.21
pH at 25 Degrees C	Std. Units	--	6.7	6.7	6.6
Bicarbonate Alkalinity as CaCO3	mg/L	420	470	390	400
Carbonate Alkalinity as CaCO3	mg/L	<4.6	<4.6	<4.6	<4.6
Iron, dissolved	ug/L	340	370	190	150
Iron, total	ug/L	940	650	270	1100
Magnesium, total	ug/L	52000	53000	45000	48000
Manganese, dissolved	ug/L	970	1100	690	930
Manganese, total	ug/L	990	1100	590	900
Molybdenum, dissolved	ug/L	<1.3	--	--	--
Potassium, total	ug/L	1100	800	1100	630
Sodium, total	ug/L	42000	43000	46000	43000
Total Alkalinity as CaCO3	mg/L	420	470	390	400
Lithium, dissolved	ug/L	<2.5	--	--	--

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-309					
Number of Sampling Dates: 4					
Parameter Name	Units	6/17/2021	10/19/2021	4/19/2022	11/2/2022
Boron	ug/L	480	550	470	490
Calcium	mg/L	140	170	190	160
Chloride	mg/L	39	47	41	55
Field pH	Std. Units	6.9/6.79	6.87	6.94	6.59
Fluoride	mg/L	0.34	<0.28	<0.22	<0.22
Sulfate	mg/L	<2.5	<2.5	20	<2
Total Dissolved Solids	mg/L	460	580	670	640
Antimony	ug/L	<1.1	<1.1	<0.69	<0.69
Arsenic	ug/L	0.84	1.4	2.3	1.3
Barium	ug/L	210	180	180	160
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	<0.051	<0.051	<0.055	<0.055
Chromium	ug/L	<1.1	<1.1	<1.1	<1.1
Cobalt	ug/L	0.91	0.6	0.49	0.39
Lead	ug/L	0.34	<0.21	<0.24	<0.24
Lithium	ug/L	<2.5	<2.5	<2.5	<2.5
Mercury	ug/L	<0.15	<0.15	<0.11	<0.11
Molybdenum	ug/L	<1.3	<1.3	<1.2	1.4
Selenium	ug/L	<0.96	<0.96	<0.96	<0.96
Thallium	ug/L	<0.26	<0.26	<0.26	<0.26
Total Radium	pCi/L	1.64	2.17	1.08	1.23
Radium-226	pCi/L	0.578	1.02	0.321	0.455
Radium-228	pCi/L	1.07	1.15	0.754	0.776
Field Specific Conductance	umhos/cm	961	1192	1196	1021
Field Temperature	deg C	18	19	9.1	15.8
Groundwater Elevation	feet	571.84	571.64	576.75	--
Turbidity	NTU	47.2	27.3	5.33	2.89
Field Oxidation Potential	millivolts	-91	124	-124.3	-126.9
Oxygen, Dissolved	mg/L	0.3	0.16	0.16	0
pH at 25 Degrees C	Std. Units	--	6.9	7.1	6.9
Bicarbonate Alkalinity as CaCO3	mg/L	520	570	660	510
Carbonate Alkalinity as CaCO3	mg/L	<4.6	<4.6	<4.6	<4.6
Iron, dissolved	ug/L	16000	23000	34000	32000
Iron, total	ug/L	16000	23000	31000	32000
Magnesium, total	ug/L	37000	41000	43000	40000
Manganese, dissolved	ug/L	3100	3700	4800	3900
Manganese, total	ug/L	3100	3700	4900	3900
Molybdenum, dissolved	ug/L	<1.3	--	--	--
Potassium, total	ug/L	3200	3000	2700	2600
Sodium, total	ug/L	10000	17000	26000	13000
Total Alkalinity as CaCO3	mg/L	520	570	660	510
Lithium, dissolved	ug/L	<2.5	--	--	--

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-310						
Number of Sampling Dates: 5						
Parameter Name	Units	10/5/2021	10/19/2021	2/21/2022	4/19/2022	11/3/2022
Boron	ug/L	1000	1100	1000	1000	900
Calcium	mg/L	100	110	100	110	110
Chloride	mg/L	81	83	78	68	70
Field pH	Std. Units	7.2	7.17	7.21	7.04	6.88
Fluoride	mg/L	<0.28	<0.28	<0.22	<0.22	<0.22
Sulfate	mg/L	120	120	120	110	120
Total Dissolved Solids	mg/L	640	610	590	630	640
Antimony	ug/L	<1.1	<1.1	<0.69	<0.69	<0.69
Arsenic	ug/L	<0.75	<0.75	<0.75	<0.75	<0.75
Barium	ug/L	110	96	55	50	39
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27	<0.27
Cadmium	ug/L	<0.051	<0.051	<0.055	<0.055	<0.055
Chromium	ug/L	<1.1	<1.1	<1.1	<1.1	<1.1
Cobalt	ug/L	0.67	0.68	0.43	0.48	0.43
Lead	ug/L	<0.21	<0.21	<0.24	<0.24	<0.24
Lithium	ug/L	4	3	2.8	2.7	3.1
Mercury	ug/L	<0.15	<0.15	<0.11	<0.11	<0.11
Molybdenum	ug/L	2	<1.3	<1.2	1.5	<1.2
Selenium	ug/L	<0.96	<0.96	<0.96	1.7	<0.96
Thallium	ug/L	<0.26	<0.26	<0.26	0.26	<0.26
Total Radium	pCi/L	1.08	0.783	0.213	0.317	0.384
Radium-226	pCi/L	0.206	0.471	0.213	0.135	0.159
Radium-228	pCi/L	0.878	0.313	-0.0116	0.182	0.225
Field Specific Conductance	umhos/cm	1141	1150	1060	1004	943
Field Temperature	deg C	14.3	13.9	12.4	12.2	13.7
Groundwater Elevation	feet	--	589.55	589.1	590.2	578.18
Turbidity	NTU	2.74	20.8	2	4.91	1.49
Field Oxidation Potential	millivolts	53.7	83.5	48.8	-35.3	130.3
Oxygen, Dissolved	mg/L	1.52	0.28	0.3	0.29	0.05
pH at 25 Degrees C	Std. Units	7.3	7.3	7.2	7.1	7.3
Bicarbonate Alkalinity as CaCO3	mg/L	--	390	410	390	420
Carbonate Alkalinity as CaCO3	mg/L	--	<4.6	<4.6	<4.6	<4.6
Iron, dissolved	ug/L	--	<36	--	<36	<36
Iron, total	ug/L	--	90	<36	<36	<36
Magnesium, total	ug/L	--	46000	44000	44000	46000
Manganese, dissolved	ug/L	--	300	--	160	--
Manganese, total	ug/L	--	310	210	150	160
Potassium, total	ug/L	--	1600	1100	1000	910
Sodium, total	ug/L	--	71000	67000	67000	61000
Total Alkalinity as CaCO3	mg/L	--	390	410	390	420

Single Location


Name: IPL - M.L. Kapp Generating Station

Location ID: MW-311						
Number of Sampling Dates: 5						
Parameter Name	Units	12/30/2021	2/21/2022	4/19/2022	8/22/2022	11/3/2022
Boron	ug/L	5200	4600	5600	--	6400
Calcium	mg/L	96	110	110	--	100
Chloride	mg/L	15	16	15	--	16
Field pH	Std. Units	7.98	7.27	7.16	7.28	7.18
Fluoride	mg/L	<0.28	0.34	<0.22	--	<0.22
Sulfate	mg/L	120	110	110	--	120
Total Dissolved Solids	mg/L	460	440	480	--	520
Antimony	ug/L	<1.1	<0.69	<2.8	--	<0.69
Arsenic	ug/L	<0.75	<0.75	<3	--	<0.75
Barium	ug/L	49	49	45	--	44
Beryllium	ug/L	<0.27	<0.27	<1.1	--	<0.27
Cadmium	ug/L	<0.051	<0.055	<0.22	--	<0.055
Chromium	ug/L	<1.1	<1.1	<4.4	--	<1.1
Cobalt	ug/L	<0.19	<0.19	<0.76	--	<0.19
Lead	ug/L	<0.21	<0.24	<0.96	--	<0.24
Lithium	ug/L	43	34	45	45	53
Mercury	ug/L	<0.15	<0.11	<0.11	--	<0.11
Molybdenum	ug/L	30	31	25	29	26
Selenium	ug/L	2.8	3.7	<3.8	--	2.8
Thallium	ug/L	<0.26	<0.26	<1	--	<0.26
Total Radium	pCi/L	0.155	0.00283	0.517	--	0.0356
Radium-226	pCi/L	0.137	-0.0299	0.0434	--	0.0251
Radium-228	pCi/L	0.0185	0.00283	0.473	--	0.0105
Field Specific Conductance	umhos/cm	811	785	718	842	684
Field Temperature	deg C	12.4	12	11.4	13.8	14.2
Groundwater Elevation	feet	572.33	572.14	574.77	574.51	572.54
Turbidity	NTU	2.88	3	5.94	1.9	1.94
Field Oxidation Potential	millivolts	6.6	100.9	111.8	89.7	149
Oxygen, Dissolved	mg/L	3.33	3.39	2.43	4.89	2.72
pH at 25 Degrees C	Std. Units	7.4	7.3	7.4	--	7.4
Bicarbonate Alkalinity as CaCO3	mg/L	--	320	320	--	300
Carbonate Alkalinity as CaCO3	mg/L	--	<4.6	<4.6	--	<4.6
Iron, dissolved	ug/L	--	--	<36	--	<36
Iron, total	ug/L	--	<36	<140	--	<36
Magnesium, total	ug/L	--	26000	24000	--	21000
Manganese, dissolved	ug/L	--	--	<3.6	--	<3.6
Manganese, total	ug/L	--	<3.6	<14	--	<3.6
Molybdenum, dissolved	ug/L	--	29	--	--	--
Potassium, total	ug/L	--	6200	6400	--	7200
Sodium, total	ug/L	--	30000	31000	--	31000
Total Alkalinity as CaCO3	mg/L	--	320	320	--	300
Lithium, dissolved	ug/L	--	33	45	--	53

Single Location

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-311A						
Number of Sampling Dates: 5						
Parameter Name	Units	12/30/2021	2/21/2022	4/19/2022	8/22/2022	11/3/2022
Boron	ug/L	7600	10000	10000	--	10000
Calcium	mg/L	88	110	110	--	100
Chloride	mg/L	17	23	19	--	28
Field pH	Std. Units	8.38	7.63	7.39	7.55	7.42
Fluoride	mg/L	<0.28	<0.22	<0.22	--	<0.22
Sulfate	mg/L	210	300	210	--	270
Total Dissolved Solids	mg/L	480	520	470	--	660
Antimony	ug/L	<1.1	<0.69	<2.8	--	<0.69
Arsenic	ug/L	<0.75	<0.75	<3	--	<0.75
Barium	ug/L	21	24	22	--	23
Beryllium	ug/L	<0.27	<0.27	<1.1	--	<0.27
Cadmium	ug/L	0.075	0.067	<0.22	--	<0.055
Chromium	ug/L	<1.1	<1.1	<4.4	--	<1.1
Cobalt	ug/L	<0.19	<0.19	<0.76	--	<0.19
Lead	ug/L	<0.21	<0.24	<0.96	--	<0.24
Lithium	ug/L	15	19	21	19	20
Mercury	ug/L	<0.15	<0.11	<0.11	--	<0.11
Molybdenum	ug/L	160	210	140	180	140
Selenium	ug/L	<0.96	1.2	<3.8	--	2.8
Thallium	ug/L	<0.26	<0.26	<1	--	<0.26
Total Radium	pCi/L	0.33	0.193	0.346	--	0.618
Radium-226	pCi/L	0.148	0.0302	0.0677	--	0.0539
Radium-228	pCi/L	0.182	0.163	0.278	--	0.564
Field Specific Conductance	umhos/cm	755	830	689	870	770
Field Temperature	deg C	11.8	12.3	12.2	13.6	12.9
Groundwater Elevation	feet	572.54	572.34	575.17	574.76	572.9
Turbidity	NTU	2.49	1	4.57	0.14	1.05
Field Oxidation Potential	millivolts	-6	80.7	95.1	79.6	147.4
Oxygen, Dissolved	mg/L	0.19	0.1	0.13	0.89	0
pH at 25 Degrees C	Std. Units	7.6	6.5	7.6	--	7.6
Bicarbonate Alkalinity as CaCO3	mg/L	--	150	200	--	200
Carbonate Alkalinity as CaCO3	mg/L	--	<4.6	<4.6	--	<4.6
Iron, dissolved	ug/L	--	--	<36	--	<36
Iron, total	ug/L	--	<36	<140	--	<36
Magnesium, total	ug/L	--	21000	18000	--	23000
Manganese, dissolved	ug/L	--	--	<3.6	--	--
Manganese, total	ug/L	--	4	<14	--	6.4
Molybdenum, dissolved	ug/L	--	190	160	--	150
Potassium, total	ug/L	--	7300	7000	--	7400
Sodium, total	ug/L	--	45000	33000	--	46000
Total Alkalinity as CaCO3	mg/L	--	150	200	--	200
Lithium, dissolved	ug/L	--	18	--	--	--



Appendix E

Statistical Evaluation

E1 LCL Evaluation – April 2022 Event

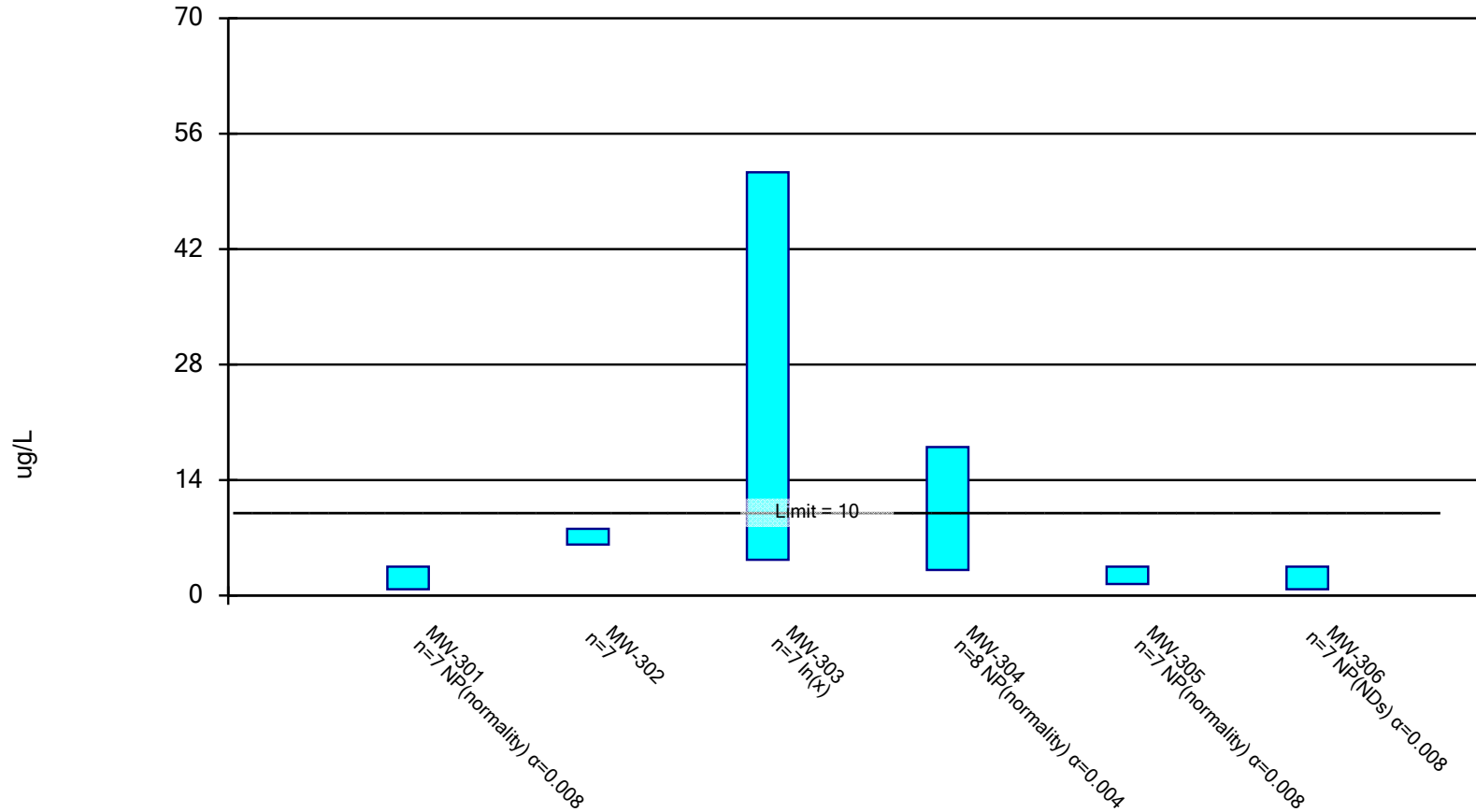
Confidence Interval

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020 Printed 6/23/2022, 1:49 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>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (ug/L)	MW-301	3.5	0.75	10	No	7	71.43	None	No	0.008	NP (normality)
Arsenic (ug/L)	MW-302	8.081	6.177	10	No	7	0	None	No	0.01	Param.
Arsenic (ug/L)	MW-303	51.32	4.338	10	No	7	0	None	ln(x)	0.01	Param.
Arsenic (ug/L)	MW-304	18	3.1	10	No	8	0	None	No	0.004	NP (normality)
Arsenic (ug/L)	MW-305	3.5	1.4	10	No	7	28.57	None	No	0.008	NP (normality)
Arsenic (ug/L)	MW-306	3.5	0.75	10	No	7	100	None	No	0.008	NP (NDs)
Arsenic (ug/L)	MW-307 (bg)	1.7	0.75	10	No	9	22.22	None	No	0.002	NP (normality)
Arsenic (ug/L)	MW-304A	3.171	0.6291	10	No	4	0	None	No	0.01	Param.
Arsenic (ug/L)	MW-310 (bg)	0.75	0.75	10	No	4	100	None	No	0.0625	NP (NDs)
Lithium (ug/L)	MW-301	14.49	4.415	40	No	7	42.86	Cohen's	No	0.01	Param.
Lithium (ug/L)	MW-302	20	4	40	No	7	0	None	No	0.008	NP (normality)
Lithium (ug/L)	MW-303	56.96	8.471	40	No	7	0	None	No	0.01	Param.
Lithium (ug/L)	MW-304	11	2.3	40	No	7	71.43	None	No	0.008	NP (normality)
Lithium (ug/L)	MW-305	23.34	14.95	40	No	7	0	None	No	0.01	Param.
Lithium (ug/L)	MW-306	84.33	54.82	40	Yes	7	0	None	No	0.01	Param.
Lithium (ug/L)	MW-307 (bg)	5.3	2.5	40	No	9	44.44	None	No	0.002	NP (normality)
Lithium (ug/L)	MW-304A	3.9	2.5	40	No	4	50	None	No	0.0625	NP (normality)
Lithium (ug/L)	MW-310 (bg)	4.479	1.771	40	No	4	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-301	481	264.7	100	Yes	7	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-302	342.8	151.4	100	Yes	7	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-303	185.4	79.14	100	No	7	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-304	1204	581.6	100	Yes	7	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-305	764.8	563.8	100	Yes	7	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-306	111.9	22.02	100	No	7	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-307 (bg)	3.4	1.1	100	No	9	77.78	None	No	0.002	NP (NDs)
Molybdenum (ug/L)	MW-304A	34.36	0.9257	100	No	4	0	None	ln(x)	0.01	Param.
Molybdenum (ug/L)	MW-310 (bg)	2.599	-0.008696	100	No	4	50	Cohen's	No	0.01	Param.

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: Arsenic Analysis Run 6/23/2022 1:48 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

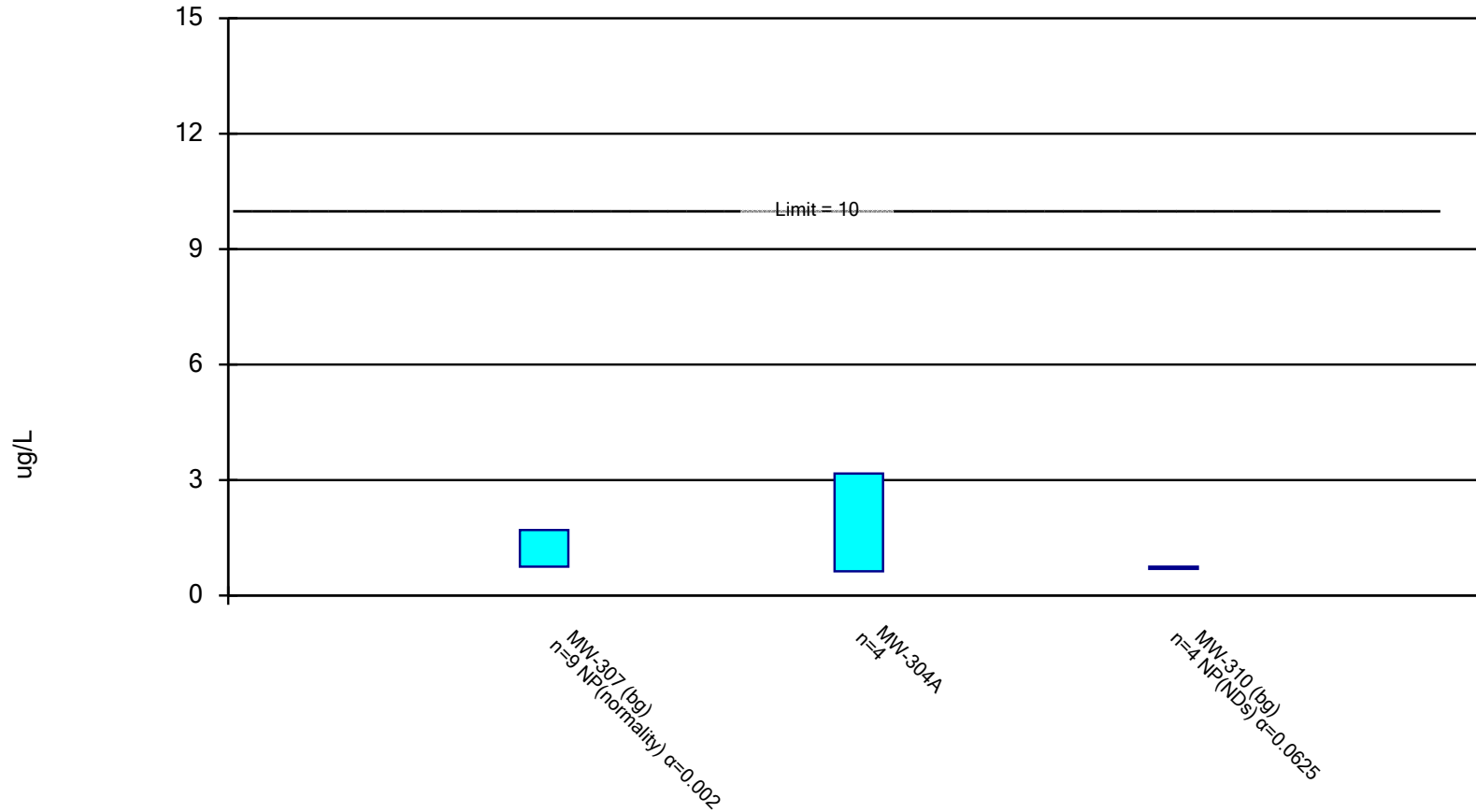
Constituent: Arsenic (ug/L) Analysis Run 6/23/2022 1:49 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306
12/10/2019	<0.75 (U)	6.7	9.2	4.5	1.4 (J)	<0.75 (U)
2/4/2020	<0.88 (U)	6.1	4	3.7	1.4 (J)	<0.88 (U)
4/29/2020	0.95 (J)	8.6	5.8	18	3.1	<0.88 (U)
7/7/2020				4.4		
10/22/2020	<3.5 (U)	7.3	20	4.5 (J)	<3.5 (U)	<3.5 (U)
4/5/2021	<0.75 (U)	7.1	14	6.6	1.6 (J)	<0.75 (U)
10/18/2021			81	3.1	3.1	<0.75 (U)
10/19/2021	1.7 (J)	7.5				
4/18/2022	<3 (U)	6.6 (J)	34	3.3 (J)	<3 (U)	
4/19/2022						<3 (U)
Mean	1.647	7.129	24	6.013	2.443	1.501
Std. Dev.	1.151	0.8015	27.13	4.963	0.9289	1.205
Upper Lim.	3.5	8.081	51.32	18	3.5	3.5
Lower Lim.	0.75	6.177	4.338	3.1	1.4	0.75

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: Arsenic Analysis Run 6/23/2022 1:48 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

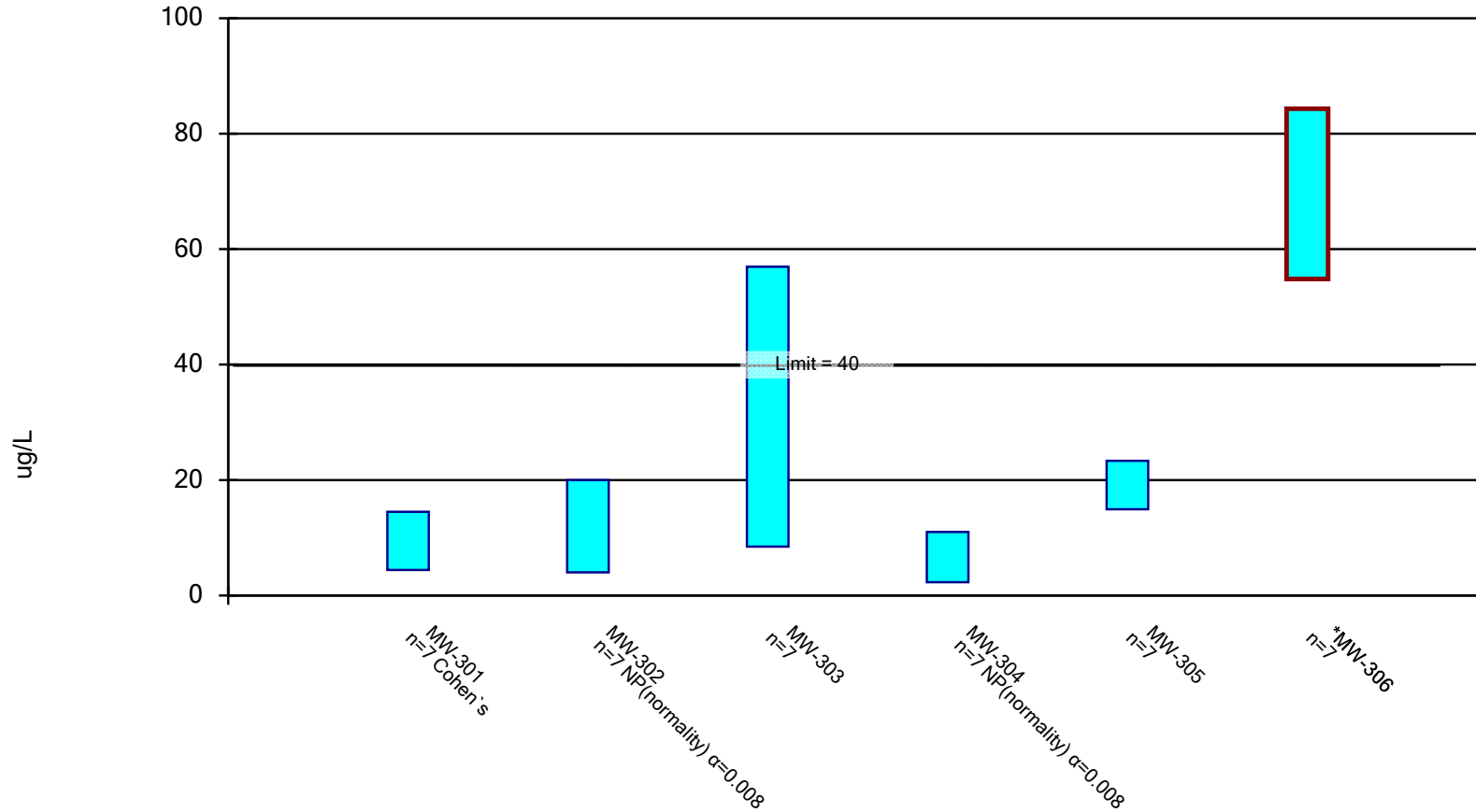
Constituent: Arsenic (ug/L) Analysis Run 6/23/2022 1:49 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)	MW-304A	MW-310 (bg)
7/7/2020	1.7 (J)		
8/7/2020	1.1 (J)		
10/22/2020	0.92 (J)		
2/22/2021	<0.75 (U)	2.7	
4/5/2021	0.96 (J)	1.8 (J)	
6/17/2021	<0.75 (U)		
7/22/2021	0.98 (J)		
10/5/2021			<0.75 (U)
10/18/2021		1.7 (J)	
10/19/2021	0.99 (J)		<0.75 (U)
2/21/2022			<0.75 (U)
4/18/2022		1.4 (J)	
4/19/2022	1 (J)		<0.75 (U)
Mean	1.017	1.9	0.75
Std. Dev.	0.2808	0.5598	0
Upper Lim.	1.7	3.171	0.75
Lower Lim.	0.75	0.6291	0.75

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: Lithium Analysis Run 6/23/2022 1:48 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

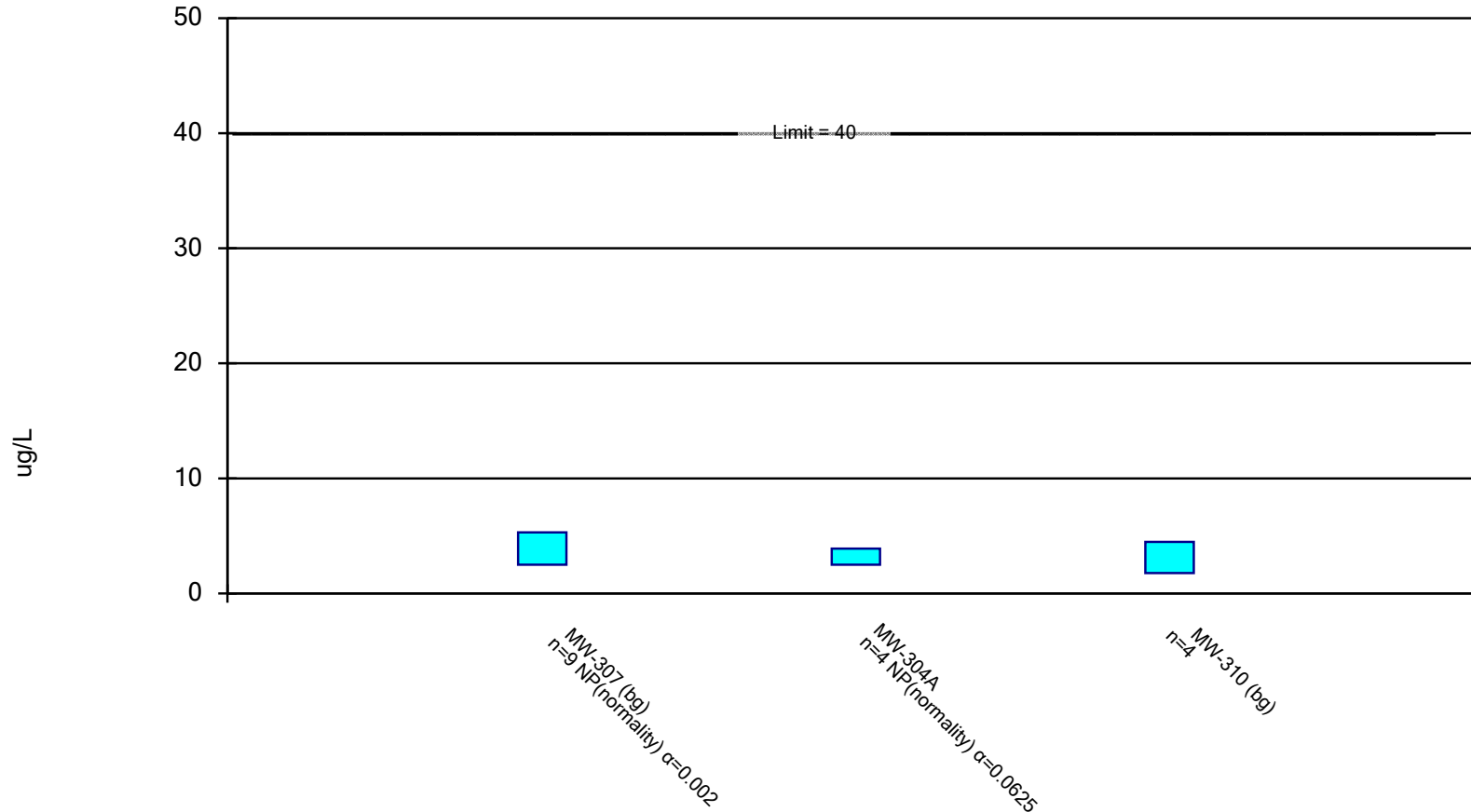
Constituent: Lithium (ug/L) Analysis Run 6/23/2022 1:49 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306
12/10/2019	<11 (U)	19 (J)	17	<11 (U)	19 (J)	68
2/4/2020	4.4 (J)	12	26	<2.3 (U)	16	69
4/29/2020	7.4 (J)	4 (J)	44	2.9 (J)	20	80
10/22/2020	<10 (U)	12	14	<10 (U)	22 (J)	60
4/5/2021	6.9 (J)	18	47	3.2 (J)	23	70
10/18/2021			14	<2.5 (U)	13	89
10/19/2021	5.8 (J)	20				
4/18/2022	<10 (U)	19 (J)	67	<10 (U)	21 (J)	
4/19/2022						51
Mean	7.929	14.86	32.71	5.986	19.14	69.57
Std. Dev.	2.461	5.843	20.41	4.09	3.532	12.42
Upper Lim.	14.49	20	56.96	11	23.34	84.33
Lower Lim.	4.415	4	8.471	2.3	14.95	54.82

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 6/23/2022 1:48 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

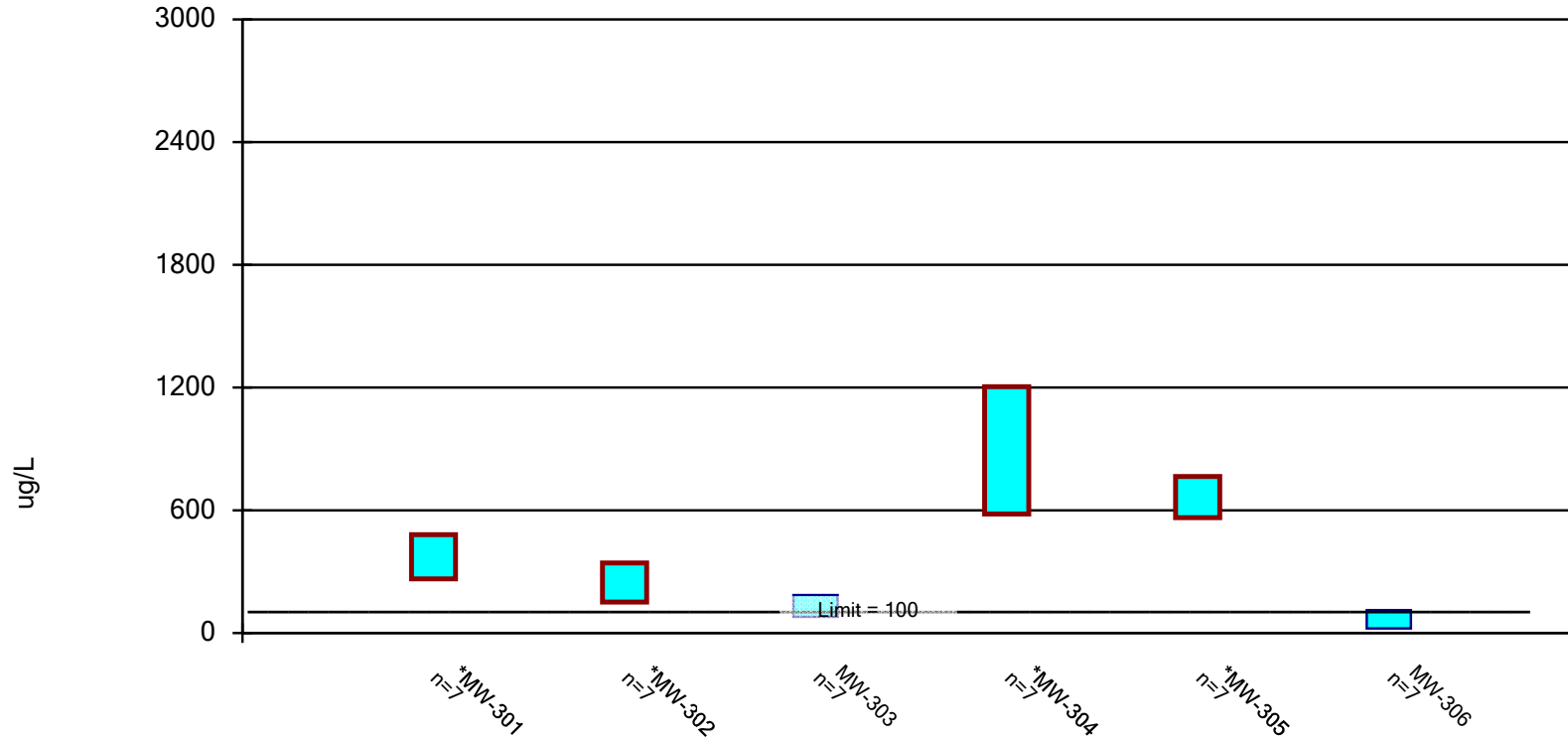
Constituent: Lithium (ug/L) Analysis Run 6/23/2022 1:49 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)	MW-304A	MW-310 (bg)
7/7/2020	<2.5 (U)		
8/7/2020	<2.5 (U)		
10/22/2020	3 (J)		
2/22/2021	3.3 (J)	3.9 (J)	
4/5/2021	2.5 (J)	2.5 (J)	
6/17/2021	<2.5 (U)		
7/22/2021	<2.5 (U)		
10/5/2021			4 (J)
10/18/2021		<2.5 (U)	
10/19/2021	4.8 (J)		3 (J)
2/21/2022			2.8 (J)
4/18/2022		<2.5 (U)	
4/19/2022	5.3 (J)		2.7 (J)
Mean	3.211	2.85	3.125
Std. Dev.	1.088	0.7	0.5965
Upper Lim.	5.3	3.9	4.479
Lower Lim.	2.5	2.5	1.771

Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 6/23/2022 1:48 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

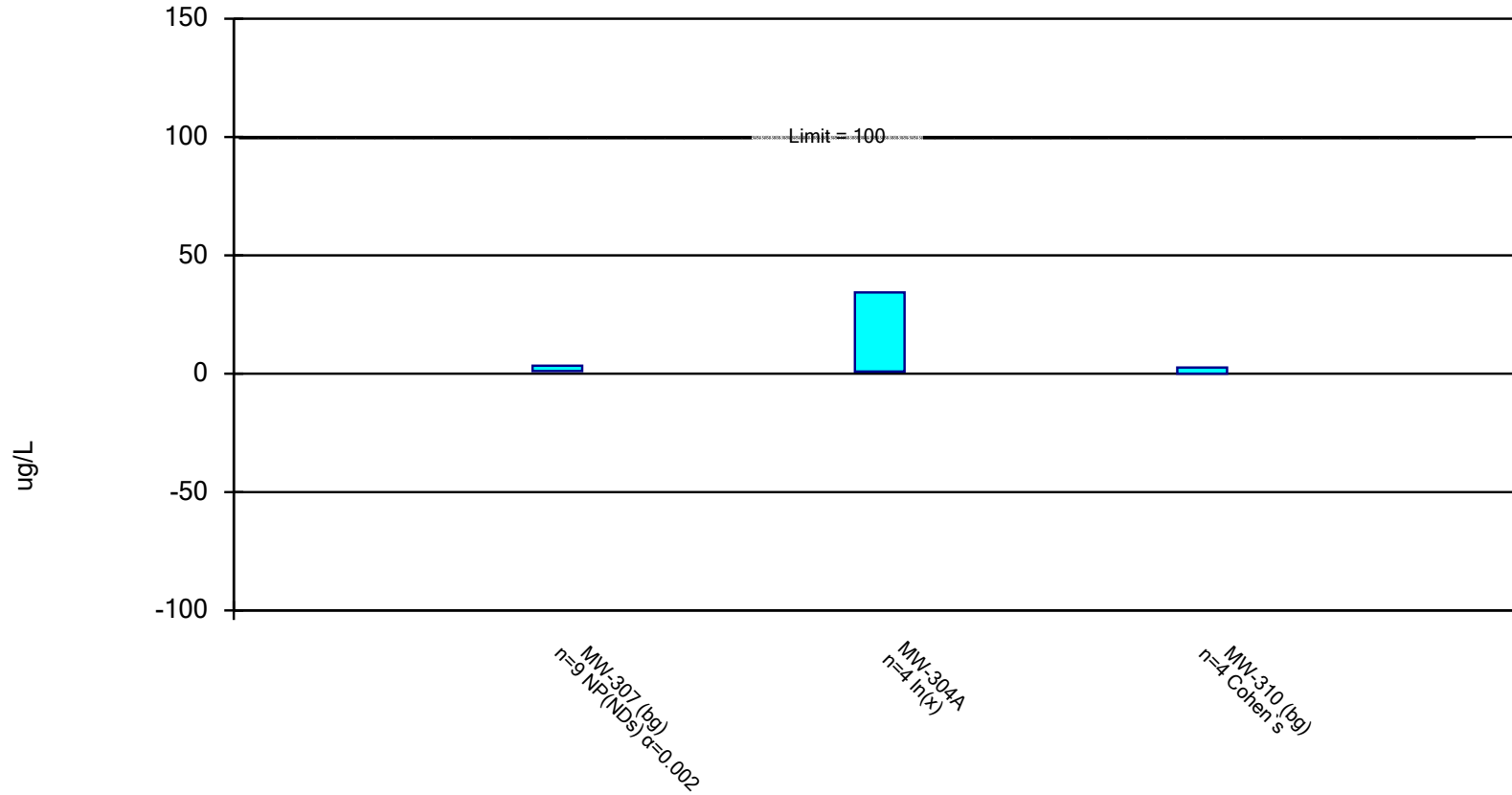
Constituent: Molybdenum (ug/L) Analysis Run 6/23/2022 1:49 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306
12/10/2019	310	260	140	820	650	88
2/4/2020	300	280	96	950	680	100
4/29/2020	250	360	74	1200	720	120
10/22/2020	510	320	180	930	580	49
4/5/2021	430	170	150	650	650	46
10/18/2021			190	1200	810	57
10/19/2021	430	200				
4/18/2022	380	140	96	500	560	
4/19/2022						8.8
Mean	372.9	247.1	132.3	892.9	664.3	66.97
Std. Dev.	91.05	80.56	44.74	262	84.63	37.84
Upper Lim.	481	342.8	185.4	1204	764.8	111.9
Lower Lim.	264.7	151.4	79.14	581.6	563.8	22.02

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 6/23/2022 1:48 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Molybdenum (ug/L) Analysis Run 6/23/2022 1:49 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)	MW-304A	MW-310 (bg)
7/7/2020	2.5		
8/7/2020	<1.1 (U)		
10/22/2020	<1.1 (U)		
2/22/2021	<1.3 (U)	3.1	
4/5/2021	3.4	17	
6/17/2021	<1.3 (U)		
7/22/2021	<1.3 (U)		
10/5/2021			2
10/18/2021		6	
10/19/2021	<1.3 (U)		<1.3 (U)
2/21/2022			<1.2 (U)
4/18/2022		3.2	
4/19/2022	<1.2 (U)		1.5 (J)
Mean	1.611	7.325	1.5
Std. Dev.	0.796	6.589	0.3559
Upper Lim.	3.4	34.36	2.599
Lower Lim.	1.1	0.9257	-0.008696

E2 LCL Evaluation – November 2022 Event

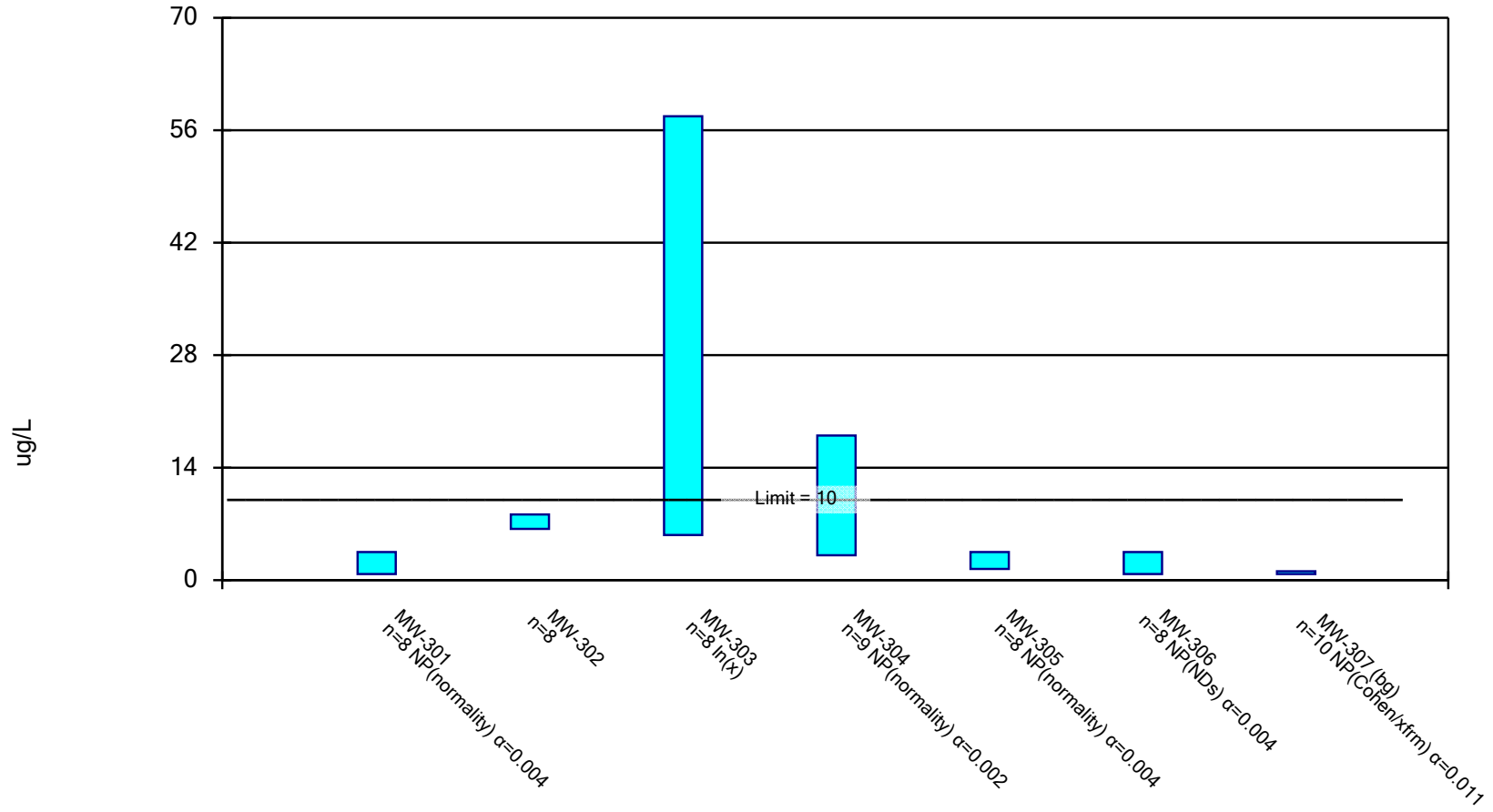
Confidence Interval

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020 Printed 12/16/2022, 10:28 AM

<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>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (ug/L)	MW-301	3.5	0.75	10	No	8	75	None	No	0.004	NP (normality)
Arsenic (ug/L)	MW-302	8.176	6.374	10	No	8	0	None	No	0.01	Param.
Arsenic (ug/L)	MW-303	57.74	5.612	10	No	8	0	None	ln(x)	0.01	Param.
Arsenic (ug/L)	MW-304	18	3.1	10	No	9	0	None	No	0.002	NP (normality)
Arsenic (ug/L)	MW-305	3.5	1.4	10	No	8	25	None	No	0.004	NP (normality)
Arsenic (ug/L)	MW-306	3.5	0.75	10	No	8	100	None	No	0.004	NP (NDs)
Arsenic (ug/L)	MW-307 (bg)	1.1	0.75	10	No	10	20	None	No	0.011	NP (Cohens/xfrm)
Arsenic (ug/L)	MW-304A	2.686	0.9541	10	No	5	0	None	No	0.01	Param.
Arsenic (ug/L)	MW-308	0.88	0.75	10	No	4	75	None	No	0.0625	NP (normality)
Arsenic (ug/L)	MW-309	2.847	0.07329	10	No	4	0	None	No	0.01	Param.
Arsenic (ug/L)	MW-310 (bg)	0.75	0.75	10	No	5	100	None	No	0.031	NP (NDs)
Arsenic (ug/L)	MW-311	3	0.75	10	No	4	100	None	No	0.0625	NP (NDs)
Arsenic (ug/L)	MW-311A	3	0.75	10	No	4	100	None	No	0.0625	NP (NDs)
Lithium (ug/L)	MW-301	12.96	5.147	40	No	8	37.5	Cohen's	No	0.01	Param.
Lithium (ug/L)	MW-302	23	9.246	40	No	8	0	None	No	0.01	Param.
Lithium (ug/L)	MW-303	56.67	13.83	40	No	8	0	None	No	0.01	Param.
Lithium (ug/L)	MW-304	11	2.3	40	No	8	62.5	None	No	0.004	NP (normality)
Lithium (ug/L)	MW-305	22.73	15.77	40	No	8	0	None	No	0.01	Param.
Lithium (ug/L)	MW-306	90.07	56.68	40	Yes	8	0	None	No	0.01	Param.
Lithium (ug/L)	MW-307 (bg)	5.3	2.5	40	No	10	40	None	No	0.011	NP (normality)
Lithium (ug/L)	MW-304A	3.9	2.5	40	No	5	60	None	No	0.031	NP (normality)
Lithium (ug/L)	MW-308	3	2.5	40	No	4	75	None	No	0.0625	NP (normality)
Lithium (ug/L)	MW-309	2.5	2.5	40	No	4	100	None	No	0.0625	NP (NDs)
Lithium (ug/L)	MW-310 (bg)	3.986	2.254	40	No	5	0	None	No	0.01	Param.
Lithium (ug/L)	MW-311	55.37	32.63	40	No	5	0	None	No	0.01	Param.
Lithium (ug/L)	MW-311A	22.62	14.98	40	No	5	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-301	487.1	287.9	100	Yes	8	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-302	321.7	153.3	100	Yes	8	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-303	191.5	90.04	100	No	8	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-304	1148	634.1	100	Yes	8	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-305	751.1	583.9	100	Yes	8	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-306	102.1	21.4	100	No	8	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-307 (bg)	3.4	1.1	100	No	10	70	None	No	0.011	NP (normality)
Molybdenum (ug/L)	MW-304A	17.17	1.582	100	No	5	0	None	ln(x)	0.01	Param.
Molybdenum (ug/L)	MW-308	1.3	1.2	100	No	4	75	None	No	0.0625	NP (normality)
Molybdenum (ug/L)	MW-309	1.485	1.115	100	No	4	75	None	No	0.01	Param.
Molybdenum (ug/L)	MW-310 (bg)	2.003	0.8767	100	No	5	60	None	No	0.01	Param.
Molybdenum (ug/L)	MW-311	32.54	23.86	100	No	5	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-311A	215.7	116.3	100	Yes	5	0	None	No	0.01	Param.

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: Arsenic Analysis Run 12/16/2022 10:26 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

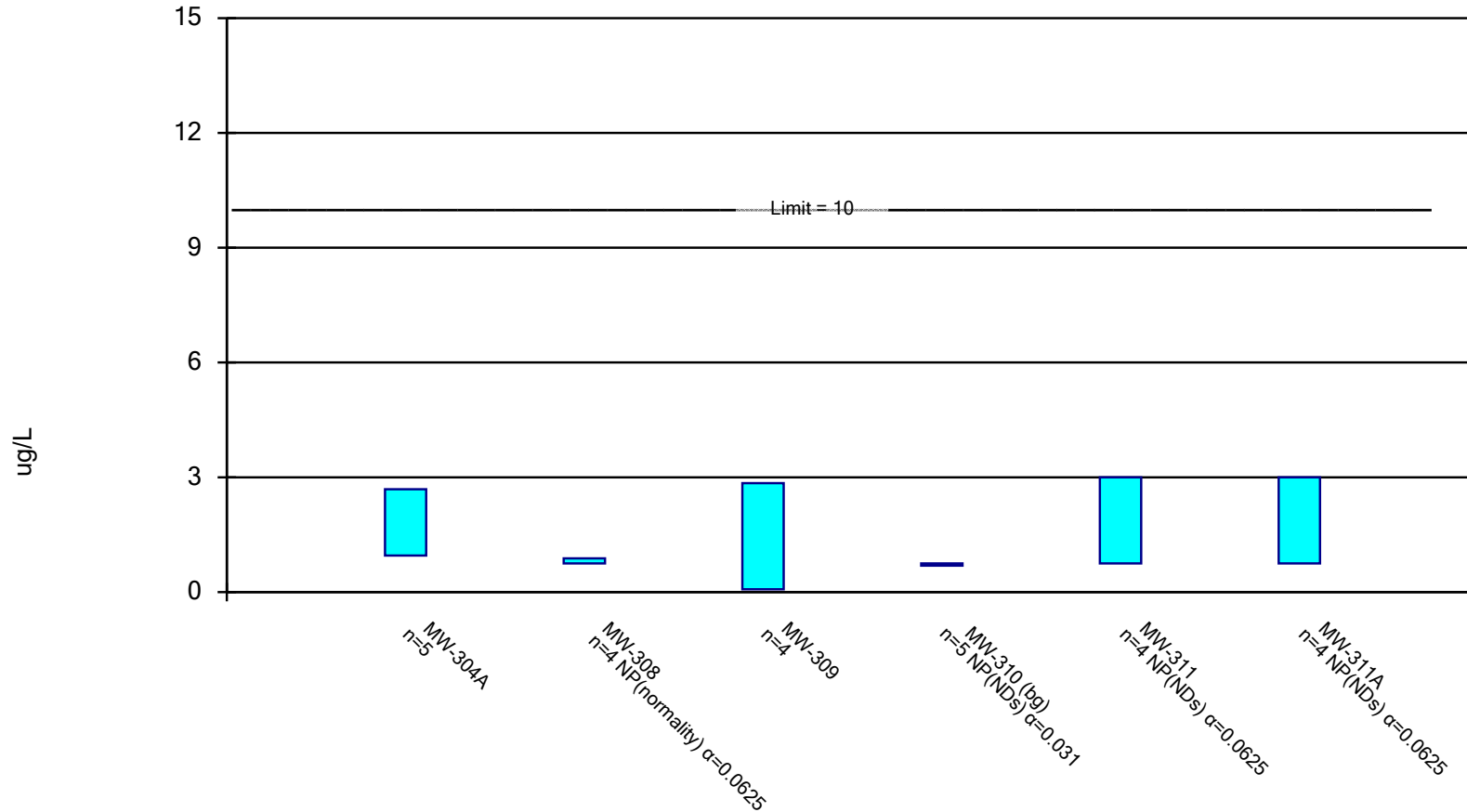
Constituent: Arsenic (ug/L) Analysis Run 12/16/2022 10:28 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)
12/10/2019	<0.75 (U)	6.7	9.2	4.5	1.4 (J)	<0.75 (U)	
2/4/2020	<0.88 (U)	6.1	4	3.7	1.4 (J)	<0.88 (U)	
4/29/2020	0.95 (J)	8.6	5.8	18	3.1	<0.88 (U)	
7/7/2020				4.4			1.7 (J)
8/7/2020							1.1 (J)
10/22/2020	<3.5 (U)	7.3	20	4.5 (J)	<3.5 (U)	<3.5 (U)	0.92 (J)
2/22/2021							<0.75 (U)
4/5/2021	<0.75 (U)	7.1	14	6.6	1.6 (J)	<0.75 (U)	0.96 (J)
6/17/2021							<0.75 (U)
7/22/2021							0.98 (J)
10/18/2021			81	3.1	3.1	<0.75 (U)	
10/19/2021	1.7 (J)	7.5					0.99 (J)
4/18/2022	<3 (U)	6.6 (J)	34	3.3 (J)	<3 (U)		
4/19/2022						<3 (U)	1 (J)
11/1/2022		8.3	67				
11/2/2022	<0.75 (U)			3.5	1.6 (J)	<0.75 (U)	
11/3/2022							1.1 (J)
Mean	1.535	7.275	29.38	5.733	2.338	1.407	1.025
Std. Dev.	1.112	0.8498	29.36	4.717	0.9102	1.146	0.2661
Upper Lim.	3.5	8.176	57.74	18	3.5	3.5	1.1
Lower Lim.	0.75	6.374	5.612	3.1	1.4	0.75	0.75

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: Arsenic Analysis Run 12/16/2022 10:26 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

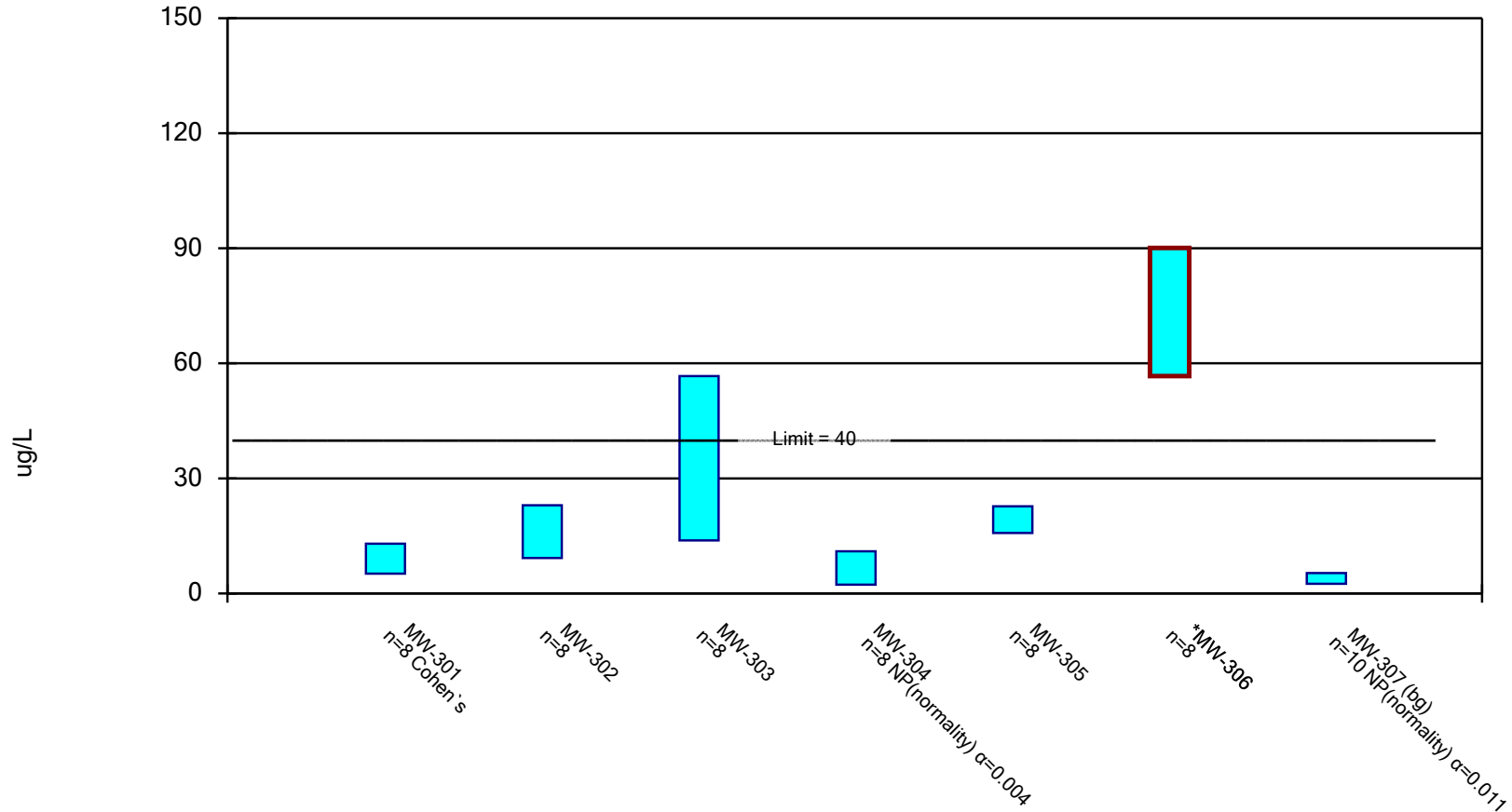
Constituent: Arsenic (ug/L) Analysis Run 12/16/2022 10:28 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-304A	MW-308	MW-309	MW-310 (bg)	MW-311	MW-311A
2/22/2021	2.7					
4/5/2021	1.8 (J)					
6/17/2021		<0.75 (U)	0.84 (J)			
10/5/2021				<0.75 (U)		
10/18/2021	1.7 (J)					
10/19/2021		<0.75 (U)	1.4 (J)	<0.75 (U)		
12/30/2021					<0.75 (U)	<0.75 (U)
2/21/2022				<0.75 (U)	<0.75 (U)	<0.75 (U)
4/18/2022	1.4 (J)					
4/19/2022		<0.75 (U)	2.3	<0.75 (U)	<3 (U)	<3 (U)
11/2/2022	1.5 (J)	0.88 (J)	1.3 (J)			
11/3/2022				<0.75 (U)	<0.75 (U)	<0.75 (U)
Mean	1.82	0.7825	1.46	0.75	1.313	1.313
Std. Dev.	0.5167	0.065	0.6108	0	1.125	1.125
Upper Lim.	2.686	0.88	2.847	0.75	3	3
Lower Lim.	0.9541	0.75	0.07329	0.75	0.75	0.75

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: Lithium Analysis Run 12/16/2022 10:26 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

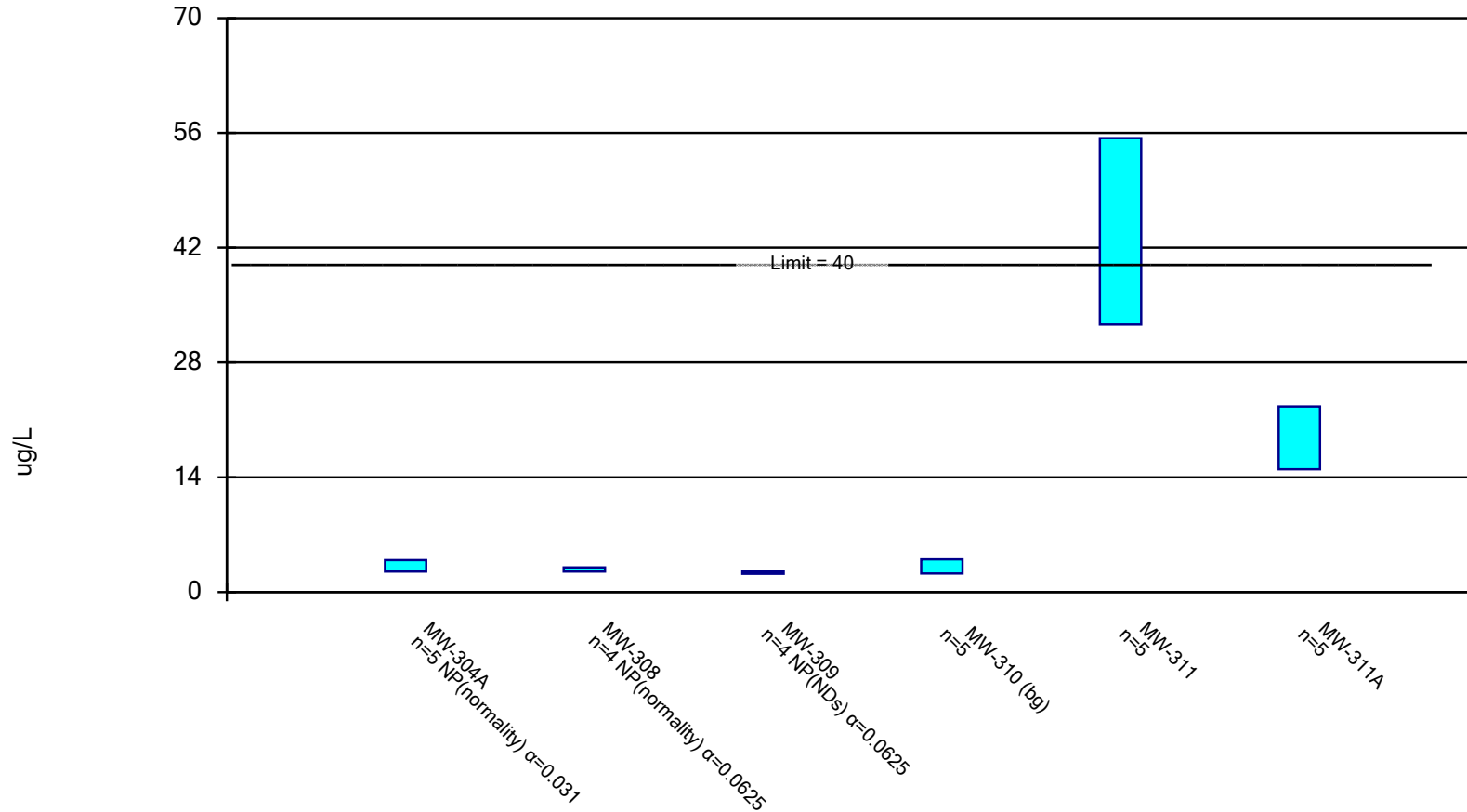
Constituent: Lithium (ug/L) Analysis Run 12/16/2022 10:28 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)
12/10/2019	<11 (U)	19 (J)	17	<11 (U)	19 (J)	68	
2/4/2020	4.4 (J)	12	26	<2.3 (U)	16	69	
4/29/2020	7.4 (J)	4 (J)	44	2.9 (J)	20	80	
7/7/2020							<2.5 (U)
8/7/2020							<2.5 (U)
10/22/2020	<10 (U)	12	14	<10 (U)	22 (J)	60	3 (J)
2/22/2021							3.3 (J)
4/5/2021	6.9 (J)	18	47	3.2 (J)	23	70	2.5 (J)
6/17/2021							<2.5 (U)
7/22/2021							<2.5 (U)
10/18/2021			14	<2.5 (U)	13	89	
10/19/2021	5.8 (J)	20					4.8 (J)
4/18/2022	<10 (U)	19 (J)	67	<10 (U)	21 (J)		
4/19/2022						51	5.3 (J)
11/1/2022		25	53				
11/2/2022	7.9 (J)			4.2 (J)	20	100	
11/3/2022							7 (J)
Mean	7.925	16.13	35.25	5.762	19.25	73.38	3.59
Std. Dev.	2.278	6.49	20.21	3.839	3.284	15.75	1.577
Upper Lim.	12.96	23	56.67	11	22.73	90.07	5.3
Lower Lim.	5.147	9.246	13.83	2.3	15.77	56.68	2.5

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 12/16/2022 10:26 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

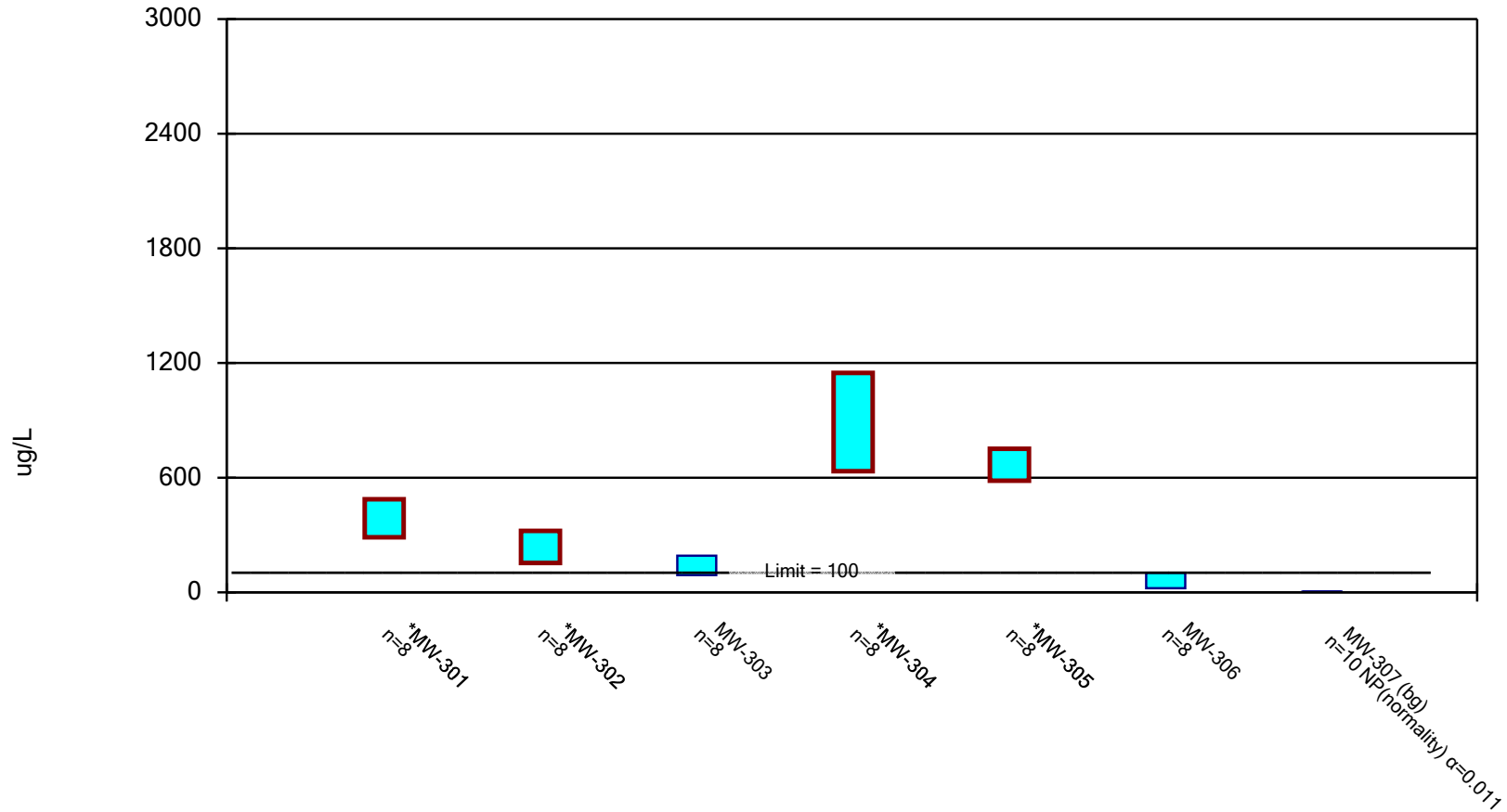
Constituent: Lithium (ug/L) Analysis Run 12/16/2022 10:28 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-304A	MW-308	MW-309	MW-310 (bg)	MW-311	MW-311A
2/22/2021	3.9 (J)					
4/5/2021	2.5 (J)					
6/17/2021		<2.5 (U)	<2.5 (U)			
10/5/2021				4 (J)		
10/18/2021	<2.5 (U)					
10/19/2021		<2.5 (U)	<2.5 (U)	3 (J)		
12/30/2021					43	15
2/21/2022				2.8 (J)	34	19
4/18/2022	<2.5 (U)					
4/19/2022		<2.5 (U)	<2.5 (U)	2.7 (J)	45	21 (J)
8/22/2022					45	19
11/2/2022	<2.5 (U)	3 (J)	<2.5 (U)			
11/3/2022				3.1 (J)	53	20
Mean	2.78	2.625	2.5	3.12	44	18.8
Std. Dev.	0.6261	0.25	0	0.5167	6.782	2.28
Upper Lim.	3.9	3	2.5	3.986	55.37	22.62
Lower Lim.	2.5	2.5	2.5	2.254	32.63	14.98

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 12/16/2022 10:26 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

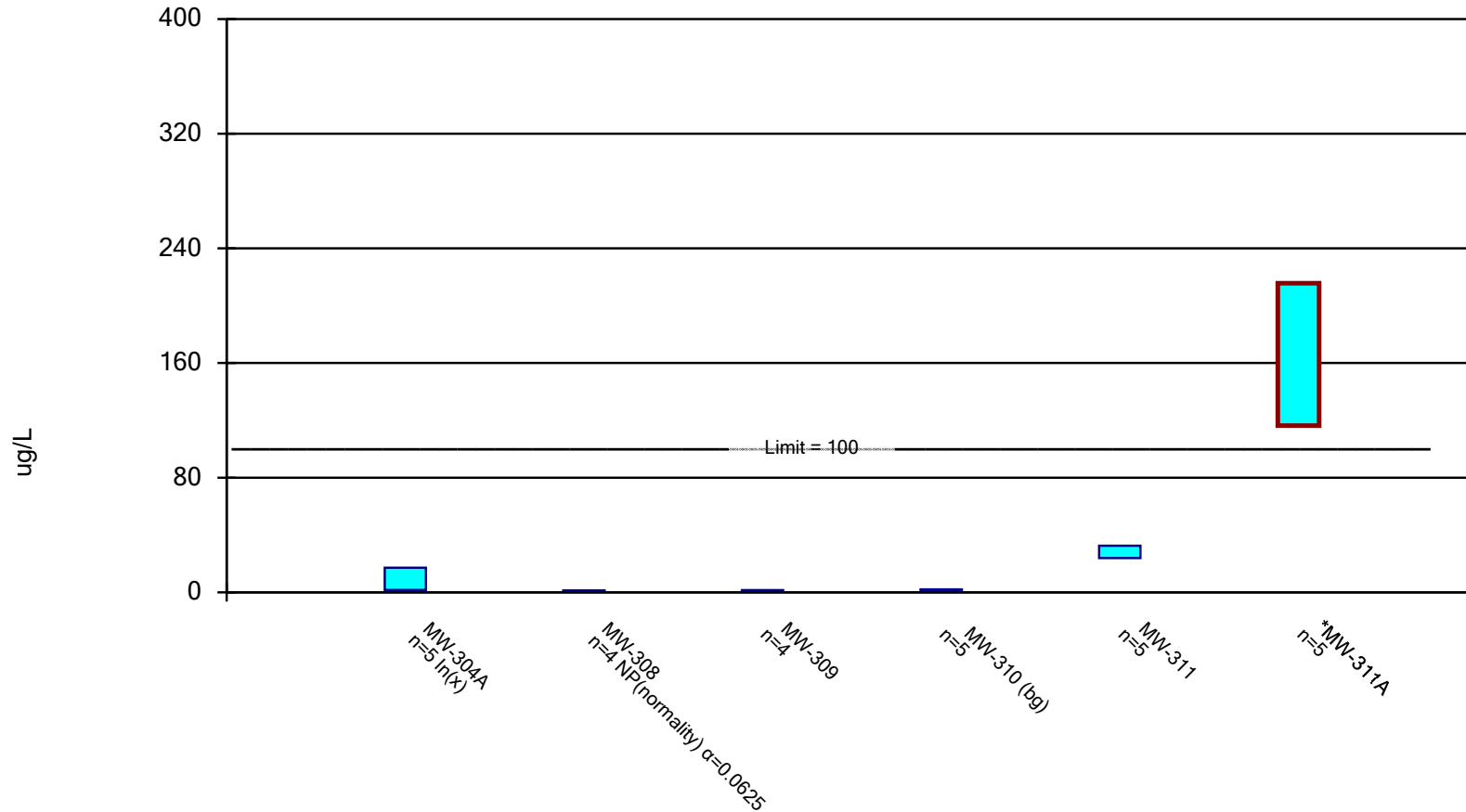
Constituent: Molybdenum (ug/L) Analysis Run 12/16/2022 10:28 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)
12/10/2019	310	260	140	820	650	88	
2/4/2020	300	280	96	950	680	100	
4/29/2020	250	360	74	1200	720	120	
7/7/2020							2.5
8/7/2020							<1.1 (U)
10/22/2020	510	320	180	930	580	49	<1.1 (U)
2/22/2021							<1.3 (U)
4/5/2021	430	170	150	650	650	46	3.4
6/17/2021							<1.3 (U)
7/22/2021							<1.3 (U)
10/18/2021			190	1200	810	57	
10/19/2021	430	200					<1.3 (U)
4/18/2022	380	140	96	500	560		
4/19/2022						8.8	<1.2 (U)
11/1/2022		170	200				
11/2/2022	490			880	690	25	
11/3/2022							5.1
Mean	387.5	237.5	140.8	891.3	667.5	61.73	1.96
Std. Dev.	93.92	79.42	47.84	242.6	78.88	38.05	1.334
Upper Lim.	487.1	321.7	191.5	1148	751.1	102.1	3.4
Lower Lim.	287.9	153.3	90.04	634.1	583.9	21.4	1.1

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 12/16/2022 10:26 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Molybdenum (ug/L) Analysis Run 12/16/2022 10:28 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-304A	MW-308	MW-309	MW-310 (bg)	MW-311	MW-311A
2/22/2021	3.1					
4/5/2021	17					
6/17/2021		<1.3 (U)	<1.3 (U)			
10/5/2021				2		
10/18/2021	6					
10/19/2021		<1.3 (U)	<1.3 (U)	<1.3 (U)		
12/30/2021					30	160
2/21/2022				<1.2 (U)	31	210
4/18/2022	3.2					
4/19/2022		<1.2 (U)	<1.2 (U)	1.5 (J)	25	140
8/22/2022					29	180
11/2/2022	3.8	1.3 (J)	1.4 (J)			
11/3/2022				<1.2 (U)	26	140
Mean	6.62	1.275	1.3	1.44	28.2	166
Std. Dev.	5.92	0.05	0.08165	0.3362	2.588	29.66
Upper Lim.	17.17	1.3	1.485	2.003	32.54	215.7
Lower Lim.	1.582	1.2	1.115	0.8767	23.86	116.3

E3 UPL Update and Tolerance Limit Calculation – April 2022 Event

August 15, 2022
File No. 25222077.00

TECHNICAL MEMORANDUM

SUBJECT: Statistical Evaluation of Groundwater Monitoring Results – UPL Calculation for Background Well MW-307
M.L. Kapp Generating Station

PREPARED BY: Nicole Kron

CHECKED BY: Sherren Clark

STATISTICAL METHODS

Groundwater monitoring data for the monitoring system at the M.L. Kapp Generating Station (KAP), are evaluated in accordance with 40 CFR 257.93(f)(3) for detection monitoring parameters, using a prediction interval procedure, in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper prediction limit (UPL).

For assessment monitoring parameters, groundwater monitoring data are evaluated by comparing the lower confidence limit (LCL) for the arithmetic mean of the monitoring results to the Groundwater Protection Standard (GPS) established in accordance with 40 CFR 257.95(h). Monitoring data for Appendix IV parameters are compared to background using prediction intervals following the same procedures used for the Appendix III parameters.

Statistical evaluation is performed using commercially available software (*Sanitas for Groundwater*[®] or similar) in general accordance with the U.S. Environmental Protection Agency's (U.S. EPA's) *Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* dated March 2009 (Unified Guidance) (U.S. EPA, 2009) and generally accepted procedures.

As of April 2022, the KAP monitoring system included background monitoring well MW-307, 6 compliance monitoring wells installed at the waste boundary (MW-301, MW-302, MW-303, MW-304, MW-305, and MW-306), 5 downgradient delineation wells (MW-304A, MW-308, MW-309, MW-311, and MW-311A), and 1 supplemental background well (MW-310). The statistical analysis includes an interwell evaluation for the Appendix III and IV parameters.

The initial UPLs were calculated based on eight rounds of background monitoring performed prior to the initiation of compliance monitoring for the OGS Ash Pond, from April 2016 through August 2017. Since then, additional rounds of monitoring for Appendix III and IV parameters have been performed at the background well. As part of the evaluation of the 2022 monitoring results, the background data set for the UPL calculations is being updated to include data from the background well collected through April 2022. This memo addresses updated UPLs for Appendix III and UPLs for Appendix IV parameters.



Because the site is already in assessment monitoring and in the process of selecting a remedy, the purposes of the UPL analysis are to provide a basis for comparison of downgradient water quality to background and to establish a GPS for any parameter where background water quality exceeds the GPS values in 40 CFR 257.95(h)(1) and (2).

BACKGROUND UPDATE

Upgradient monitoring well MW-307 was installed in April 2020 because the analytical results to date for the on-site upgradient well (MW-306) suggested that this well may not represent natural background groundwater conditions at the site. As part of the evaluation of April 2022 monitoring results, the background data set for the UPL calculations is being updated to include data from new background well MW-307 collected through April 2022 (minimum of eight rounds for each parameter). This memo addresses updated UPLs for Appendix III and IV parameters.

TIME SERIES PLOTS

Time series plots are prepared for the required monitoring parameters to show the concentration variations over time. Time series graphs are included in **Attachment 1**.

OUTLIER ANALYSIS - INTERWELL

For interwell analysis, an outlier evaluation is performed for background monitoring results at the upgradient well(s). A statistical outlier is a value that is extremely different from the other values in the data set. The Sanitas outlier tests identify data points that do not appear to fit the distribution of the rest of the data set and determine if they differ significantly from the rest of the data. The outlier analysis performed in Sanitas includes the following steps:

- 1) Run normality test (Shapiro Wilk/Francia).
- 2) If normally distributed, run USEPA's 1989 Outlier Test to identify suspected outliers.
 - a) If number of background samples is less than or equal to 25, run Dixon's test for suspected outliers.
 - b) If number of background samples is more than 25, run Rosner's test for suspected outliers.
- 3) If not normally distributed, run Tukey's test for outliers.
- 4) Review data flagged as possible outliers to evaluate whether they should be removed from the background data set. Also review time series plots for possible outliers that were not picked up in the statistical evaluation (e.g., outlier test may not identify outliers when two values are similar to each other, but very different from all other data).

Results identified as statistical outliers are checked for possible lab instrument failure, field collection problems, or data entry errors; however, outliers may exist naturally in the data if there is an extremely wide inherent or temporal variability in the data. The Unified Guidance states that unless a likely error can be identified, the outlier should not be removed.

Only upgradient monitoring well was MW-307 evaluated for outliers. The supplemental background monitoring well, MW-310, was installed to characterize background concentrations in bedrock, but is not upgradient from the CCR Unit and is not currently being used for UPL calculation.

For the interwell evaluation of the April 2022 sampling event, the following background values were identified as potential outliers and handled as described:

- **Arsenic (MW-307).** One high result from the July 2020 event was flagged as a statistical outlier. This result was not removed from the dataset because there was no known explanation for the higher result; it was only slightly higher than the other background results (1.7 micrograms per liter [$\mu\text{g/L}$] vs. 0.92-1.1 $\mu\text{g/L}$) and it appeared to be within the range of potential natural variation.

Outlier analysis results are included in **Attachment 2**.

INTERWELL PREDICTION LIMITS

Interwell prediction limits were calculated using background data from the upgradient monitoring well (MW-307) for each monitored constituent, with outliers evaluated for removal as noted above. Groundwater results from July 2020 through April 2022 were included to calculate the interwell prediction limits. The prediction limit analysis performed in Sanitas includes the following steps:

- 1) If 100 percent of the background values are non-detect, the Double Quantification rule applies and no prediction limit is calculated.
- 2) If more than 50 percent of results are non-detect, then a non-parametric prediction limit is calculated.
- 3) If 50 percent or fewer of the results are non-detect, run normality test (Shapiro Wilk/Francia) to assess whether the data fit a normal distribution or can be transformed to fit a normal distribution (e.g., lognormal).
- 4) If normal or transformed normal, calculate parametric prediction limit.
- 5) If not normal or transformed normal, calculate non-parametric prediction limit.

Consistent with the Unified Guidance, parametric prediction limits are calculated based on a 1-of-2 retesting protocol and a 10 percent site-wide false positive rate. Sanitas establishes the per-test significance level based on user inputs of the number of events per year, number of constituents being evaluated, and number of compliance wells. The 10 percent site-wide false positive rate was applied separately to the Appendix III and Appendix IV parameter groups. For the April 2022 event, the following values were used:

TECHNICAL MEMORANDUM

August 15, 2022

Page 4

Parameter	Value	Comments
Evaluations per year	2	Spring and fall events
App III Constituents analyzed	6	Total of seven constituents were analyzed, but fluoride was not counted because all background results were non-detect. Double Quantification Rule will apply for this parameter.
App IV Constituents analyzed	9	Total of 15 constituents were analyzed but antimony, beryllium, chromium, fluoride, mercury, and thallium were not counted because all background results were non-detect. The Double Quantification Rule will apply for these parameters.
Compliance wells	6	

Non-parametric prediction limits are also based on a 1-of-2 retesting protocol. The non-parametric limit is the highest value in the background dataset. Due to the small sample size, the false positive rate for the non-parametric tests is higher than for the parametric tests, but will go down as more background data are obtained.

For results with 100 percent non-detects in the background data (listed in table above), evaluation under the Double Quantification Rule means that a statistically significant increase (SSI) has not occurred for a compliance well unless two sample results from the well exceed the laboratory's reporting limit or quantification limit.

For evaluation of parameters with less than 100 percent non-detects in the background sampling, the non-detects were adjusted using the Kaplan-Meier technique, unless the non-detects represent less than 15 percent of the total samples, in which case one-half of the detection limit was used.

Interwell prediction limit analysis results are included in **Attachment 3** and **Attachment 4**.

NDK/AJR_lmh/SCC

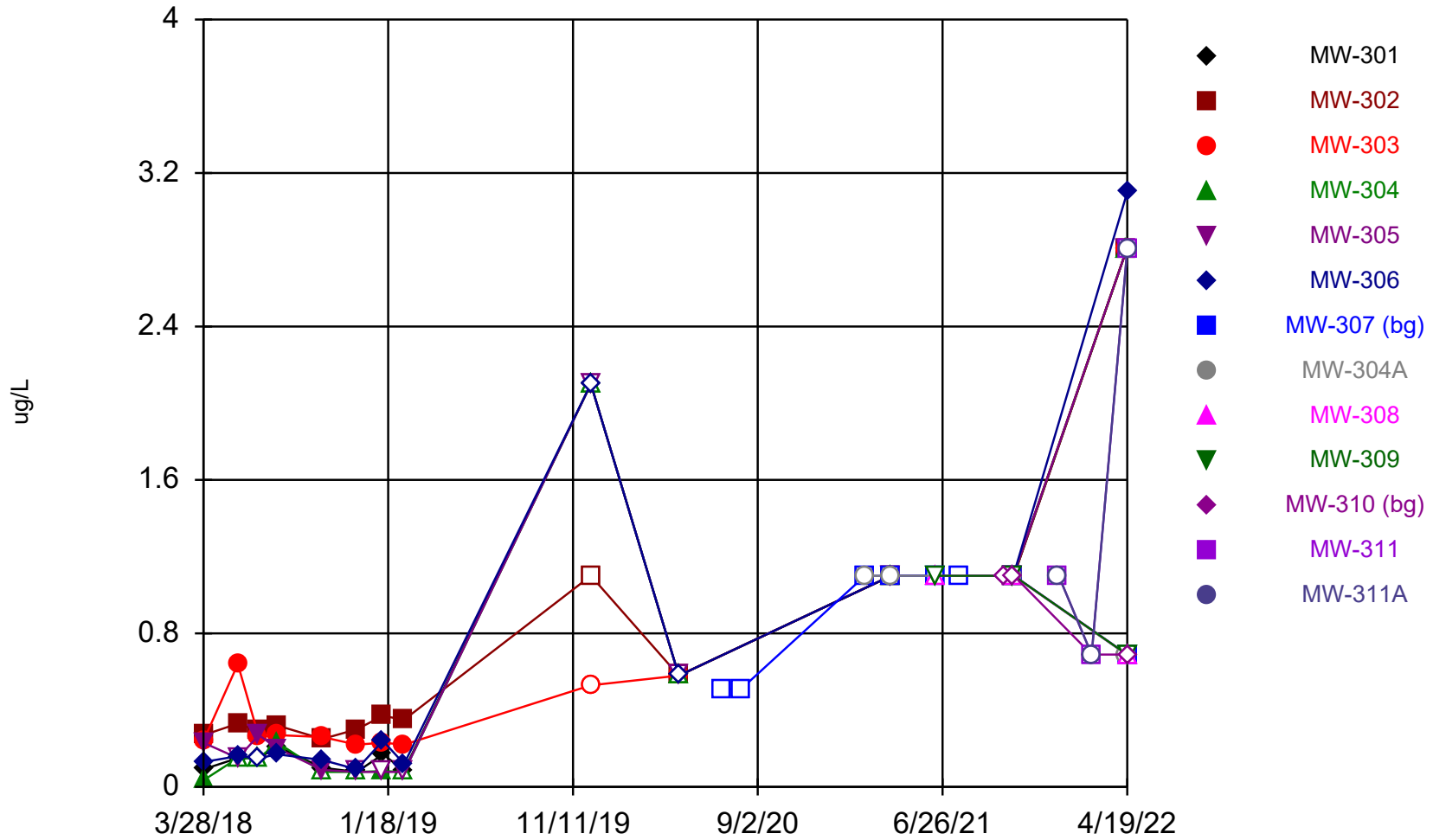
Encl. Attachments 1 through 4

I:\25222077.00\Data and Calculations\Sanitas\KAP UPL update\220815_KAP - CCR Stats Memo - UPL Update_Rev1.docx

Attachment 1

Times Series Graphs

Antimony



Time Series Analysis Run 6/26/2022 11:30 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Antimony (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	0.092 (J)	0.27 (J)	0.24 (J)	0.035 (J)	0.23 (J)	0.13 (J)			
5/22/2018	<0.15 (U)	0.33 (J)	0.64 (J)	<0.15 (U)	<0.15 (U)	0.16 (J)			
6/25/2018	<0.15 (U)	0.29 (J)	0.26 (J)	<0.15 (U)	0.27 (J)	<0.15 (U)			
7/25/2018	0.21 (J)	0.32 (J)	0.27 (J)	0.23 (J)	0.2 (J)	0.17 (J)			
10/5/2018	0.1 (J)	0.25 (J)	0.26 (J)	<0.078 (U)	0.088 (J)	0.14 (J)			
11/29/2018	<0.078 (U)	0.3 (J)	0.22 (J)	<0.078 (U)	<0.078 (U)	0.092 (J)			
1/10/2019	0.17 (J)	0.37 (J)	0.23 (J)	0.082 (J)	<0.078 (U)	0.24 (J)			
2/13/2019	0.086 (J)	0.35 (J)	0.22 (J)	<0.078 (U)	<0.078 (U)	0.12 (J)			
12/10/2019	<2.1 (U)	<1.1 (U)	<0.53 (U)	<2.1 (U)	<2.1 (U)	<2.1 (U)			
4/29/2020	<0.58 (U)	<0.58 (U)	<0.58 (U)	<0.58 (U)	<0.58 (U)	<0.58 (U)			
7/7/2020							<0.51 (U)		
8/7/2020							<0.51 (U)		
2/22/2021							<1.1 (U)	<1.1 (U)	
4/5/2021	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	
6/17/2021							<1.1 (U)		<1.1 (U)
7/22/2021							<1.1 (U)		
10/5/2021									
10/18/2021			<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)		<1.1 (U)	
10/19/2021	<1.1 (U)	<1.1 (U)					<1.1 (U)		<1.1 (U)
12/30/2021									
2/21/2022									
4/18/2022	<2.8 (U)	<2.8 (U)	<2.8 (U)	<2.8 (U)	<2.8 (U)			<0.69 (U)	
4/19/2022						3.1 (J)	<0.69 (U)		<0.69 (U)

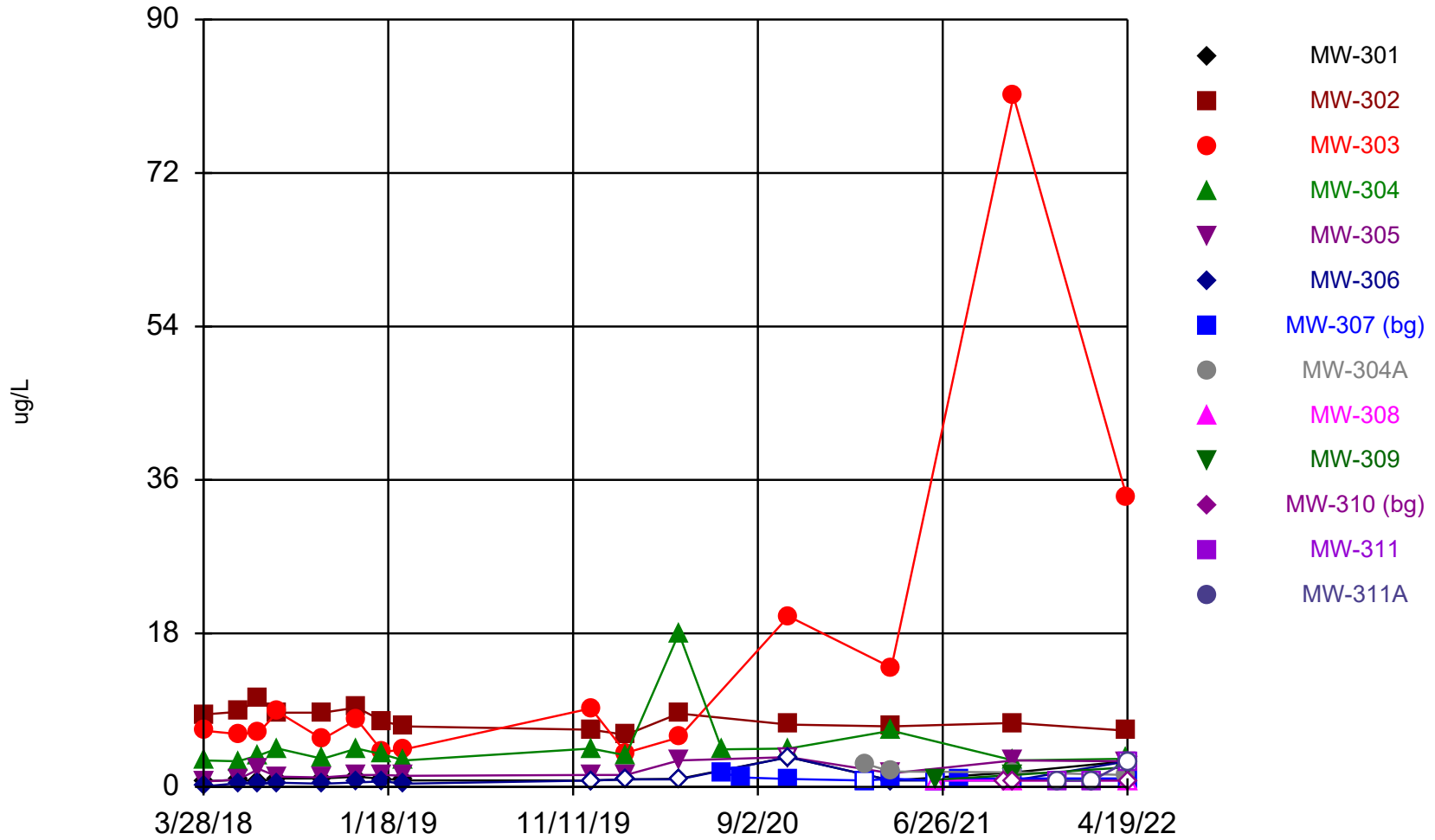
Time Series

Constituent: Antimony (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
4/29/2020				
7/7/2020				
8/7/2020				
2/22/2021				
4/5/2021				
6/17/2021	<1.1 (U)			
7/22/2021				
10/5/2021		<1.1 (U)		
10/18/2021				
10/19/2021	<1.1 (U)	<1.1 (U)		
12/30/2021			<1.1 (U)	<1.1 (U)
2/21/2022		<0.69 (U)	<0.69 (U)	<0.69 (U)
4/18/2022				
4/19/2022	<0.69 (U)	<0.69 (U)	<2.8 (U)	<2.8 (U)

Arsenic



Time Series Analysis Run 6/26/2022 11:30 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Arsenic (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	0.66 (J)	8.5	6.6	3.1	0.62 (J)	0.054 (J)			
5/22/2018	0.82 (J)	8.8	6.2	3	0.86 (J)	0.42 (J)			
6/25/2018	0.67 (J)	10.3	6.4	3.7	2.1	0.33 (J)			
7/25/2018	1 (J)	8.7	8.8	4.5	1.2	0.49 (J)			
10/5/2018	0.99 (J)	8.7	5.6	3.3	1.1	0.37 (J)			
11/29/2018	1.2	9.3	7.9	4.5	1.4	0.53 (J)			
1/10/2019	0.94 (J)	7.7	4.1	3.8	1.4	0.65 (J)			
2/13/2019	0.76 (J)	7.1	4.4	3.1	1.3	0.37 (J)			
12/10/2019	<0.75 (U)	6.7	9.2	4.5	1.4 (J)	<0.75 (U)			
2/4/2020	<0.88 (U)	6.1	4	3.7	1.4 (J)	<0.88 (U)			
4/29/2020	0.95 (J)	8.6	5.8	18	3.1	<0.88 (U)			
7/7/2020				4.4			1.7 (J)		
8/7/2020							1.1 (J)		
10/22/2020	<3.5 (U)	7.3	20	4.5 (J)	<3.5 (U)	<3.5 (U)	0.92 (J)		
2/22/2021							<0.75 (U)	2.7	
4/5/2021	<0.75 (U)	7.1	14	6.6	1.6 (J)	<0.75 (U)	0.96 (J)	1.8 (J)	
6/17/2021							<0.75 (U)		<0.75 (U)
7/22/2021							0.98 (J)		
10/5/2021									
10/18/2021			81	3.1	3.1	<0.75 (U)		1.7 (J)	
10/19/2021	1.7 (J)	7.5					0.99 (J)		<0.75 (U)
12/30/2021									
2/21/2022									
4/18/2022	<3 (U)	6.6 (J)	34	3.3 (J)	<3 (U)			1.4 (J)	
4/19/2022						<3 (U)	1 (J)		<0.75 (U)

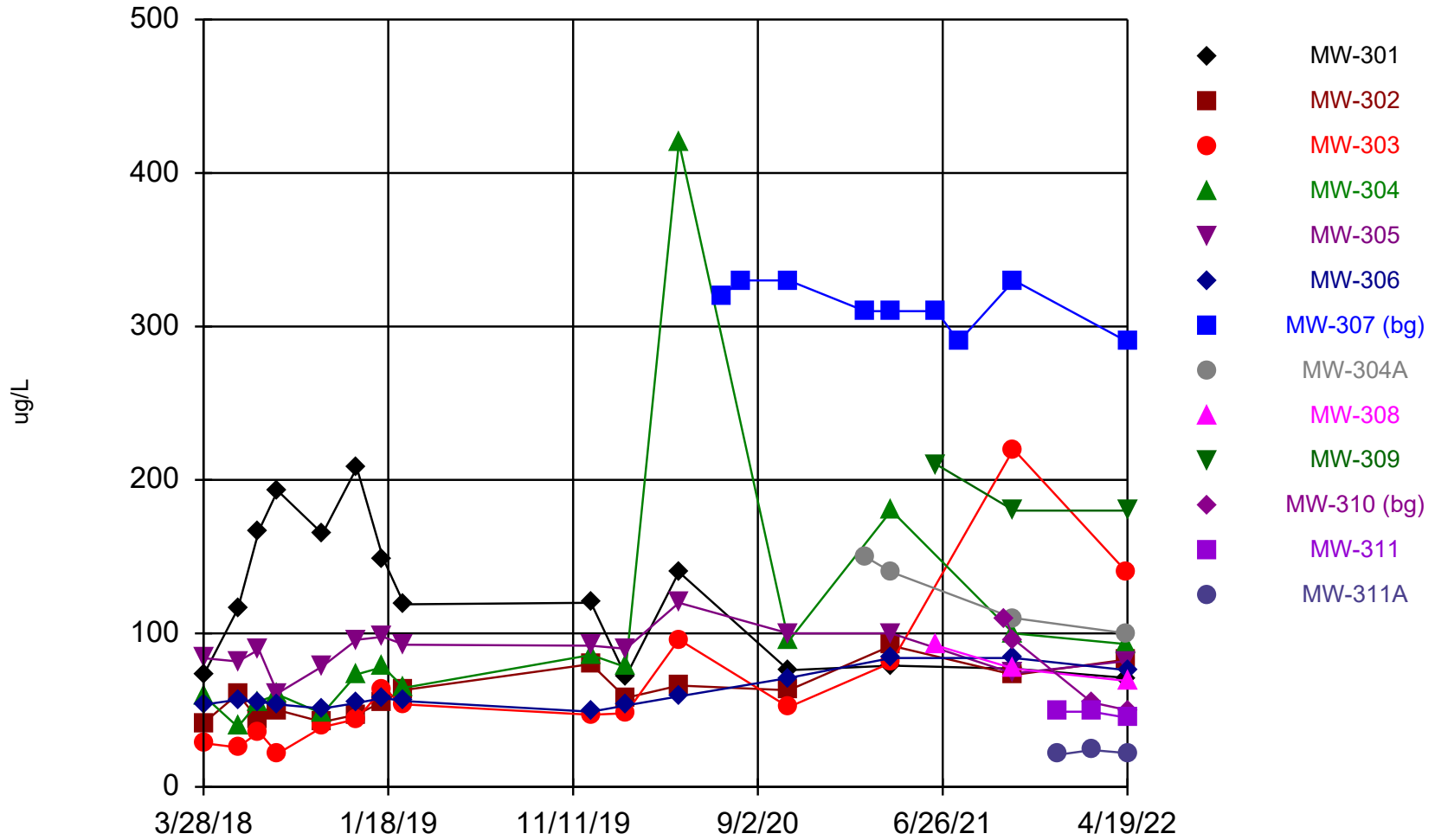
Time Series

Constituent: Arsenic (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	0.84 (J)			
7/22/2021				
10/5/2021		<0.75 (U)		
10/18/2021				
10/19/2021	1.4 (J)	<0.75 (U)		
12/30/2021			<0.75 (U)	<0.75 (U)
2/21/2022		<0.75 (U)	<0.75 (U)	<0.75 (U)
4/18/2022				
4/19/2022	2.3	<0.75 (U)	<3 (U)	<3 (U)

Barium



Time Series Analysis Run 6/26/2022 11:30 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Barium (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	72.9	41.6	28.5	59.4	83.9	53.6			
5/22/2018	116	60.4	25.7	39.1	81.7	56.8			
6/25/2018	167	43.4	35.8	55.7	89.5	55.5			
7/25/2018	193	50.1	21.7	60.2	61	53.8			
10/5/2018	165	42.3	39	47.7	78.6	51.1			
11/29/2018	208	47.1	44.2	73.3	95.9	54.7			
1/10/2019	149	55.7	64	78.1	97.8	57.9			
2/13/2019	119	63.1	53.8	64.6	92.6	55.9			
12/10/2019	120	80	47	86	92	49			
2/4/2020	72	58	48	78	90	53			
4/29/2020	140	66	96	420	120	59			
7/7/2020							320		
8/7/2020							330		
10/22/2020	76	63	52	95	100	71	330		
2/22/2021							310	150	
4/5/2021	79	92	81	180	100	84	310	140	
6/17/2021							310		92
7/22/2021							290		
10/5/2021									
10/18/2021			220	100	74	84		110	
10/19/2021	77	73					330		77
12/30/2021									
2/21/2022									
4/18/2022	71	83	140	93	82			100	
4/19/2022						76	290		69

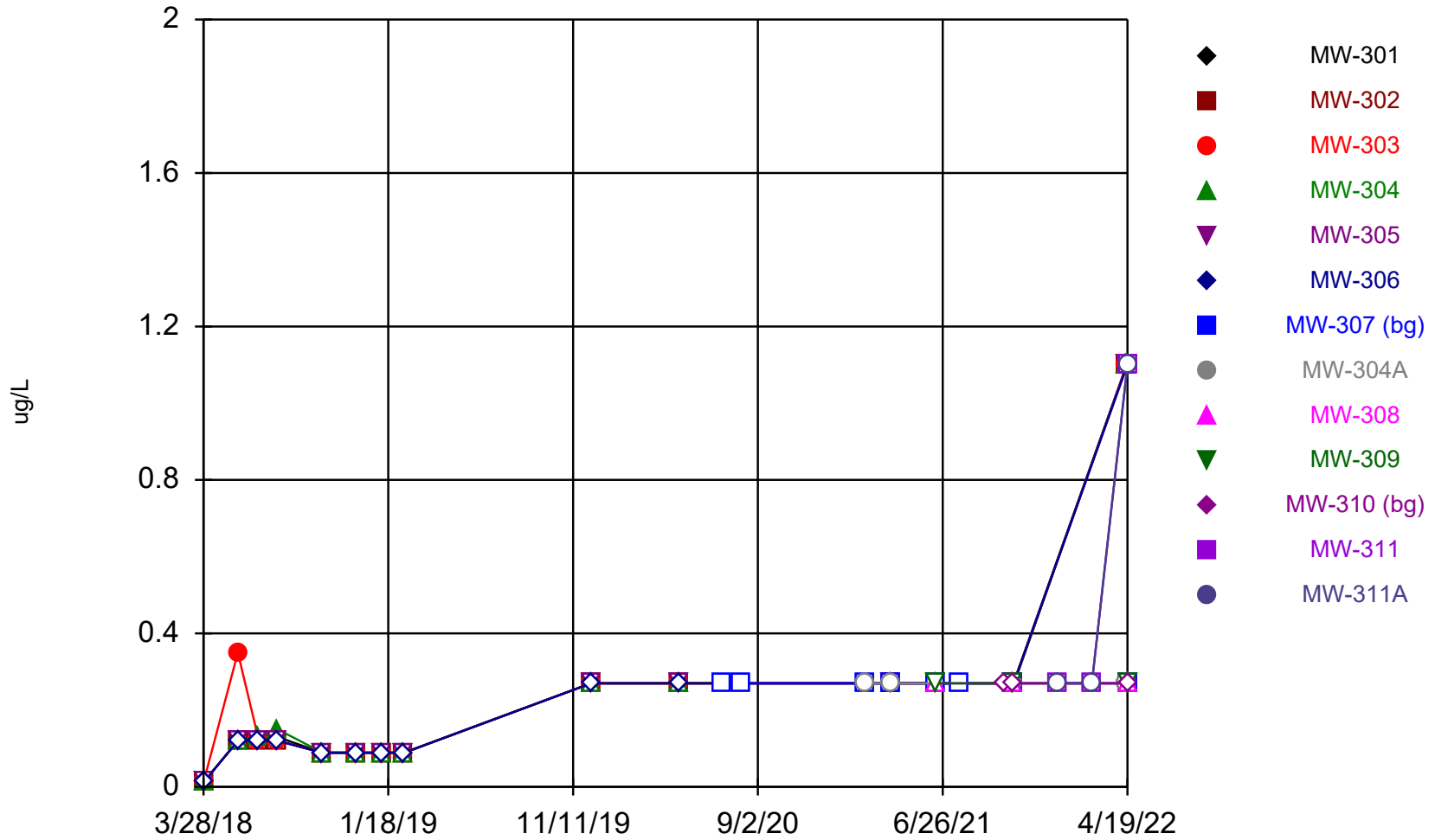
Time Series

Constituent: Barium (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	210			
7/22/2021				
10/5/2021		110		
10/18/2021				
10/19/2021	180	96		
12/30/2021			49	21
2/21/2022		55	49	24
4/18/2022				
4/19/2022	180	50	45	22

Beryllium



Time Series Analysis Run 6/26/2022 11:30 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Beryllium (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	<0.012 (U)	<0.012 (U)	<0.012 (U)	<0.012 (U)	<0.012 (U)	<0.012 (U)			
5/22/2018	<0.12 (U)	<0.12 (U)	0.35 (J)	<0.12 (U)	<0.12 (U)	<0.12 (U)			
6/25/2018	<0.12 (U)	<0.12 (U)	<0.12 (U)	<0.12 (U)	<0.12 (U)	<0.12 (U)			
7/25/2018	0.13 (J)	<0.12 (U)	<0.12 (U)	0.15 (J)	<0.12 (U)	<0.12 (U)			
10/5/2018	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)			
11/29/2018	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)			
1/10/2019	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)			
2/13/2019	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)	<0.089 (U)			
12/10/2019	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)			
4/29/2020	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)			
7/7/2020							<0.27 (U)		
8/7/2020							<0.27 (U)		
2/22/2021							<0.27 (U)	<0.27 (U)	
4/5/2021	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	
6/17/2021							<0.27 (U)		<0.27 (U)
7/22/2021							<0.27 (U)		
10/5/2021									
10/18/2021			<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)		<0.27 (U)	
10/19/2021	<0.27 (U)	<0.27 (U)					<0.27 (U)		<0.27 (U)
12/30/2021									
2/21/2022									
4/18/2022	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)			<0.27 (U)	
4/19/2022						<1.1 (U)	<0.27 (U)		<0.27 (U)

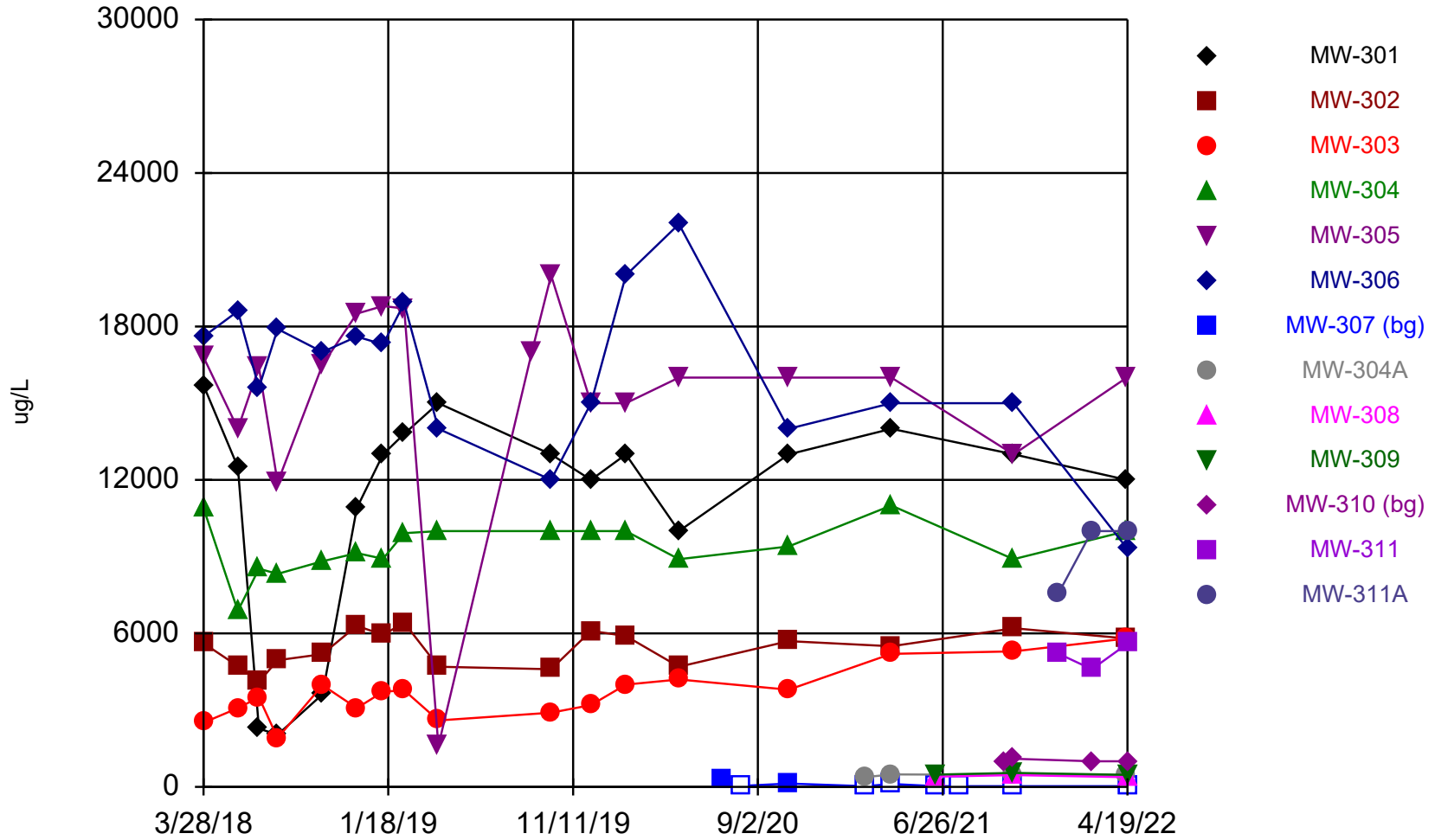
Time Series

Constituent: Beryllium (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
4/29/2020				
7/7/2020				
8/7/2020				
2/22/2021				
4/5/2021				
6/17/2021	<0.27 (U)			
7/22/2021				
10/5/2021		<0.27 (U)		
10/18/2021				
10/19/2021	<0.27 (U)	<0.27 (U)		
12/30/2021			<0.27 (U)	<0.27 (U)
2/21/2022		<0.27 (U)	<0.27 (U)	<0.27 (U)
4/18/2022				
4/19/2022	<0.27 (U)	<0.27 (U)	<1.1 (U)	<1.1 (U)

Boron



Time Series Analysis Run 6/26/2022 11:30 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Boron (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	15700	5620	2510	10900	16800	17600			
5/22/2018	12500	4720	3080	6880	14000	18600			
6/25/2018	2280	4100	3500	8530	16400	15600			
7/25/2018	2040	4950	1910	8330	11900	17900			
10/5/2018	3620	5190	3980	8820	16500	17000			
11/29/2018	10900	6300	3080	9140	18500	17600			
1/10/2019	13000	5940	3720	8920	18800	17300			
2/13/2019	13800	6420	3780	9920	18700	18900			
4/9/2019	15000	4700	2600	10000	1600	14000			
9/6/2019					17000				
10/7/2019	13000	4600	2900	10000	20000	12000			
12/10/2019	12000	6100	3200	10000	15000	15000			
2/4/2020	13000	5900	4000	10000	15000	20000			
4/29/2020	10000	4700	4200	8900	16000	22000			
7/7/2020							280		
8/7/2020							<80 (U)		
10/22/2020	13000	5700	3800	9400	16000	14000	130		
2/22/2021							<58 (U)	380	
4/5/2021	14000	5500	5200	11000	16000	15000	<230 (U)	490	
6/17/2021							<58 (U)		400
7/22/2021							<58 (U)		
10/5/2021									
10/18/2021			5300	8900	13000	15000		470	
10/19/2021	13000	6200					<58 (U)		460
12/30/2021									
2/21/2022									
4/18/2022	12000	5800	5800	10000	16000			460	
4/19/2022						9300	<58 (U)		380

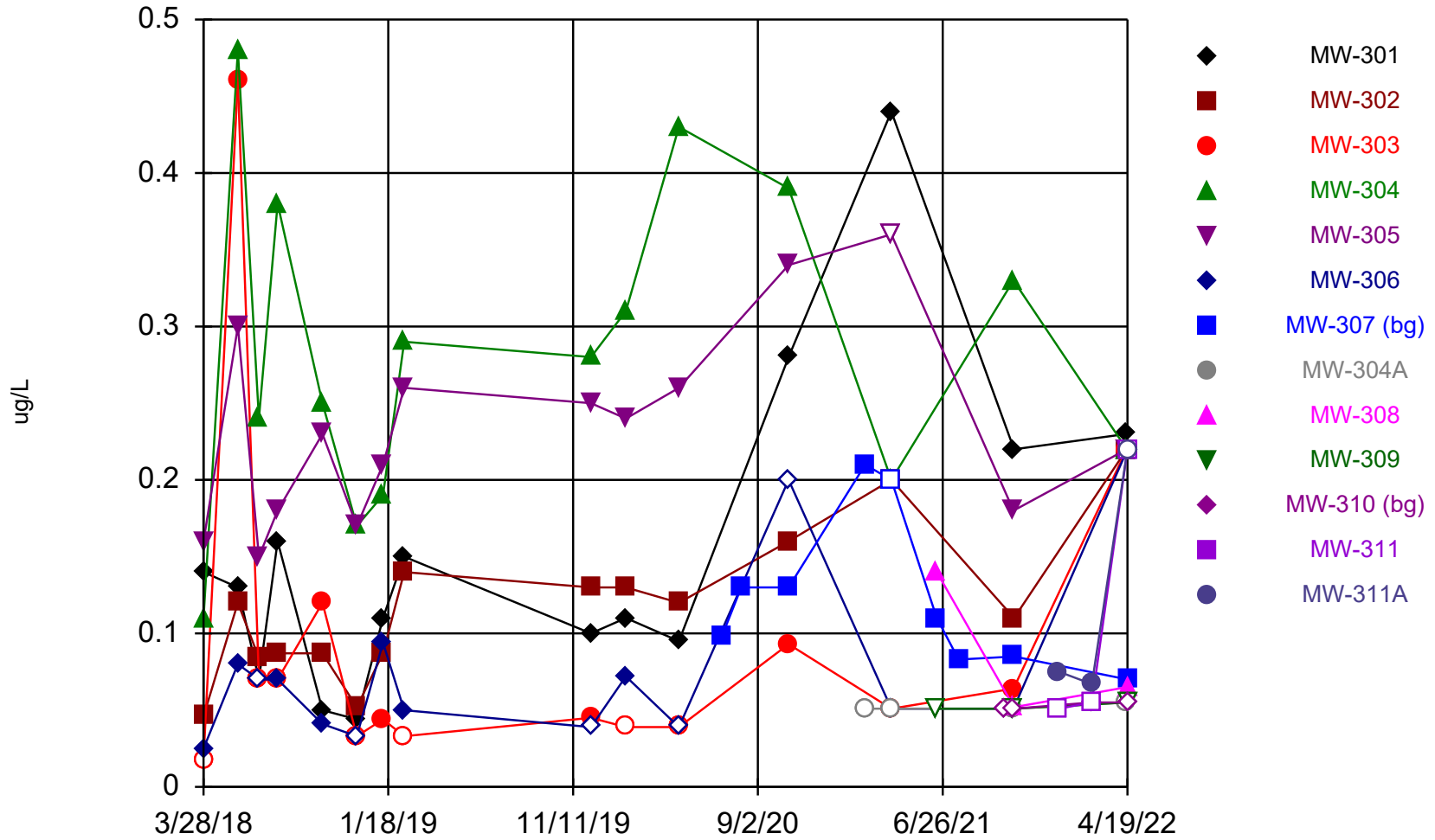
Time Series

Constituent: Boron (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
4/9/2019				
9/6/2019				
10/7/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	480			
7/22/2021				
10/5/2021		1000		
10/18/2021				
10/19/2021	550	1100		
12/30/2021			5200	7600
2/21/2022		1000	4600	10000
4/18/2022				
4/19/2022	470	1000	5600	10000

Cadmium



Time Series Analysis Run 6/26/2022 11:30 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Cadmium (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	0.14 (J)	0.046 (J)	<0.018 (U)	0.11 (J)	0.16 (J)	0.025 (J)			
5/22/2018	0.13 (J)	0.12 (J)	0.46 (J)	0.48 (J)	0.3 (J)	0.08 (J)			
6/25/2018	<0.07 (U)	0.084 (J)	<0.07 (U)	0.24 (J)	0.15 (J)	<0.07 (U)			
7/25/2018	0.16 (J)	0.087 (J)	<0.07 (U)	0.38 (J)	0.18 (J)	0.07 (J)			
10/5/2018	0.05 (J)	0.087 (J)	0.12 (J)	0.25 (J)	0.23 (J)	0.041 (J)			
11/29/2018	0.044 (J)	0.052 (J)	<0.033 (U)	0.17 (J)	0.17 (J)	<0.033 (U)			
1/10/2019	0.11 (J)	0.087 (J)	0.044 (J)	0.19 (J)	0.21 (J)	0.094 (J)			
2/13/2019	0.15 (J)	0.14 (J)	<0.033 (U)	0.29 (J)	0.26 (J)	0.05 (J)			
12/10/2019	0.1	0.13	0.045 (J)	0.28	0.25	<0.039 (U)			
2/4/2020	0.11	0.13	<0.039 (U)	0.31	0.24	0.072 (J)			
4/29/2020	0.095 (J)	0.12	<0.039 (U)	0.43	0.26	<0.039 (U)			
7/7/2020							0.098 (J)		
8/7/2020							0.13		
10/22/2020	0.28 (J)	0.16	0.093 (J)	0.39 (J)	0.34 (J)	<0.2 (U)	0.13		
2/22/2021							0.21	<0.051 (U)	
4/5/2021	0.44	<0.2	<0.051 (U)	<0.2 (U)	<0.36 (U)	<0.051 (U)	<0.2 (U)	<0.051 (U)	
6/17/2021							0.11		0.14
7/22/2021							0.083 (J)		
10/5/2021									
10/18/2021			0.064 (J)	0.33	0.18	<0.051 (U)		<0.051 (U)	
10/19/2021	0.22	0.11					0.085 (J)		0.052 (J)
12/30/2021									
2/21/2022									
4/18/2022	0.23 (J)	<0.22 (U)	<0.22 (U)	<0.22 (U)	<0.22 (U)			<0.055 (U)	
4/19/2022						<0.22 (U)	0.07 (J)		0.065 (J)

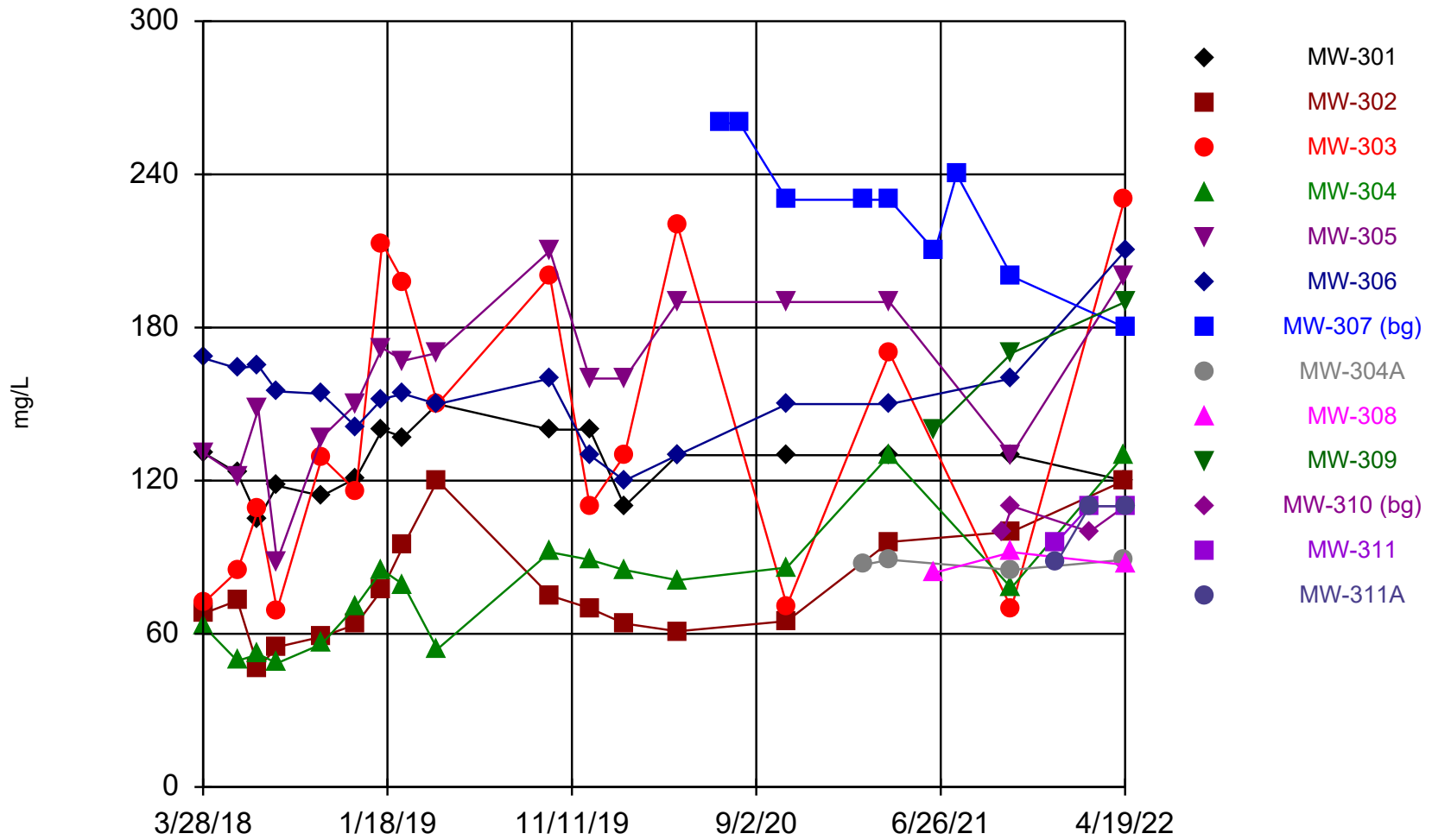
Time Series

Constituent: Cadmium (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	<0.051 (U)			
7/22/2021				
10/5/2021		<0.051 (U)		
10/18/2021				
10/19/2021	<0.051 (U)	<0.051 (U)		
12/30/2021			<0.051 (U)	0.075 (J)
2/21/2022		<0.055 (U)	<0.055 (U)	0.067 (J)
4/18/2022				
4/19/2022	<0.055 (U)	<0.055 (U)	<0.22 (U)	<0.22 (U)

Calcium



Time Series Analysis Run 6/26/2022 11:30 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Calcium (mg/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	131	67.9	72	63.2	131	168			
5/22/2018	123	73	84.5	49.4	122	164			
6/25/2018	105	46.7	109	52	148	165			
7/25/2018	118	54.8	69.3	48.5	88.4	155			
10/5/2018	114	58.9	129	56	137	154			
11/29/2018	121	63.7	116	70.9	150	141			
1/10/2019	140	77.4	213	85	172	152			
2/13/2019	137	94.5	198	79.3	167	154			
4/9/2019	150	120	150	54	170	150			
10/7/2019	140	75	200	92	210	160			
12/10/2019	140	70	110	89	160	130			
2/4/2020	110	64	130	85	160	120			
4/29/2020	130	61	220	81	190	130			
7/7/2020							260		
8/7/2020							260		
10/22/2020	130	65	71	86	190	150	230		
2/22/2021							230	87	
4/5/2021	130	96	170	130	190	150	230	89	
6/17/2021							210		84
7/22/2021							240		
10/5/2021									
10/18/2021			70	78	130	160		85	
10/19/2021	130	100					200		92
12/30/2021									
2/21/2022									
4/18/2022	120	120	230	130	200			89	
4/19/2022						210	180		87

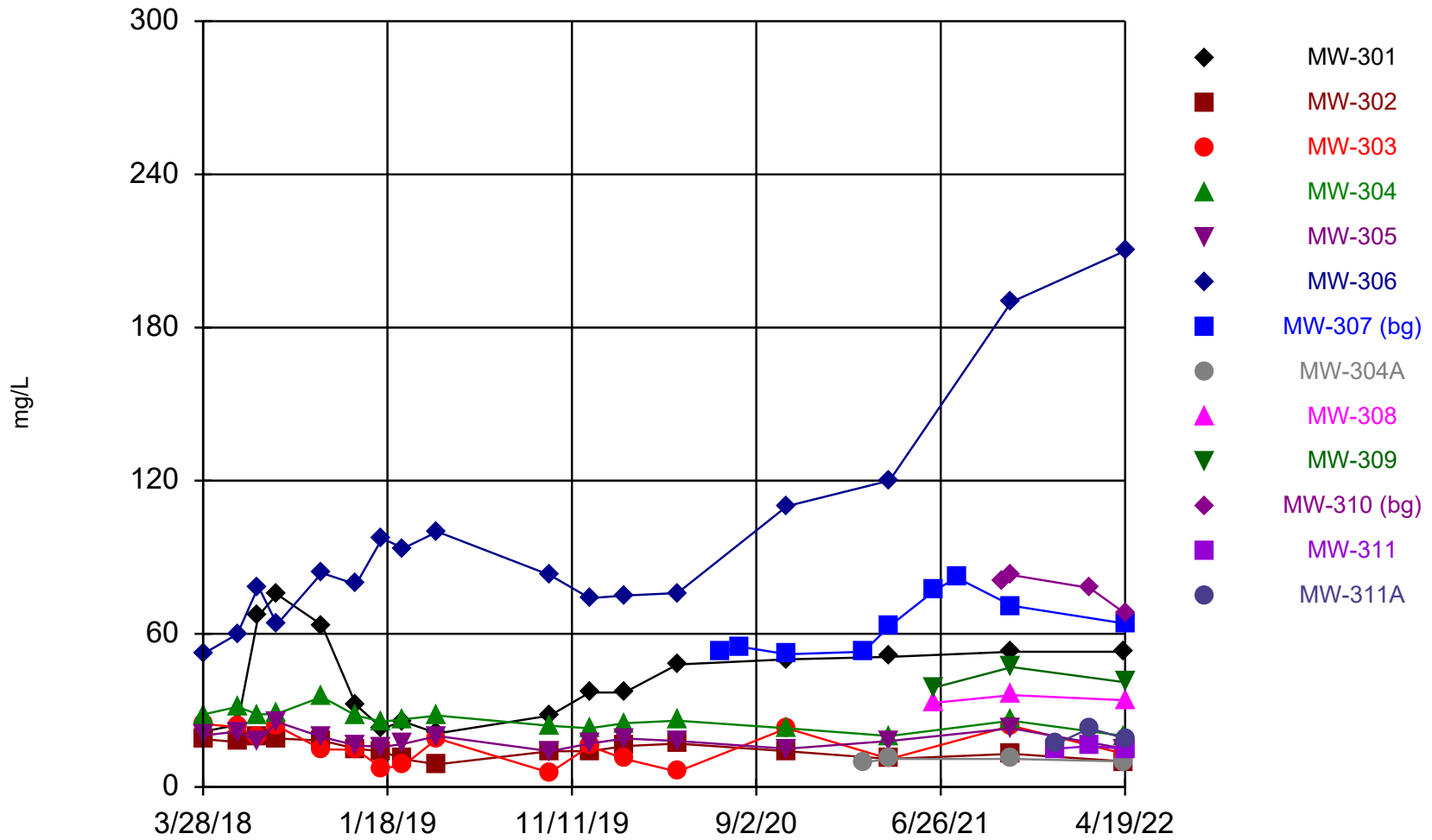
Time Series

Constituent: Calcium (mg/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
4/9/2019				
10/7/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	140			
7/22/2021				
10/5/2021		100		
10/18/2021				
10/19/2021	170	110		
12/30/2021			96	88
2/21/2022		100	110	110
4/18/2022				
4/19/2022	190	110	110	110

Chloride



Time Series Analysis Run 6/26/2022 11:30 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Chloride (mg/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	21.7	18.8	24.7	28.4	20.2	52.1			
5/22/2018	24.3	17.6	23.5	31.4	21.7	59.9			
6/25/2018	67.1	19.4	19.7	28.4	17.7	78.5			
7/25/2018	75.5	19	23.9	28.7	25.5	63.7			
10/5/2018	63.5	18.2	14.7	35.3	19.6	83.8			
11/29/2018	32.1	15	14.6	28	16.3	79.4			
1/10/2019	23	13.9	7.3	25.6	15.7	97.4			
2/13/2019	25.6	10.9	8.4	26.5	16.9	93.5			
4/9/2019	21	8.9	19	28	20	100			
10/7/2019	28	14	5.6	24	14	83			
12/10/2019	37	14	16	23	17	74			
2/4/2020	37	16	11	25	19	75			
4/29/2020	48	17	6	26	18	76			
7/7/2020							53		
8/7/2020							55		
10/22/2020	50	14	23	23	15	110	52		
2/22/2021							53	9.7	
4/5/2021	51	11	11	20	18	120	63	11	
6/17/2021							77		33
7/22/2021							82		
10/5/2021									
10/18/2021			24	26	23	190		11	
10/19/2021	53	13					71		36
12/30/2021									
2/21/2022									
4/18/2022	53	10	13	20	15			10	
4/19/2022						210	64		34

Time Series

Constituent: Chloride (mg/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
4/9/2019				
10/7/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	39			
7/22/2021				
10/5/2021		81		
10/18/2021				
10/19/2021	47	83		
12/30/2021			15	17
2/21/2022		78	16	23
4/18/2022				
4/19/2022	41	68	15	19

Time Series

Constituent: Chromium (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	0.24 (J)	0.27 (J)	0.11 (J)	0.49 (J)	0.44 (J)	0.22 (J)			
5/22/2018	0.32 (J)	1.4	0.52 (J)	0.68 (J)	0.2 (J)	<0.19 (U)			
6/25/2018	0.25 (J)	0.59 (J)	0.45 (J)	3.9	0.93 (J)	<0.19 (U)			
7/25/2018	0.3 (J)	<0.19 (U)	<0.19 (U)	1.8	<0.19 (U)	<0.19 (U)			
10/5/2018	0.13 (J)	0.29 (J)	0.2 (J)	0.33 (J)	<0.079 (U)	0.13 (J)			
11/29/2018	0.58 (J)	0.32 (J)	<0.078 (U)	0.1 (J)	<0.078 (U)	0.16 (J)			
1/10/2019	0.35 (J)	0.64 (J)	0.38 (J)	0.23 (J)	0.24 (J)	0.3 (J)			
2/13/2019	0.14 (J)	0.36 (J)	0.15 (J)	0.18 (J)	0.45 (J)	0.16 (J)			
12/10/2019	<0.98 (U)	<0.98 (U)	<0.98 (U)	<0.98 (U)	<0.98 (U)	<0.98 (U)			
4/29/2020	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)			
7/7/2020							<1.1 (U)		
8/7/2020							<1.1 (U)		
2/22/2021							<1.1 (U)	3.1 (J)	
4/5/2021	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)	
6/17/2021							<1.1 (U)		<1.1 (U)
7/22/2021							<1.1 (U)		
10/5/2021									
10/18/2021			<1.1 (U)	<1.1 (U)	<1.1 (U)	<1.1 (U)		<1.1 (U)	
10/19/2021	<1.1 (U)	<1.1 (U)					<1.1 (U)		<1.1 (U)
12/30/2021									
2/21/2022									
4/18/2022	<4.4 (U)	<4.4 (U)	<4.4 (U)	<4.4 (U)	<4.4 (U)			<1.1 (U)	
4/19/2022						<4.4 (U)	<1.1 (U)		<1.1 (U)

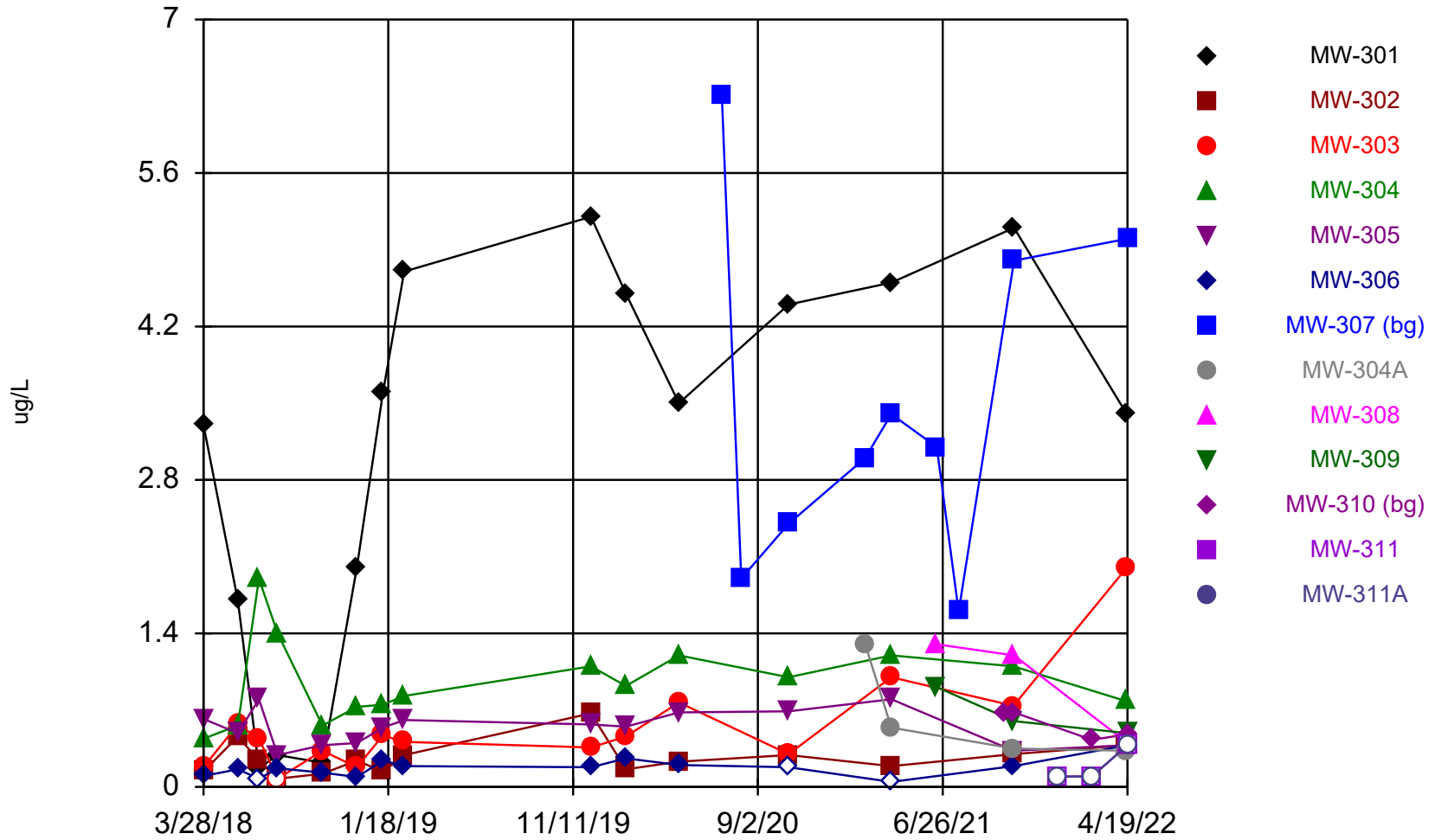
Time Series

Constituent: Chromium (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
4/29/2020				
7/7/2020				
8/7/2020				
2/22/2021				
4/5/2021				
6/17/2021	<1.1 (U)			
7/22/2021				
10/5/2021		<1.1 (U)		
10/18/2021				
10/19/2021	<1.1 (U)	<1.1 (U)		
12/30/2021			<1.1 (U)	<1.1 (U)
2/21/2022		<1.1 (U)	<1.1 (U)	<1.1 (U)
4/18/2022				
4/19/2022	<1.1 (U)	<1.1 (U)	<4.4 (U)	<4.4 (U)

Cobalt



Time Series Analysis Run 6/26/2022 11:30 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Cobalt (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	3.3	0.14 (J)	0.18 (J)	0.44 (J)	0.62 (J)	0.1 (J)			
5/22/2018	1.7	0.46 (J)	0.57 (J)	0.56 (J)	0.49 (J)	0.16 (J)			
6/25/2018	0.17 (J)	0.24 (J)	0.44 (J)	1.9	0.8 (J)	<0.15 (U)			
7/25/2018	0.29 (J)	<0.15 (U)	<0.15 (U)	1.4	0.29 (J)	0.17 (J)			
10/5/2018	0.22 (J)	0.12 (J)	0.33 (J)	0.56 (J)	0.38 (J)	0.13 (J)			
11/29/2018	2	0.24 (J)	0.18 (J)	0.73 (J)	0.4 (J)	0.09 (J)			
1/10/2019	3.6	0.14 (J)	0.47 (J)	0.75 (J)	0.54 (J)	0.24 (J)			
2/13/2019	4.7	0.29 (J)	0.41 (J)	0.83 (J)	0.61 (J)	0.19 (J)			
12/10/2019	5.2	0.67	0.36 (J)	1.1	0.57	0.18 (J)			
2/4/2020	4.5	0.16 (J)	0.46 (J)	0.92	0.55	0.26 (J)			
4/29/2020	3.5	0.23 (J)	0.77	1.2	0.68	0.2 (J)			
7/7/2020							6.3		
8/7/2020							1.9		
10/22/2020	4.4	0.29 (J)	0.3 (J)	1 (J)	0.69 (J)	<0.36 (U)	2.4		
2/22/2021							3	1.3	
4/5/2021	4.6	0.19 (J)	1	1.2	0.8	<0.091 (U)	3.4	0.54	
6/17/2021							3.1		1.3
7/22/2021							1.6		
10/5/2021									
10/18/2021			0.74	1.1	0.33 (J)	0.19 (J)		0.35 (J)	
10/19/2021	5.1	0.3 (J)					4.8		1.2
12/30/2021									
2/21/2022									
4/18/2022	3.4	<0.76 (U)	2	0.78 (J)	<0.76 (U)			0.33 (J)	
4/19/2022						<0.76 (U)	5		0.4 (J)

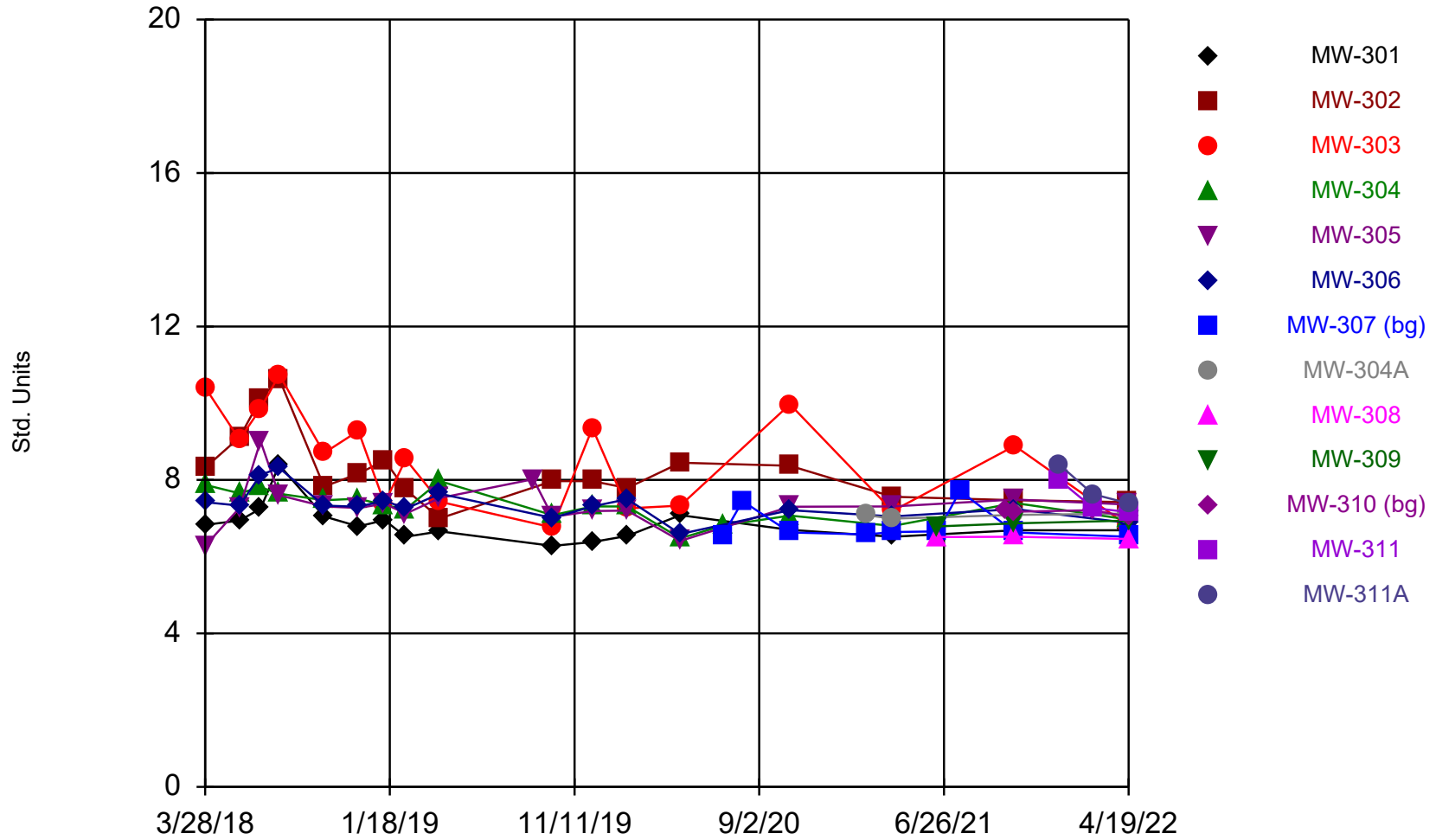
Time Series

Constituent: Cobalt (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	0.91			
7/22/2021				
10/5/2021		0.67		
10/18/2021				
10/19/2021	0.6	0.68		
12/30/2021			<0.19 (U)	<0.19 (U)
2/21/2022		0.43 (J)	<0.19 (U)	<0.19 (U)
4/18/2022				
4/19/2022	0.49 (J)	0.48 (J)	<0.76 (U)	<0.76 (U)

Field pH



Time Series Analysis Run 6/26/2022 11:31 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Field pH (Std. Units) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	6.83	8.32	10.41	7.87	6.28	7.42			
5/22/2018	6.94	9.11	9.05	7.65	7.27	7.33			
6/25/2018	7.25	10.11	9.86	7.81	9.01	8.13			
7/25/2018	8.39	10.64	10.74	7.64	7.6	8.31			
10/5/2018	7.05	7.83	8.7	7.47	7.31	7.33			
11/29/2018	6.79	8.16	9.28	7.51	7.27	7.3			
1/10/2019	6.95	8.51	7.39	7.34	7.38	7.46			
2/13/2019	6.52	7.75	8.54	7.24	7.12	7.25			
4/9/2019	6.66	7	7.43	7.97	7.53	7.64			
9/6/2019					8.02				
10/7/2019	6.28	7.97	6.76	7.08	7.04	7.01			
12/10/2019	6.38	7.97	9.35	7.31	7.19	7.31			
2/4/2020	6.54	7.79	7.26	7.31	7.2	7.5			
4/29/2020	7.08	8.45	7.33	6.48	6.41	6.59			
7/7/2020				6.81			6.57		
8/7/2020							7.45		
10/22/2020	6.7	8.37	9.97	7.07	7.3	7.21	6.63		
2/22/2021							6.58	7.08	
4/5/2021	6.52	7.56	7.19	6.8	7.31	7.05	6.64	6.99	
6/17/2021							6.66		6.51
7/22/2021							7.71		
10/5/2021									
10/18/2021			8.89	7.4	7.49	7.24		7.09	
10/19/2021	6.69	7.47					6.63		6.52
12/30/2021									
2/21/2022									
4/18/2022	6.69	7.42	6.81	6.97	7.36			7.12	
4/19/2022						6.88	6.52		6.46

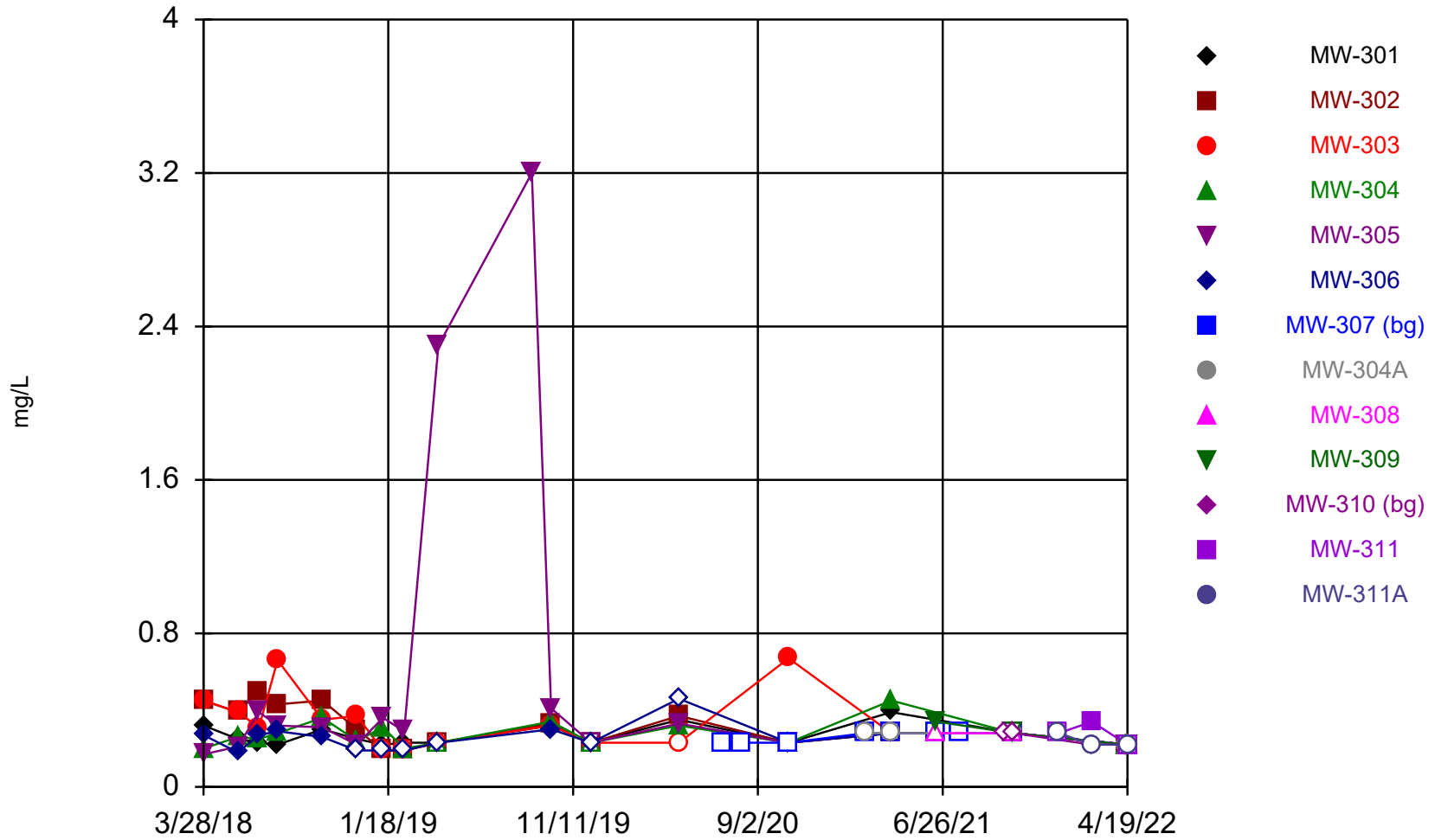
Time Series

Constituent: Field pH (Std. Units) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
4/9/2019				
9/6/2019				
10/7/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	6.79			
7/22/2021				
10/5/2021		7.2		
10/18/2021				
10/19/2021	6.87	7.17		
12/30/2021			7.98	8.38
2/21/2022		7.21	7.27	7.63
4/18/2022				
4/19/2022	6.94	7.04	7.16	7.39

Fluoride



Time Series Analysis Run 6/26/2022 11:31 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Fluoride (mg/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	0.32	0.45	0.45	0.2	0.17 (J)	0.27			
5/22/2018	0.25	0.39	0.39	0.26	0.21	0.18 (J)			
6/25/2018	0.23	0.5	0.31	0.25	0.39	0.27			
7/25/2018	0.22	0.43	0.66	0.28	0.32	0.29			
10/5/2018	0.3	0.45	0.35	0.36	0.31	0.26			
11/29/2018	0.25	0.3	0.37	0.24	0.22	<0.19 (U)			
1/10/2019	0.22	0.19 (J)	<0.19 (U)	0.31	0.36	<0.19 (U)			
2/13/2019	0.23	<0.19 (U)	<0.19 (U)	0.2 (J)	0.29	<0.19 (U)			
4/9/2019	<0.23 (U)	<0.23 (U)	<0.23 (U)	<0.23 (U)	2.3	<0.23 (U)			
9/6/2019					3.2				
10/7/2019	0.32 (J)	0.33 (J)	0.32 (J)	0.34 (J)	0.41 (J)	0.3 (J)			
12/10/2019	<0.23 (U)	<0.23 (U)	<0.23 (U)	<0.23 (U)	<0.23 (U)	<0.23 (U)			
4/29/2020	0.35 (J)	0.37 (J)	<0.23 (U)	0.32 (J)	0.33 (J)	<0.46 (U)			
7/7/2020							<0.23 (U)		
8/7/2020							<0.23 (U)		
10/22/2020	<0.23 (U)	<0.23 (U)	0.67	<0.23 (U)	<0.23 (U)	<0.23 (U)	<0.23 (U)		
2/22/2021							<0.28 (U)	<0.28 (U)	
4/5/2021	0.39 (J)	<0.28 (U)	<0.28 (U)	0.45 (J)	<0.28 (U)	<0.28 (U)	<0.28 (U)	<0.28 (U)	
6/17/2021							<0.28 (U)		<0.28 (U)
7/22/2021							<0.28 (U)		
10/5/2021									
10/18/2021			<0.28 (U)	<0.28 (U)	<0.28 (U)	<0.28 (U)		<0.28 (U)	
10/19/2021	<0.28 (U)	<0.28 (U)					<0.28 (U)		<0.28 (U)
12/30/2021									
2/21/2022									
4/18/2022	<0.22 (U)	<0.22 (U)	<0.22 (U)	<0.22 (U)	<0.22 (U)			<0.22 (U)	
4/19/2022						<0.22 (U)	<0.22 (U)		<0.22 (U)

Time Series

Constituent: Fluoride (mg/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
4/9/2019				
9/6/2019				
10/7/2019				
12/10/2019				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	0.34 (J)			
7/22/2021				
10/5/2021		<0.28 (U)		
10/18/2021				
10/19/2021	<0.28 (U)	<0.28 (U)		
12/30/2021			<0.28 (U)	<0.28 (U)
2/21/2022		<0.22 (U)	0.34 (J)	<0.22 (U)
4/18/2022				
4/19/2022	<0.22 (U)	<0.22 (U)	<0.22 (U)	<0.22 (U)

Time Series

Constituent: Lead (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	0.059 (J)	0.068 (J)	0.039 (J)	0.19 (J)	0.099 (J)	0.033 (J)			
5/22/2018	0.12 (J)	0.6 (J)	0.42 (J)	0.6 (J)	0.24 (J)	<0.12 (U)			
6/25/2018	<0.12 (U)	0.13 (J)	0.18 (J)	2.3	0.58 (J)	<0.12 (U)			
7/25/2018	0.28 (J)	<0.12 (U)	<0.12 (U)	2.6	0.15 (J)	<0.12 (U)			
10/5/2018	<0.13 (U)	<0.13 (U)	<0.13 (U)	0.26 (J)	<0.13 (U)	<0.13 (U)			
11/29/2018	<0.13 (U)	0.28 (J)	<0.13 (U)	<0.13 (U)	<0.13 (U)	<0.13 (U)			
1/10/2019	<0.13 (U)	<0.13 (U)	1.4	<0.13 (U)	<0.13 (U)	<0.13 (U)			
2/13/2019	<0.13 (U)	0.38 (J)	<0.13 (U)	<0.13 (U)	0.14 (J)	0.19 (J)			
12/10/2019	<0.27 (U)	0.6	0.57	0.4 (J)	<0.27 (U)	<0.27 (U)			
2/4/2020	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)			
4/29/2020	<0.27 (U)	<0.27 (U)	<0.27 (U)	0.51	<0.27 (U)	<0.27 (U)			
7/7/2020							0.12 (J)		
8/7/2020							<0.11 (U)		
10/22/2020	<0.44 (U)	<0.11 (U)	<0.11 (U)	<0.44 (U)	<0.44 (U)	<0.44 (U)	<0.11 (U)		
2/22/2021							<0.21 (U)	1.1	
4/5/2021	<0.21 (U)	<0.21 (U)	<0.21 (U)	<0.21 (U)	<0.21 (U)	<0.21 (U)	<0.21 (U)	0.24 (J)	
6/17/2021							<0.21 (U)		0.46 (J)
7/22/2021							<0.21 (U)		
10/5/2021									
10/18/2021			<0.21 (U)	<0.21 (U)	<0.21 (U)	<0.21 (U)		<0.21 (U)	
10/19/2021	0.48 (J)	<0.21 (U)					<0.21 (U)		<0.21 (U)
12/30/2021									
2/21/2022									
4/18/2022	<0.96 (U)	<0.96 (U)	<0.96 (U)	<0.96 (U)	<0.96 (U)			<0.24 (U)	
4/19/2022						<0.96 (U)	<0.24 (U)		<0.24 (U)

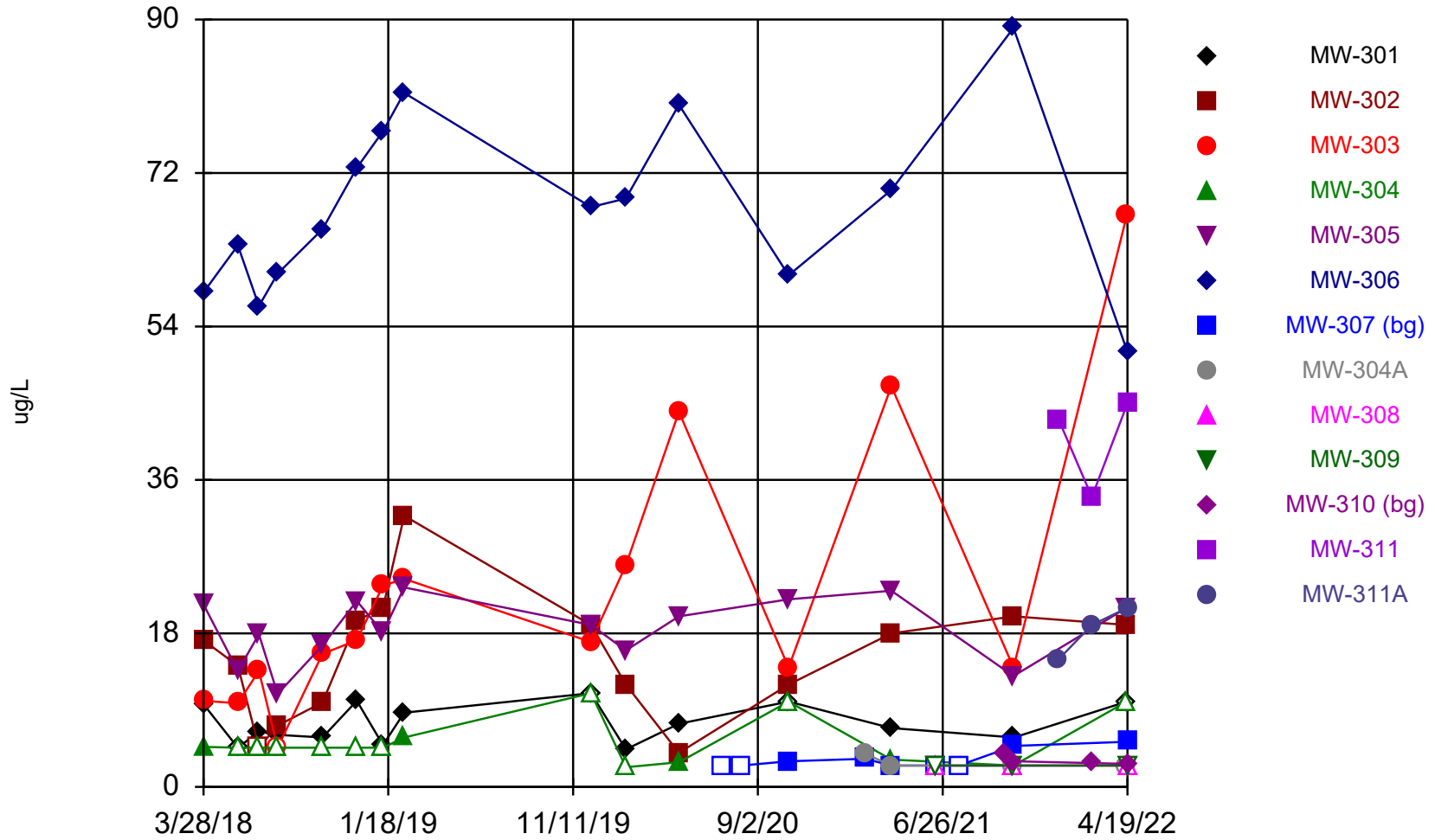
Time Series

Constituent: Lead (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	0.34 (J)			
7/22/2021				
10/5/2021		<0.21 (U)		
10/18/2021				
10/19/2021	<0.21 (U)	<0.21 (U)		
12/30/2021			<0.21 (U)	<0.21 (U)
2/21/2022		<0.24 (U)	<0.24 (U)	<0.24 (U)
4/18/2022				
4/19/2022	<0.24 (U)	<0.24 (U)	<0.96 (U)	<0.96 (U)

Lithium



Time Series Analysis Run 6/26/2022 11:31 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Lithium (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	9.7 (J)	17.2	10.1	4.7 (J)	21.4	58			
5/22/2018	<4.6 (U)	14.2	9.8 (J)	<4.6 (U)	13.6	63.5			
6/25/2018	6.5 (J)	<4.6 (U)	13.6	<4.6 (U)	17.9	56.4			
7/25/2018	6.1 (J)	7.2 (J)	<4.6 (U)	<4.6 (U)	10.9	60.2			
10/5/2018	5.8 (J)	9.9 (J)	15.6	<4.6 (U)	16.6	65.4			
11/29/2018	10.1	19.5	17.2	<4.6 (U)	21.8	72.6			
1/10/2019	4.9 (J)	21	23.6	<4.6 (U)	18.1	76.9			
2/13/2019	8.7 (J)	31.8	24.4	5.8 (J)	23.4	81.4			
12/10/2019	<11 (U)	19 (J)	17	<11 (U)	19 (J)	68			
2/4/2020	4.4 (J)	12	26	<2.3 (U)	16	69			
4/29/2020	7.4 (J)	4 (J)	44	2.9 (J)	20	80			
7/7/2020							<2.5 (U)		
8/7/2020							<2.5 (U)		
10/22/2020	<10 (U)	12	14	<10 (U)	22 (J)	60	3 (J)		
2/22/2021							3.3 (J)	3.9 (J)	
4/5/2021	6.9 (J)	18	47	3.2 (J)	23	70	2.5 (J)	2.5 (J)	
6/17/2021							<2.5 (U)		<2.5 (U)
7/22/2021							<2.5 (U)		
10/5/2021									
10/18/2021			14	<2.5 (U)	13	89		<2.5 (U)	
10/19/2021	5.8 (J)	20					4.8 (J)		<2.5 (U)
12/30/2021									
2/21/2022									
4/18/2022	<10 (U)	19 (J)	67	<10 (U)	21 (J)			<2.5 (U)	
4/19/2022						51	5.3 (J)		<2.5 (U)

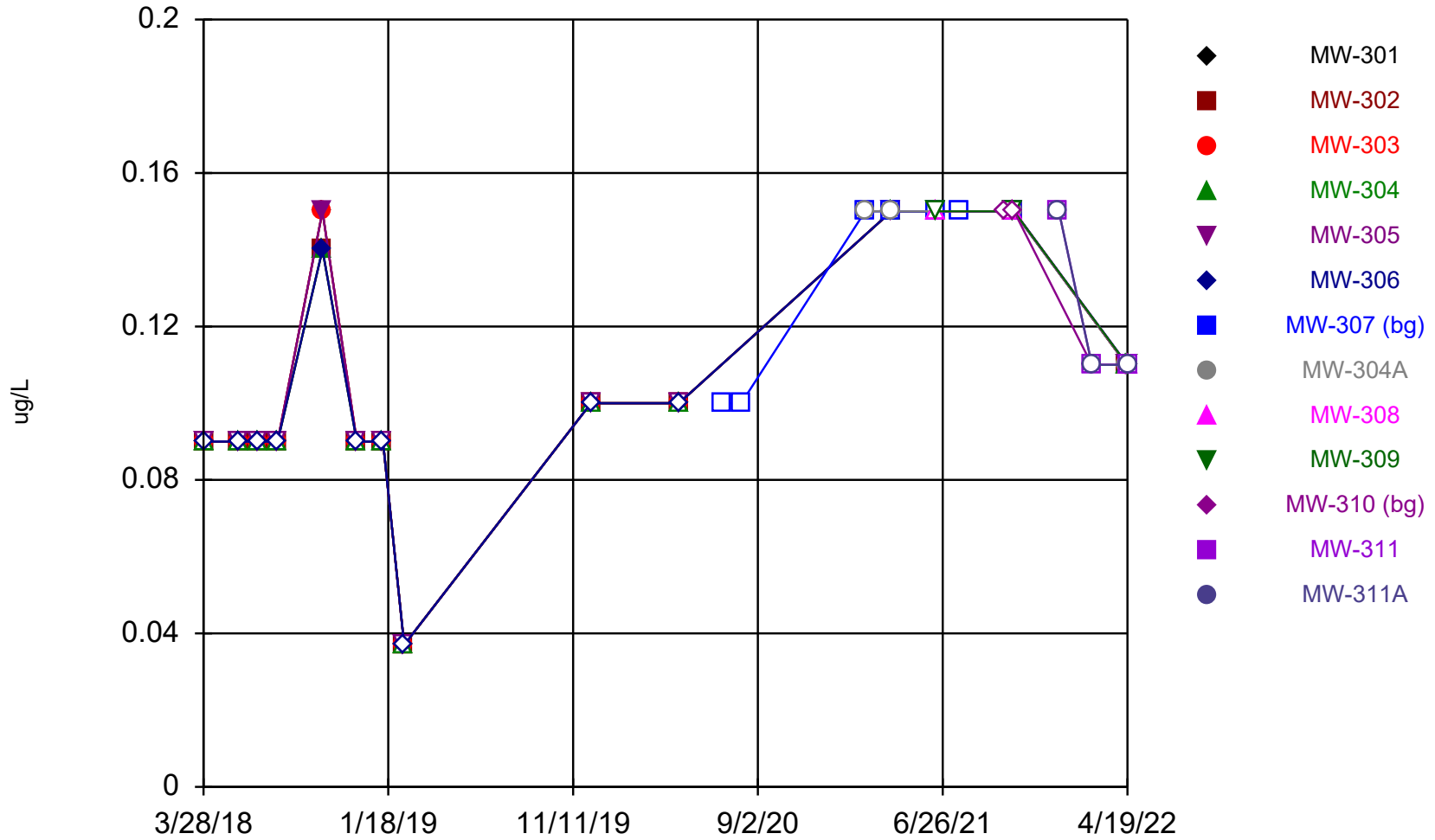
Time Series

Constituent: Lithium (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	<2.5 (U)			
7/22/2021				
10/5/2021		4 (J)		
10/18/2021				
10/19/2021	<2.5 (U)	3 (J)		
12/30/2021			43	15
2/21/2022		2.8 (J)	34	19
4/18/2022				
4/19/2022	<2.5 (U)	2.7 (J)	45	21 (J)

Mercury



Time Series Analysis Run 6/26/2022 11:31 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Mercury (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)			
5/22/2018	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)			
6/25/2018	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)			
7/25/2018	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)			
10/5/2018	0.15 (J)	0.14 (J)	0.15 (J)	0.14 (J)	0.15 (J)	0.14 (J)			
11/29/2018	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)			
1/10/2019	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)	<0.09 (U)			
2/13/2019	<0.037 (U)	<0.037 (U)	<0.037 (U)	<0.037 (U)	<0.037 (U)	<0.037 (U)			
12/10/2019	<0.1 (U)	<0.1 (U)	<0.1 (U)	<0.1 (U)	<0.1 (U)	<0.1 (U)			
4/29/2020	<0.1 (U)	<0.1 (U)	<0.1 (U)	<0.1 (U)	<0.1 (U)	<0.1 (U)			
7/7/2020							<0.1 (U)		
8/7/2020							<0.1 (U)		
2/22/2021							<0.15 (U)	<0.15 (U)	
4/5/2021	<0.15	<0.15 (U)	<0.15 (U)	<0.15 (U)	<0.15 (U)	<0.15 (U)	<0.15 (U)	<0.15 (U)	
6/17/2021							<0.15		<0.15 (U)
7/22/2021							<0.15 (U)		
10/5/2021									
10/18/2021			<0.15 (U)	<0.15 (U)	<0.15 (U)	<0.15 (U)		<0.15 (U)	
10/19/2021	<0.15 (U)	<0.15 (U)					<0.15 (U)		<0.15 (U)
12/30/2021									
2/21/2022									
4/18/2022	<0.11 (U)	<0.11 (U)	<0.11 (U)	<0.11 (U)	<0.11 (U)			<0.11 (U)	
4/19/2022						<0.11 (U)	<0.11 (U)		<0.11 (U)

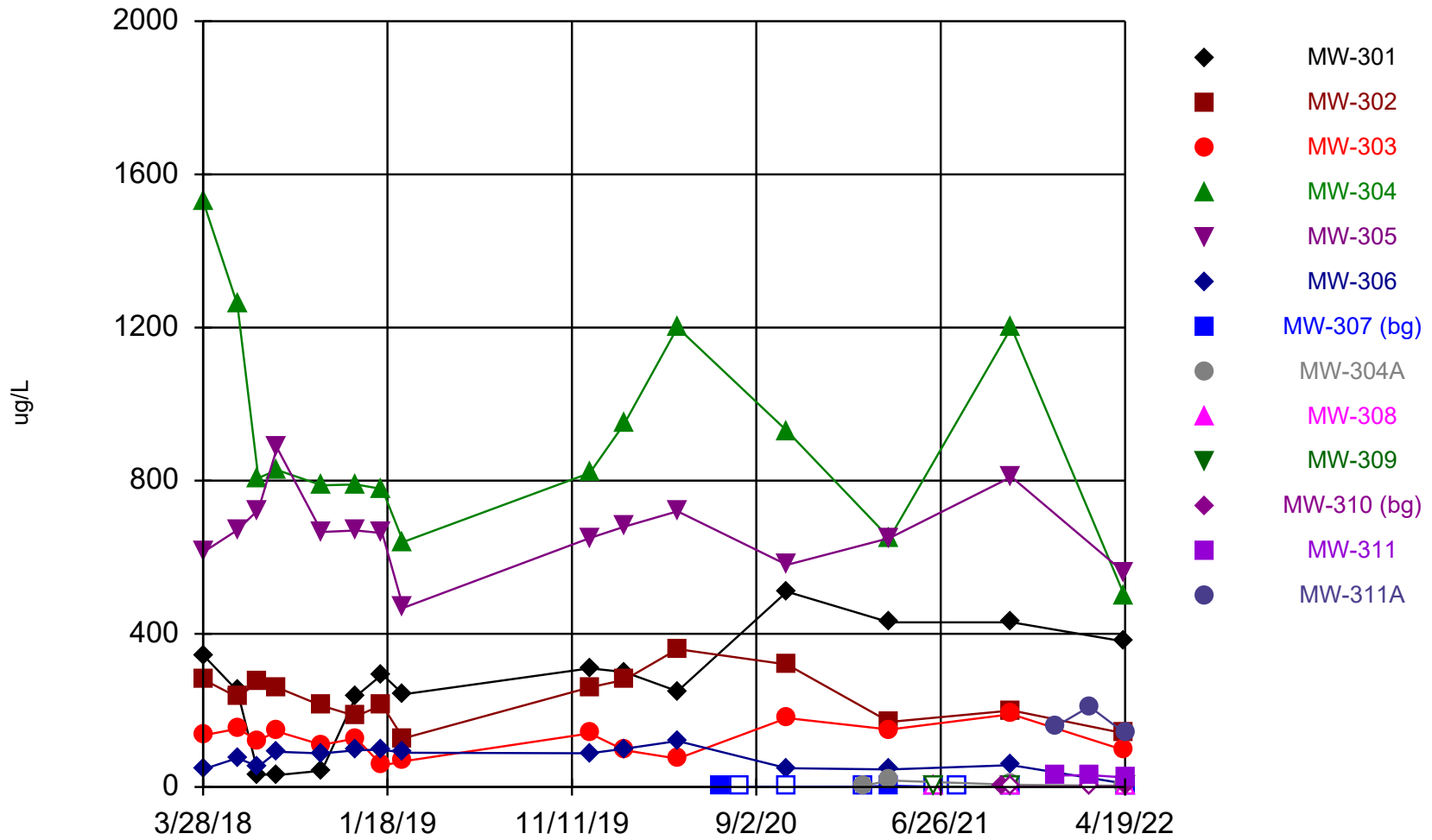
Time Series

Constituent: Mercury (ug/L) Analysis Run 6/26/2022 11:32 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
4/29/2020				
7/7/2020				
8/7/2020				
2/22/2021				
4/5/2021				
6/17/2021	<0.15 (U)			
7/22/2021				
10/5/2021		<0.15 (U)		
10/18/2021				
10/19/2021	<0.15 (U)	<0.15 (U)		
12/30/2021			<0.15 (U)	<0.15 (U)
2/21/2022		<0.11 (U)	<0.11 (U)	<0.11 (U)
4/18/2022				
4/19/2022	<0.11 (U)	<0.11 (U)	<0.11 (U)	<0.11 (U)

Molybdenum



Time Series Analysis Run 6/26/2022 11:31 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Molybdenum (ug/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	345	281	135	1530	613	46.4			
5/22/2018	251	235	152	1260	671	75.3			
6/25/2018	33.1	274	122	807	724	53.3			
7/25/2018	31.1	260	145	828	886	92			
10/5/2018	42.8	212	110	788	666	87.6			
11/29/2018	237	185	127	790	670	96.1			
1/10/2019	294	214	55.9	778	663	97.6			
2/13/2019	242	127	67.1	640	468	89.5			
12/10/2019	310	260	140	820	650	88			
2/4/2020	300	280	96	950	680	100			
4/29/2020	250	360	74	1200	720	120			
7/7/2020							2.5		
8/7/2020							<1.1 (U)		
10/22/2020	510	320	180	930	580	49	<1.1 (U)		
2/22/2021							<1.3 (U)	3.1	
4/5/2021	430	170	150	650	650	46	3.4	17	
6/17/2021							<1.3 (U)		<1.3 (U)
7/22/2021							<1.3 (U)		
10/5/2021									
10/18/2021			190	1200	810	57		6	
10/19/2021	430	200					<1.3 (U)		<1.3 (U)
12/30/2021									
2/21/2022									
4/18/2022	380	140	96	500	560			3.2	
4/19/2022						8.8	<1.2 (U)		<1.2 (U)

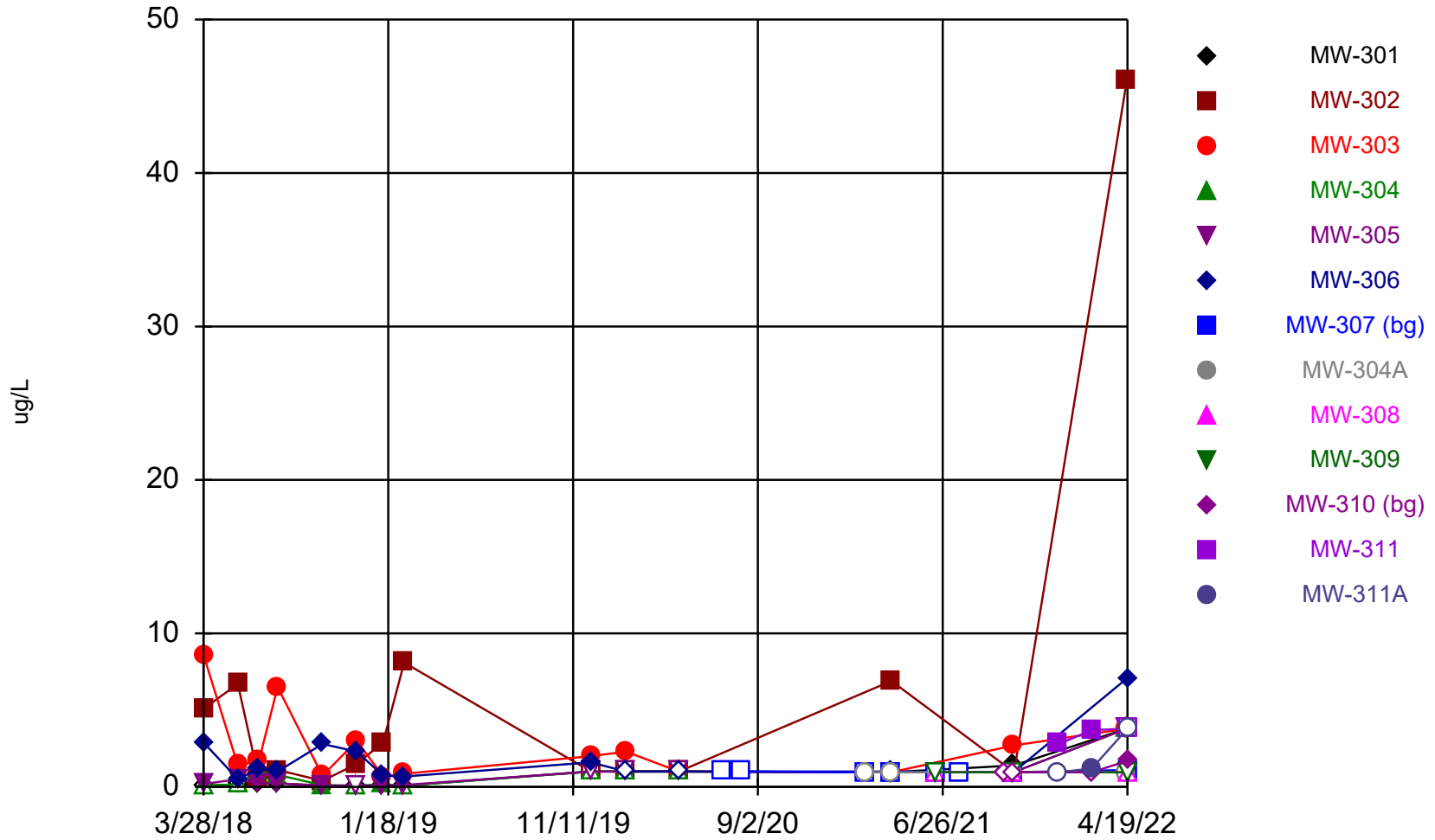
Time Series

Constituent: Molybdenum (ug/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	<1.3 (U)			
7/22/2021				
10/5/2021		2		
10/18/2021				
10/19/2021	<1.3 (U)	<1.3 (U)		
12/30/2021			30	160
2/21/2022		<1.2 (U)	31	210
4/18/2022				
4/19/2022	<1.2 (U)	1.5 (J)	25	140

Selenium



Time Series Analysis Run 6/26/2022 11:31 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Selenium (ug/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	<0.086 (U)	5.1	8.6	<0.086 (U)	0.19 (J)	2.9			
5/22/2018	<0.16 (U)	6.7	1.4	<0.16 (U)	0.5 (J)	0.51 (J)			
6/25/2018	<0.16 (U)	0.5 (J)	1.7	1 (J)	0.23 (J)	1.2			
7/25/2018	0.23 (J)	1.1	6.5	0.79 (J)	0.23 (J)	1			
10/5/2018	0.086 (J)	0.4 (J)	0.72 (J)	0.11 (J)	0.088 (J)	2.8			
11/29/2018	<0.085 (U)	1.5	3	<0.085 (U)	<0.085 (U)	2.3			
1/10/2019	0.12 (J)	2.9	0.69 (J)	0.14 (J)	0.094 (J)	0.73 (J)			
2/13/2019	<0.085 (U)	8.1	0.86 (J)	<0.085 (U)	0.13 (J)	0.68 (J)			
12/10/2019	<1 (U)	<1 (U)	2 (J)	<1 (U)	<1 (U)	1.6 (J)			
2/4/2020	<1 (U)	<1 (U)	2.3 (J)	<1 (U)	<1 (U)	<1 (U)			
4/29/2020	<1 (U)	<1 (U)	<1 (U)	<1 (U)	<1 (U)	<1 (U)			
7/7/2020							<1 (U)		
8/7/2020							<1 (U)		
2/22/2021							<0.96 (U)	<0.96 (U)	
4/5/2021	<0.96 (U)	6.9	<0.96 (U)	<0.96 (U)	<0.96 (U)	1 (J)	<0.96 (U)	<0.96 (U)	
6/17/2021							<0.96 (U)		<0.96 (U)
7/22/2021							<0.96 (U)		
10/5/2021									
10/18/2021			2.7 (J)	<0.96 (U)	<0.96 (U)	<0.96 (U)		<0.96 (U)	
10/19/2021	1.4 (J)	<0.96 (U)					<0.96 (U)		<0.96 (U)
12/30/2021									
2/21/2022									
4/18/2022	<3.8 (U)	46	<3.8 (U)	<3.8 (U)	<3.8 (U)			<0.96 (U)	
4/19/2022						7.1 (J)	1.1 (J)		<0.96 (U)

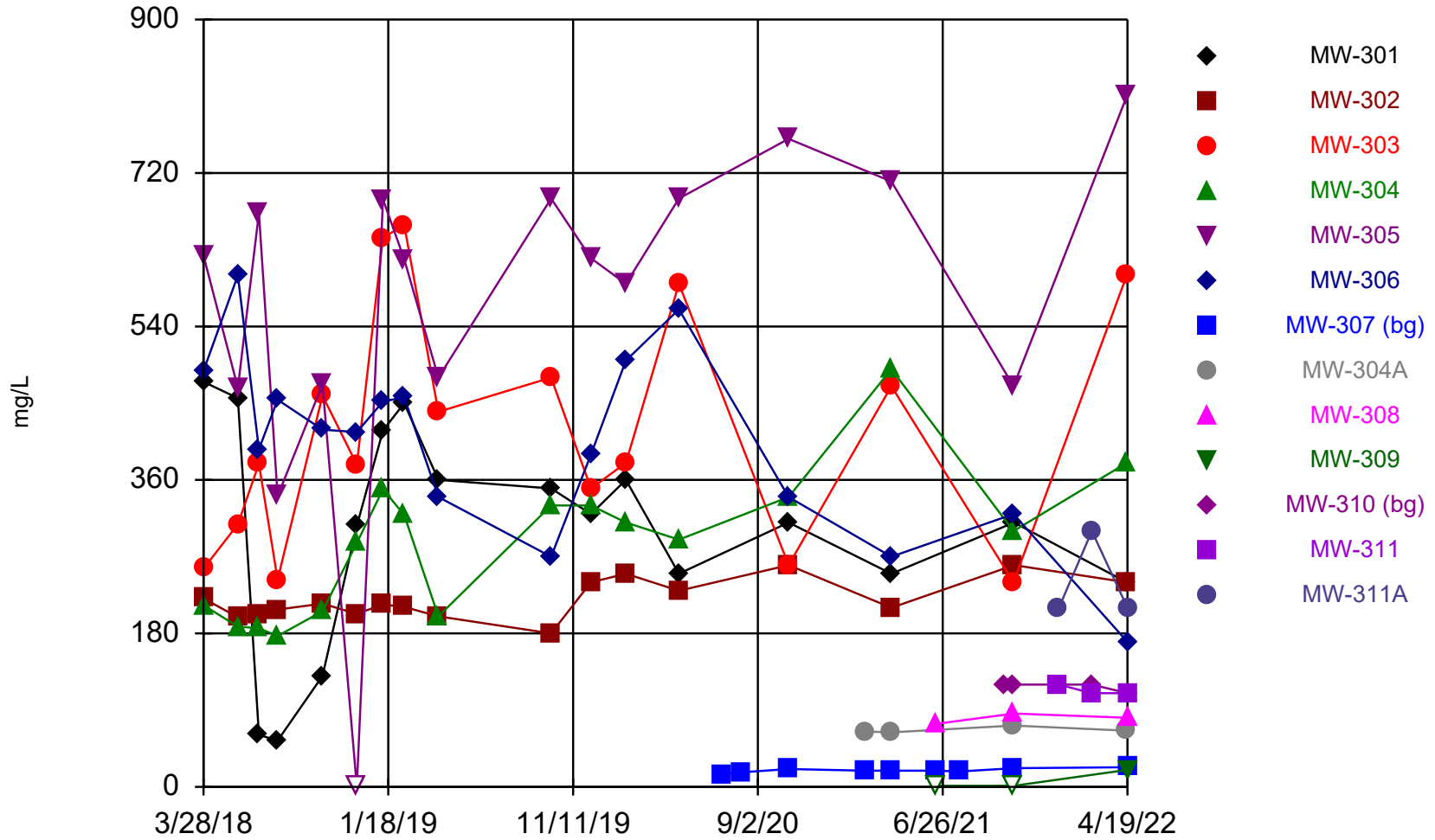
Time Series

Constituent: Selenium (ug/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
2/22/2021				
4/5/2021				
6/17/2021	<0.96			
7/22/2021				
10/5/2021		<0.96 (U)		
10/18/2021				
10/19/2021	<0.96 (U)	<0.96 (U)		
12/30/2021			2.8 (J)	<0.96 (U)
2/21/2022		<0.96 (U)	3.7 (J)	1.2 (J)
4/18/2022				
4/19/2022	<0.96 (U)	1.7 (J)	<3.8 (U)	<3.8 (U)

Sulfate



Time Series Analysis Run 6/26/2022 11:31 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Sulfate (mg/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	475	221	256	213	623	488			
5/22/2018	456	199	308	188	468	600			
6/25/2018	61	201	379	186	673	396			
7/25/2018	54.3	208	243	177	341	454			
10/5/2018	130	215	459	206	472	419			
11/29/2018	306	203	378	286	<0.24 (U)	416			
1/10/2019	418	214	644	349	689	452			
2/13/2019	450	211	659	319	619	457			
4/9/2019	360	200	440	200	480	340			
10/7/2019	350	180	480	330	690	270			
12/10/2019	320	240	350	330	620	390			
2/4/2020	360	250	380	310	590	500			
4/29/2020	250	230	590	290	690	560			
7/7/2020							15		
8/7/2020							17		
10/22/2020	310	260	260	340	760	340	21		
2/22/2021							19	65	
4/5/2021	250	210	470	490	710	270	19	64	
6/17/2021							19		74
7/22/2021							18		
10/5/2021									
10/18/2021			240	300	470	320		72	
10/19/2021	310	260					22		86
12/30/2021									
2/21/2022									
4/18/2022	240	240	600	380	810			66	
4/19/2022						170	23		81

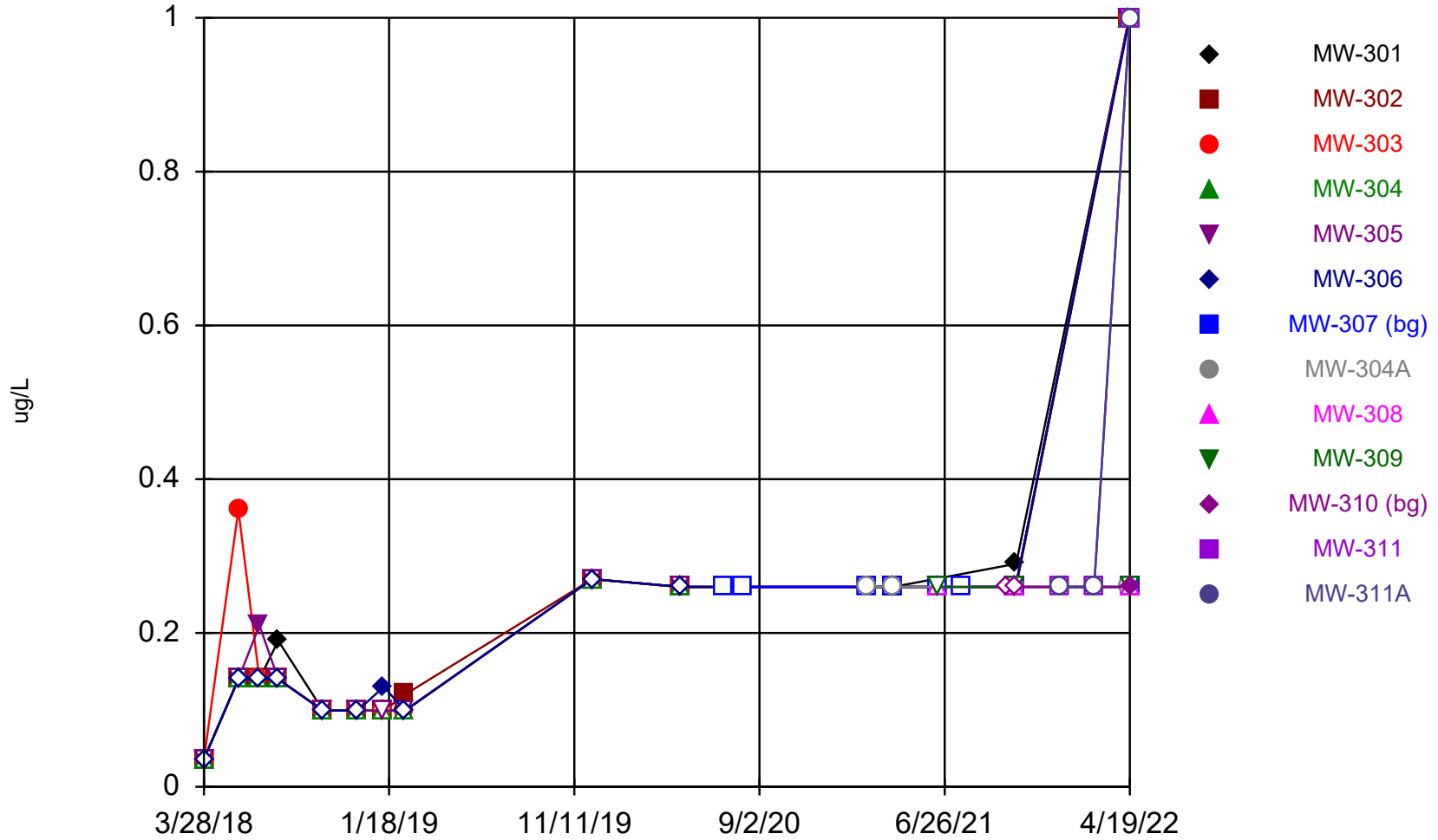
Time Series

Constituent: Sulfate (mg/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
4/9/2019				
10/7/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	<2.5 (U)			
7/22/2021				
10/5/2021		120		
10/18/2021				
10/19/2021	<2.5 (U)	120		
12/30/2021			120	210
2/21/2022		120	110	300
4/18/2022				
4/19/2022	20	110	110	210

Thallium



Time Series Analysis Run 6/26/2022 11:31 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Thallium (ug/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	<0.036 (U)	<0.036 (U)	<0.036 (U)	<0.036 (U)	<0.036 (U)	<0.036 (U)			
5/22/2018	<0.14 (U)	<0.14 (U)	0.36 (J)	<0.14 (U)	<0.14 (U)	<0.14 (U)			
6/25/2018	<0.14 (U)	<0.14 (U)	<0.14 (U)	<0.14 (U)	0.21 (J)	<0.14 (U)			
7/25/2018	0.19 (J)	<0.14 (U)	<0.14 (U)	<0.14 (U)	<0.14 (U)	<0.14 (U)			
10/5/2018	<0.099 (U)	<0.099 (U)	<0.099 (U)	<0.099 (U)	<0.099 (U)	<0.099 (U)			
11/29/2018	<0.099 (U)	<0.099 (U)	<0.099 (U)	<0.099 (U)	<0.099 (U)	<0.099 (U)			
1/10/2019	<0.099 (U)	<0.099 (U)	<0.099 (U)	<0.099 (U)	<0.099 (U)	0.13 (J)			
2/13/2019	<0.099 (U)	0.12 (J)	<0.099 (U)	<0.099 (U)	<0.099 (U)	<0.099 (U)			
12/10/2019	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)			
4/29/2020	<0.26 (U)	<0.26 (U)	<0.26 (U)	<0.26 (U)	<0.26 (U)	<0.26 (U)			
7/7/2020							<0.26 (U)		
8/7/2020							<0.26 (U)		
2/22/2021							<0.26 (U)	<0.26 (U)	
4/5/2021	<0.26 (U)	<0.26 (U)	<0.26 (U)	<0.26 (U)	<0.26 (U)	<0.26 (U)	<0.26 (U)	<0.26 (U)	
6/17/2021							<0.26 (U)		<0.26 (U)
7/22/2021							<0.26 (U)		
10/5/2021									
10/18/2021			<0.26 (U)	<0.26 (U)	<0.26 (U)	<0.26 (U)		<0.26 (U)	
10/19/2021	0.29 (J)	<0.26 (U)					<0.26 (U)		<0.26 (U)
12/30/2021									
2/21/2022									
4/18/2022	<1 (U)	<1 (U)	<1 (U)	<1 (U)	<1 (U)			<0.26 (U)	
4/19/2022						<1 (U)	<0.26 (U)		<0.26 (U)

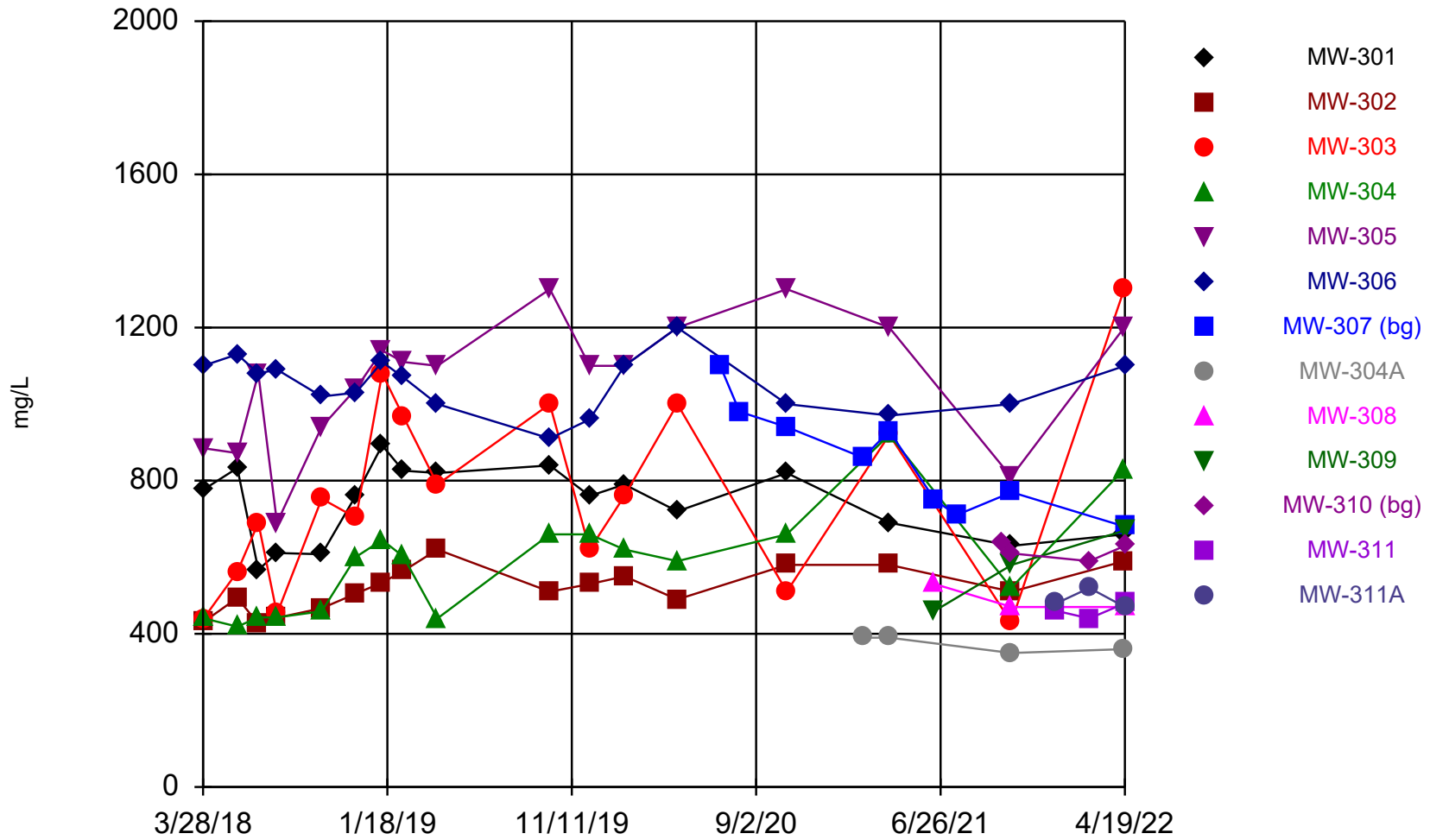
Time Series

Constituent: Thallium (ug/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
4/29/2020				
7/7/2020				
8/7/2020				
2/22/2021				
4/5/2021				
6/17/2021	<0.26 (U)			
7/22/2021				
10/5/2021		<0.26 (U)		
10/18/2021				
10/19/2021	<0.26 (U)	<0.26 (U)		
12/30/2021			<0.26 (U)	<0.26 (U)
2/21/2022		<0.26 (U)	<0.26 (U)	<0.26 (U)
4/18/2022				
4/19/2022	<0.26 (U)	0.26 (J)	<1 (U)	<1 (U)

Total Dissolved Solids



Time Series Analysis Run 6/26/2022 11:31 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

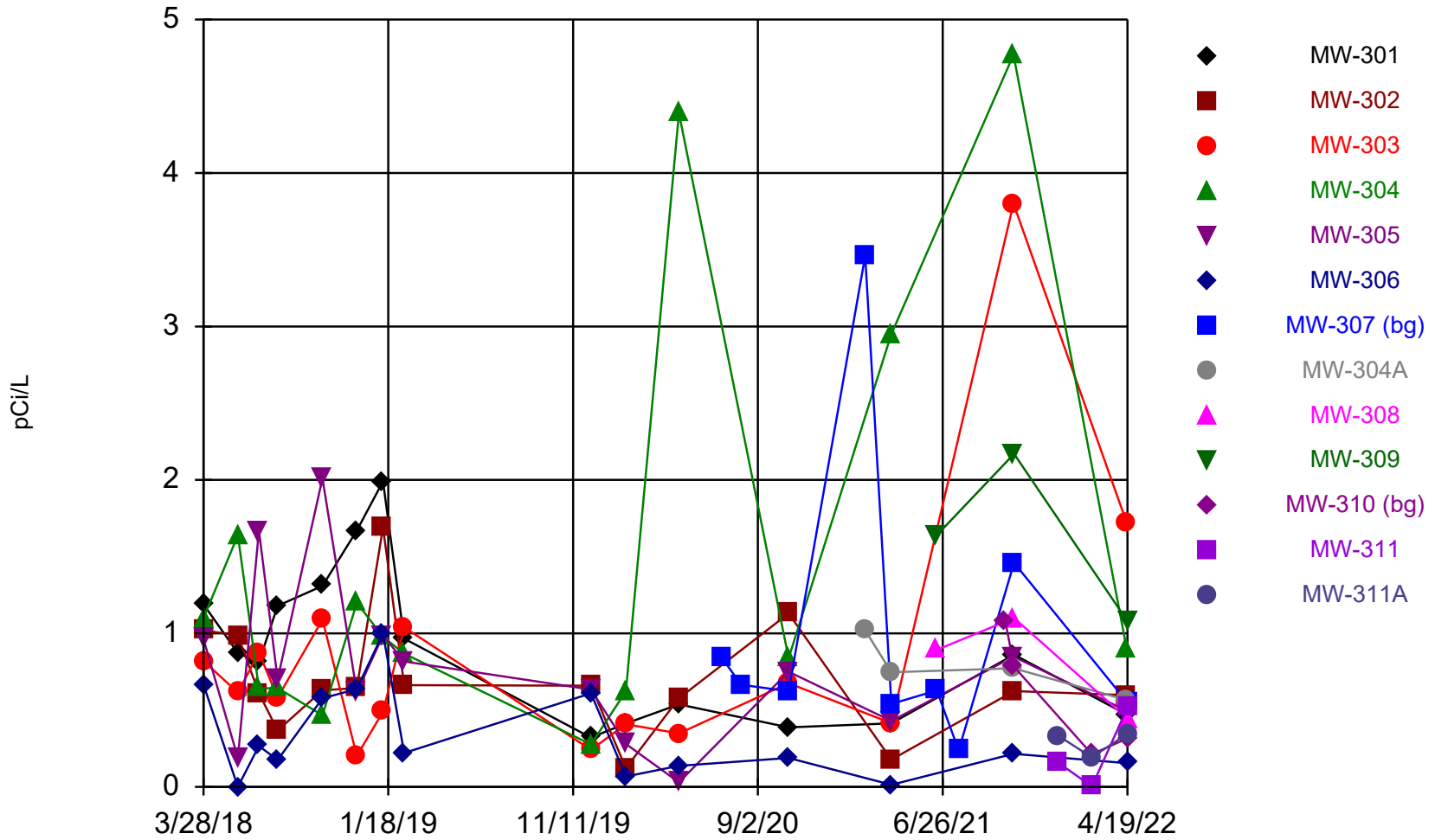
	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	776	430	438	441	885	1100			
5/22/2018	833	494	562	419	872	1130			
6/25/2018	567	426	690	443	1080	1080			
7/25/2018	611	442	452	443	690	1090			
10/5/2018	608	467	753	459	941	1020			
11/29/2018	762	505	703	601	1040	1030			
1/10/2019	892	534	1080	645	1140	1110			
2/13/2019	826	564	968	602	1110	1070			
4/9/2019	820	620	790	440	1100	1000			
10/7/2019	840	510	1000	660	1300	910			
12/10/2019	760	530	620	660	1100	960			
2/4/2020	790	550	760	620	1100	1100			
4/29/2020	720	490	1000	590	1200	1200			
7/7/2020							1100		
8/7/2020							980		
10/22/2020	820	580	510	660	1300	1000	940		
2/22/2021							860	390	
4/5/2021	690	580	920	920	1200	970	930	390	
6/17/2021							750		530
7/22/2021							710		
10/5/2021									
10/18/2021			430	520	810	1000		350	
10/19/2021	630	510					770		470
12/30/2021									
2/21/2022									
4/18/2022	660	590	1300	830	1200			360	
4/19/2022						1100	680		470

Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/26/2022 11:33 AM
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
4/9/2019				
10/7/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	460			
7/22/2021				
10/5/2021		640		
10/18/2021				
10/19/2021	580	610		
12/30/2021			460	480
2/21/2022		590	440	520
4/18/2022				
4/19/2022	670	630	480	470

Total Radium



Time Series Analysis Run 6/26/2022 11:31 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Time Series

Constituent: Total Radium (pCi/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A	MW-308
3/28/2018	1.19	1.02	0.821	1.1	0.962	0.666			
5/22/2018	0.872	0.987	0.614	1.64	0.189	0			
6/25/2018	0.813	0.611	0.876	0.641	1.67	0.267			
7/25/2018	1.18	0.367	0.581	0.645	0.702	0.175			
10/5/2018	1.31	0.63	1.09	0.466	2.01	0.577			
11/29/2018	1.67	0.644	0.202	1.2	0.616	0.638			
1/10/2019	1.99	1.69	0.49	0.978	0.987	1			
2/13/2019	0.966	0.663	1.04	0.869	0.817	0.221			
12/10/2019	0.321	0.659	0.242	0.277	0.634	0.61			
2/4/2020	0.413	0.122	0.409	0.622	0.28	0.068			
4/29/2020	0.538	0.577	0.348	4.39	0.0301	0.137			
7/7/2020							0.841		
8/7/2020							0.666		
10/22/2020	0.388	1.13	0.676	0.839	0.75	0.189	0.623		
2/22/2021							3.46	1.02	
4/5/2021	0.414	0.178	0.415	2.95	0.429	0.0138	0.54	0.747	
6/17/2021							0.629		0.893
7/22/2021							0.238		
10/5/2021									
10/18/2021			3.8	4.77	0.849	0.216		0.773	
10/19/2021	0.861	0.624					1.46		1.1
12/30/2021									
2/21/2022									
4/18/2022	0.472	0.598	1.72	0.898	0.496			0.566	
4/19/2022						0.154	0.549		0.444

Time Series

Constituent: Total Radium (pCi/L) Analysis Run 6/26/2022 11:33 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-309	MW-310 (bg)	MW-311	MW-311A
3/28/2018				
5/22/2018				
6/25/2018				
7/25/2018				
10/5/2018				
11/29/2018				
1/10/2019				
2/13/2019				
12/10/2019				
2/4/2020				
4/29/2020				
7/7/2020				
8/7/2020				
10/22/2020				
2/22/2021				
4/5/2021				
6/17/2021	1.64			
7/22/2021				
10/5/2021		1.08		
10/18/2021				
10/19/2021	2.17	0.783		
12/30/2021			0.155	0.33
2/21/2022		0.213	0.00283	0.193
4/18/2022				
4/19/2022	1.08	0.317	0.517	0.346

Attachment 2

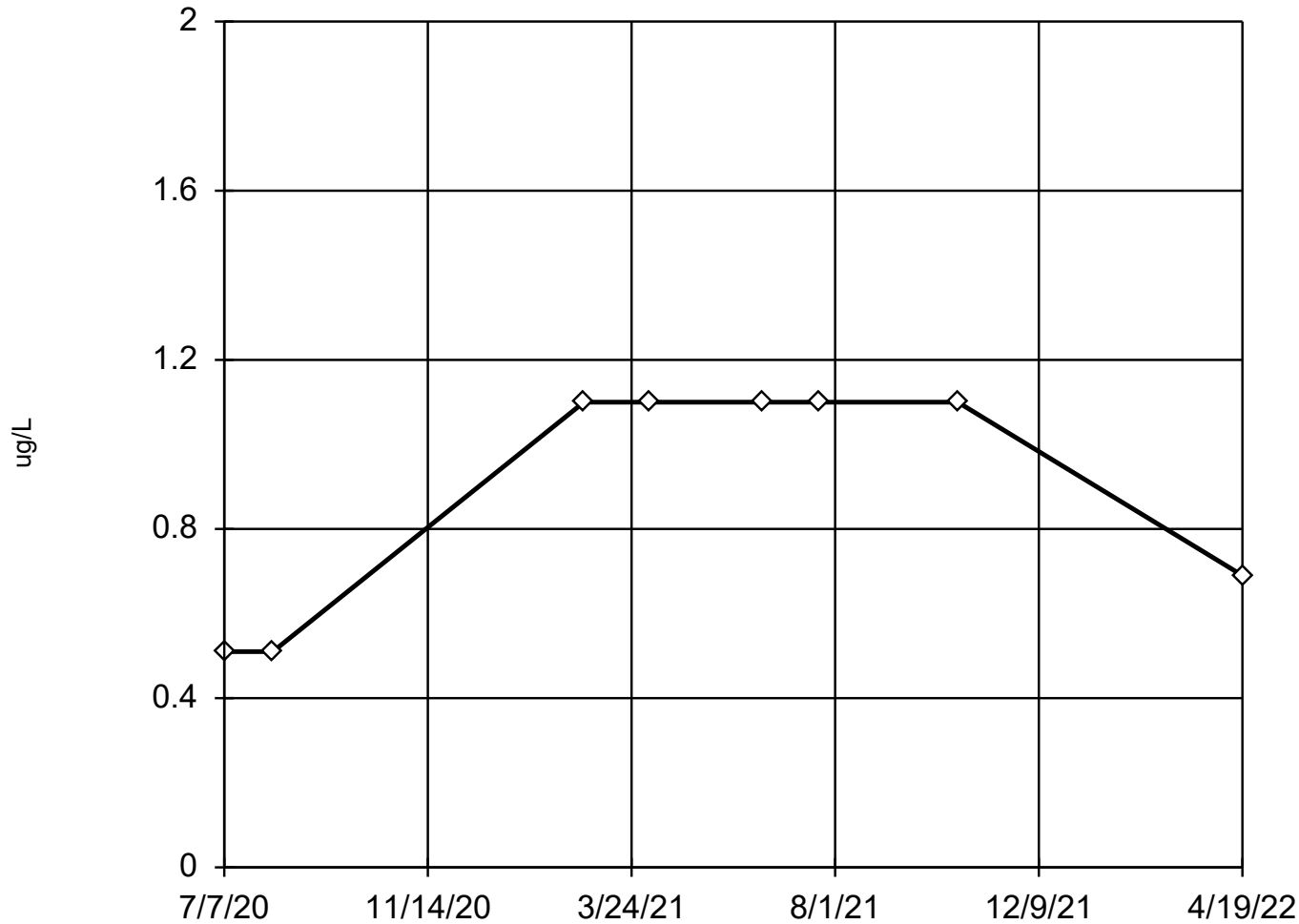
Outlier Analysis

Outlier Analysis

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020 Printed 6/26/2022, 11:35 AM

<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Antimony (ug/L)	MW-307 (bg)	No	n/a	n/a	NP (nrm)	NaN	8	0.9013	0.2799	unknown	ShapiroWilk
Arsenic (ug/L)	MW-307 (bg)	Yes	1.7	7/7/2020	Dixon`s	0.05	9	1.017	0.2808	normal	ShapiroWilk
Barium (ug/L)	MW-307 (bg)	No	n/a	n/a	NP (nrm)	NaN	9	313.3	15.81	unknown	ShapiroWilk
Beryllium (ug/L)	MW-307 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	8	0.27	0	unknown	ShapiroWilk
Boron (ug/L)	MW-307 (bg)	No	n/a	n/a	NP (nrm)	NaN	9	112.2	85.2	unknown	ShapiroWilk
Cadmium (ug/L)	MW-307 (bg)	No	n/a	n/a	EPA 1989	0.05	9	0.1129	0.04172	ln(x)	ShapiroWilk
Calcium (mg/L)	MW-307 (bg)	No	n/a	n/a	EPA 1989	0.05	9	226.7	26.46	normal	ShapiroWilk
Chloride (mg/L)	MW-307 (bg)	No	n/a	n/a	EPA 1989	0.05	9	63.33	11.21	normal	ShapiroWilk
Chromium (ug/L)	MW-307 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	8	1.1	0	unknown	ShapiroWilk
Cobalt (ug/L)	MW-307 (bg)	No	n/a	n/a	EPA 1989	0.05	9	3.5	1.564	normal	ShapiroWilk
Field pH (Std. Units)	MW-307 (bg)	No	n/a	n/a	NP (nrm)	NaN	9	6.821	0.4372	unknown	ShapiroWilk
Fluoride (mg/L)	MW-307 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	9	0.2567	0.02784	unknown	ShapiroWilk
Lead (ug/L)	MW-307 (bg)	No	n/a	n/a	NP (nrm)	NaN	9	0.1811	0.05183	unknown	ShapiroWilk
Lithium (ug/L)	MW-307 (bg)	No	n/a	n/a	NP (nrm)	NaN	9	3.211	1.088	unknown	ShapiroWilk
Mercury (ug/L)	MW-307 (bg)	No	n/a	n/a	NP (nrm)	NaN	8	0.1325	0.02435	unknown	ShapiroWilk
Molybdenum (ug/L)	MW-307 (bg)	No	n/a	n/a	NP (nrm)	NaN	9	1.611	0.796	unknown	ShapiroWilk
Selenium (ug/L)	MW-307 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	8	0.9875	0.04892	unknown	ShapiroWilk
Sulfate (mg/L)	MW-307 (bg)	No	n/a	n/a	EPA 1989	0.05	9	19.22	2.489	normal	ShapiroWilk
Thallium (ug/L)	MW-307 (bg)	n/a	n/a	n/a	NP (nrm)	NaN	8	0.26	0	unknown	ShapiroWilk
Total Dissolved Solids (mg/L)	MW-307 (bg)	No	n/a	n/a	EPA 1989	0.05	9	857.8	140.7	normal	ShapiroWilk
Total Radium (pCi/L)	MW-307 (bg)	No	n/a	n/a	EPA 1989	0.05	9	1.001	0.9795	ln(x)	ShapiroWilk

Tukey's Outlier Screening MW-307 (bg)



n = 8

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 7.014, low cutoff = 0.09304, based on IQR multiplier of 3.

Constituent: Antimony Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

Constituent: Antimony (ug/L) Analysis Run 6/26/2022 11:35 AM

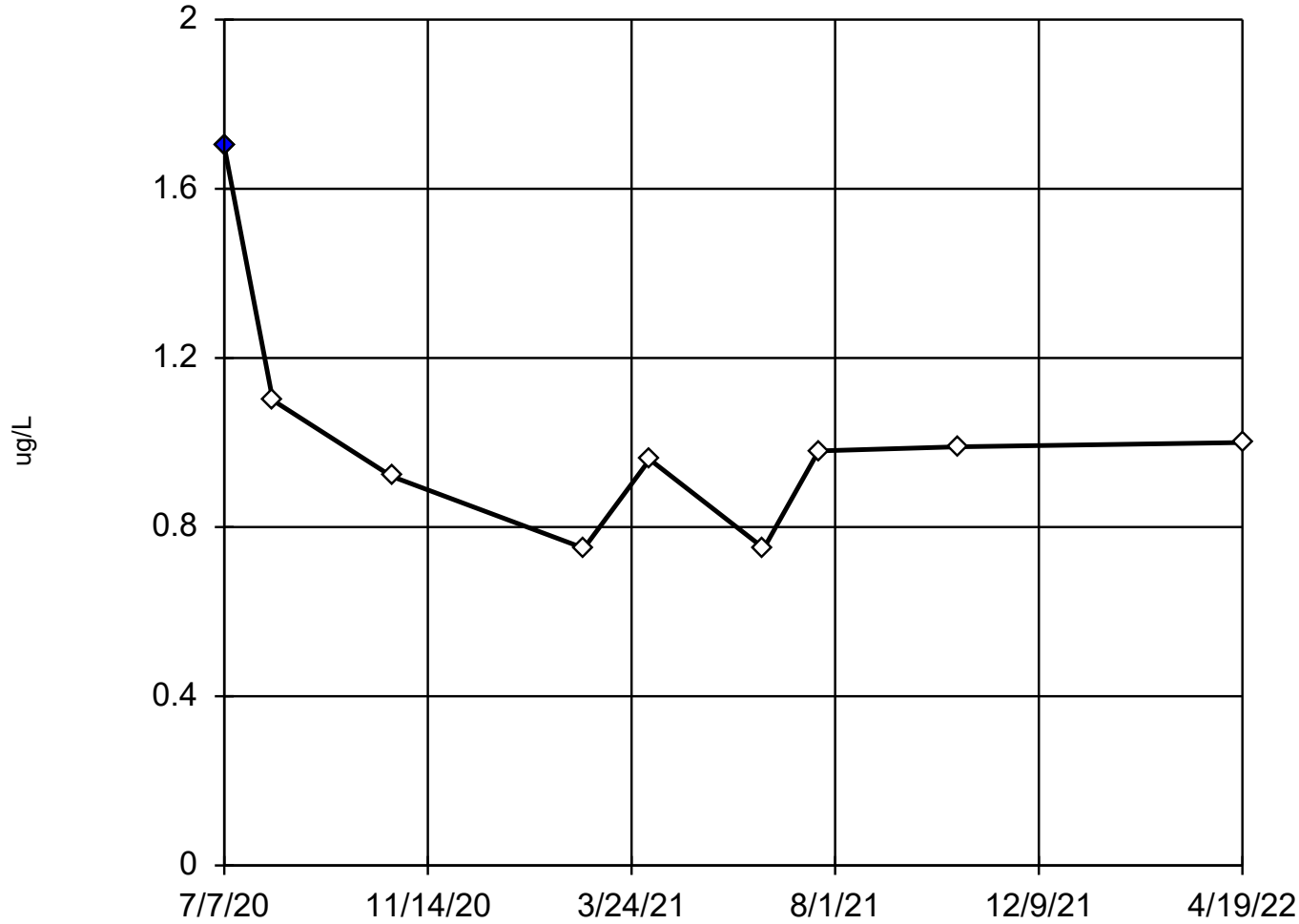
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	<0.51 (U)
8/7/2020	<0.51 (U)
2/22/2021	<1.1 (U)
4/5/2021	<1.1 (U)
6/17/2021	<1.1 (U)
7/22/2021	<1.1 (U)
10/19/2021	<1.1 (U)
4/19/2022	<0.69 (U)

Dixon's Outlier Test

MW-307 (bg)



n = 9

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 1.017.
Std. Dev. = 0.2808.
1.7 (J): c = 0.6316
tab1 = 0.512.
Alpha = 0.05.

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8758
Critical = 0.851
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Arsenic Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Dixon's Outlier Test

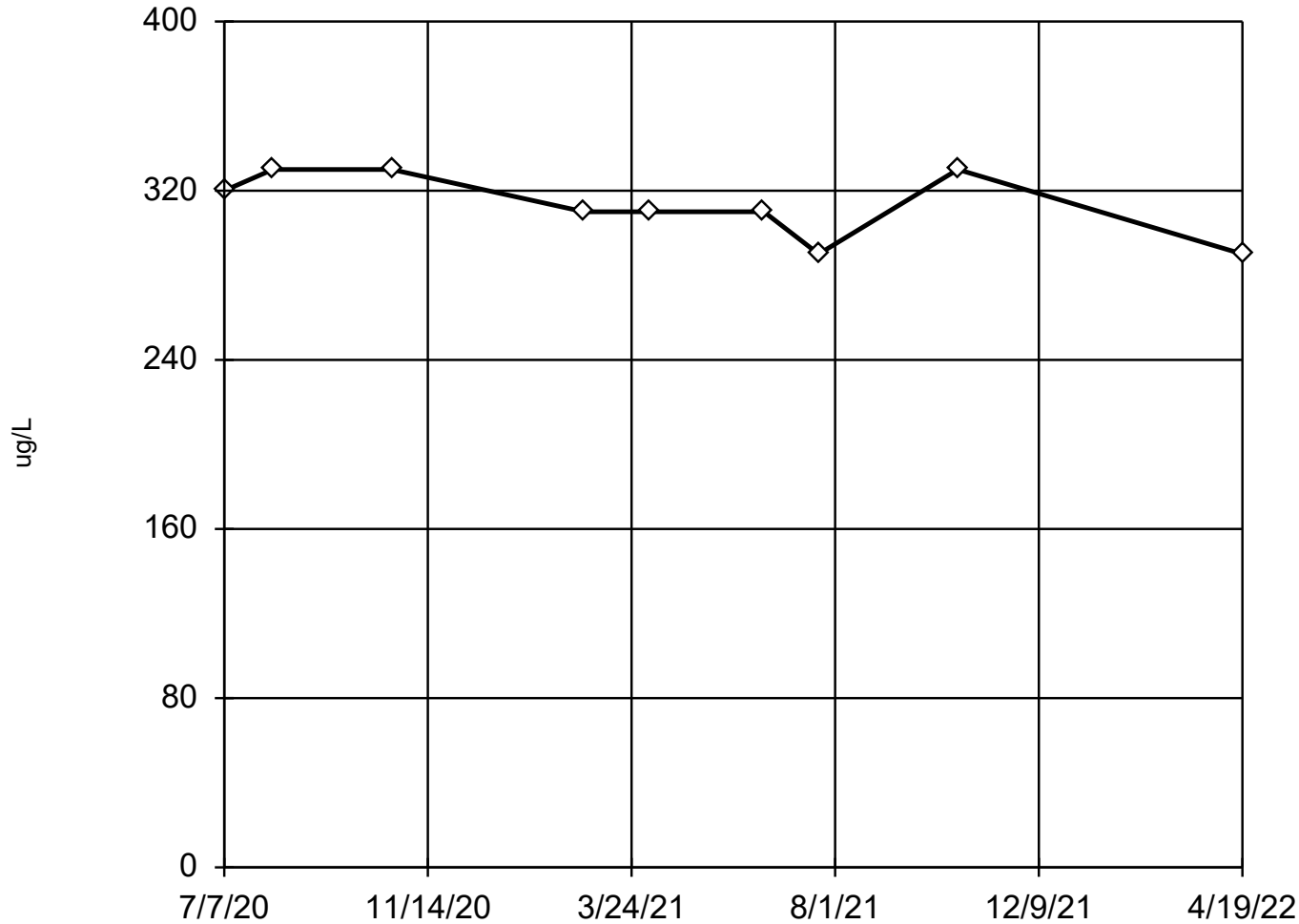
Constituent: Arsenic (ug/L) Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)
7/7/2020	1.7 (JO)
8/7/2020	1.1 (J)
10/22/2020	0.92 (J)
2/22/2021	<0.75 (U)
4/5/2021	0.96 (J)
6/17/2021	<0.75 (U)
7/22/2021	0.98 (J)
10/19/2021	0.99 (J)
4/19/2022	1 (J)

Tukey's Outlier Screening

MW-307 (bg)



n = 9

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were x^6 transformed to achieve best W statistic (graph shown in original units).

High cutoff = 378.5, low cutoff = -311.3, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

Constituent: Barium (ug/L) Analysis Run 6/26/2022 11:35 AM

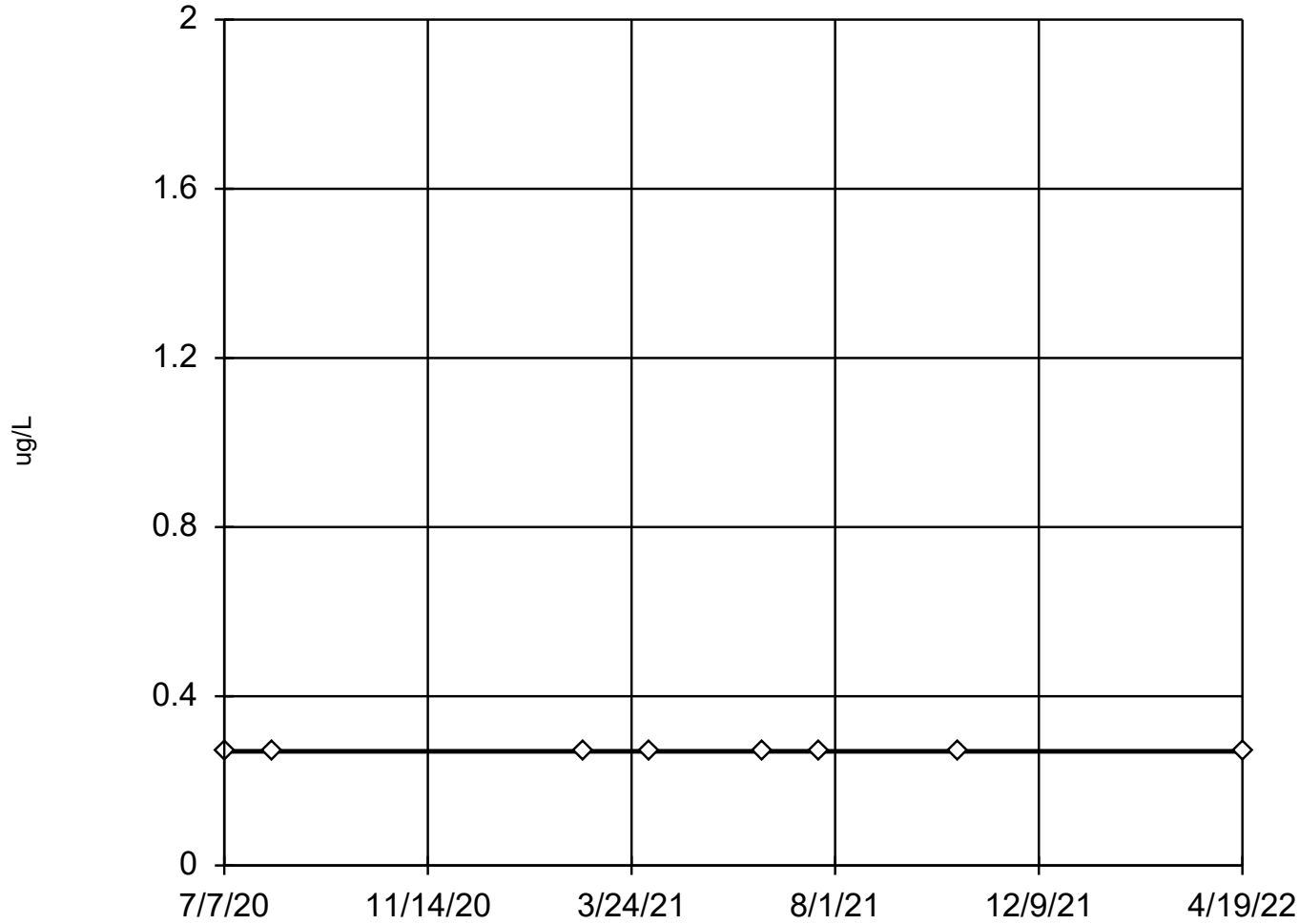
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	320
8/7/2020	330
10/22/2020	330
2/22/2021	310
4/5/2021	310
6/17/2021	310
7/22/2021	290
10/19/2021	330
4/19/2022	290

Tukey's Outlier Screening

MW-307 (bg)



n = 8

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Beryllium Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

Constituent: Beryllium (ug/L) Analysis Run 6/26/2022 11:35 AM

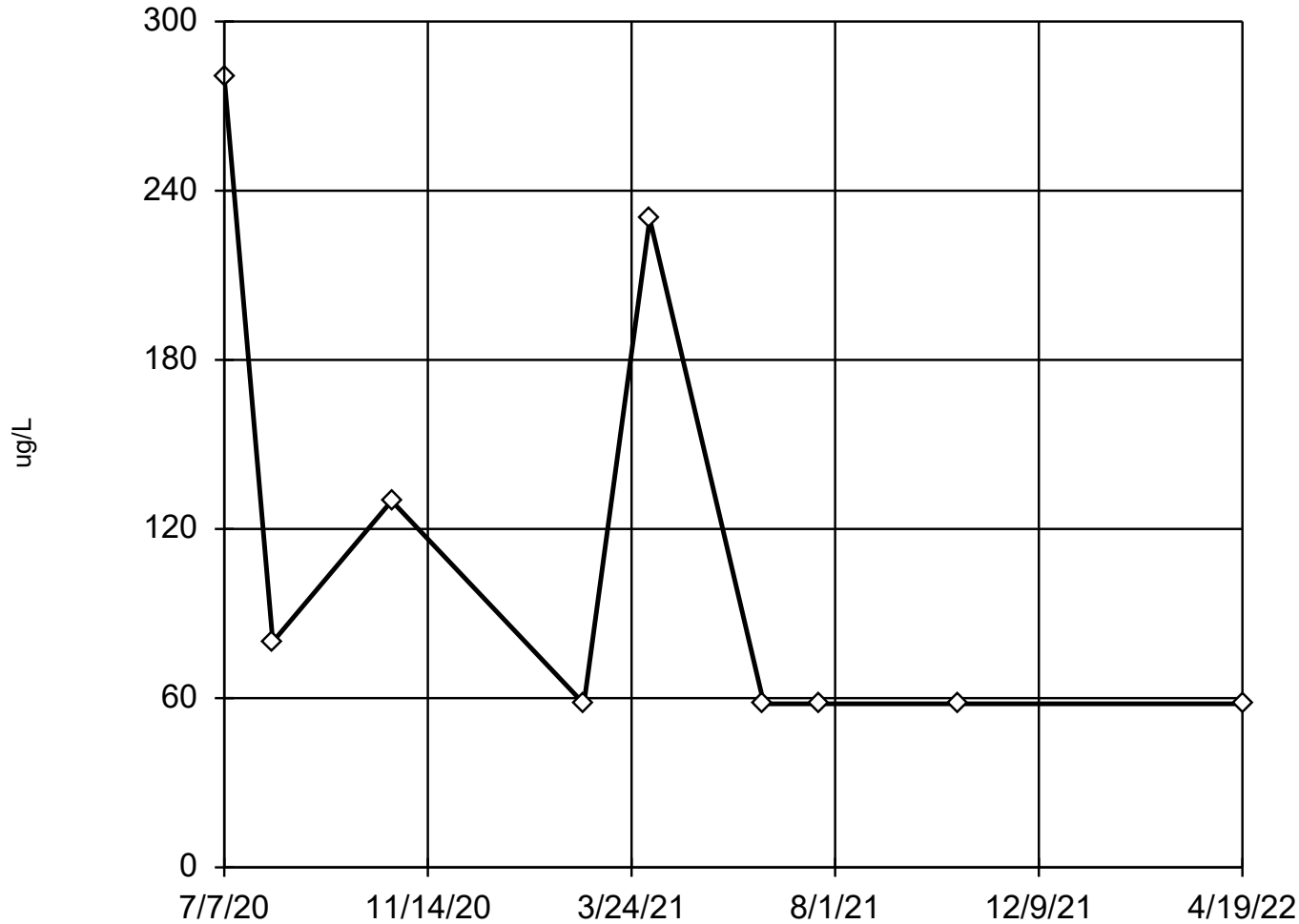
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	<0.27 (U)
8/7/2020	<0.27 (U)
2/22/2021	<0.27 (U)
4/5/2021	<0.27 (U)
6/17/2021	<0.27 (U)
7/22/2021	<0.27 (U)
10/19/2021	<0.27 (U)
4/19/2022	<0.27 (U)

Tukey's Outlier Screening

MW-307 (bg)



n = 9

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 4582, low cutoff = 2.189, based on IQR multiplier of 3.

Constituent: Boron Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

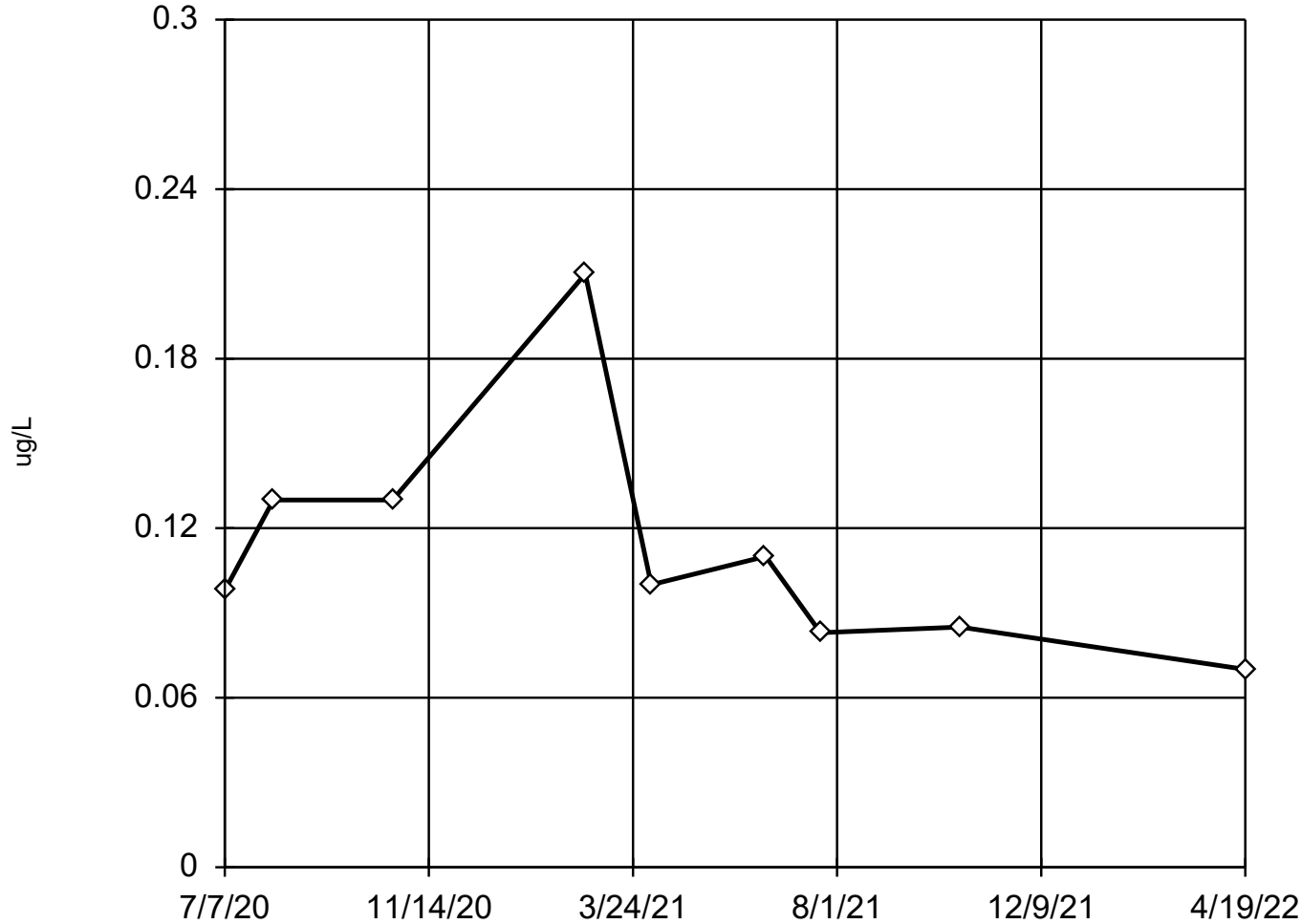
Constituent: Boron (ug/L) Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)
7/7/2020	280
8/7/2020	<80 (U)
10/22/2020	130
2/22/2021	<58 (U)
4/5/2021	<230 (U)
6/17/2021	<58 (U)
7/22/2021	<58 (U)
10/19/2021	<58 (U)
4/19/2022	<58 (U)

EPA Screening (suspected outliers for Dixon's Test)

MW-307 (bg)



n = 9

Dixon's will not be run.
No suspect values identified
or unable to establish
suspect values.
Mean 0.1129, std. dev.
0.04172, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9362
Critical = 0.859 (after
natural log transforma-
tion)
The distribution was found
to be log-normal.

Constituent: Cadmium Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

EPA 1989 Outlier Screening

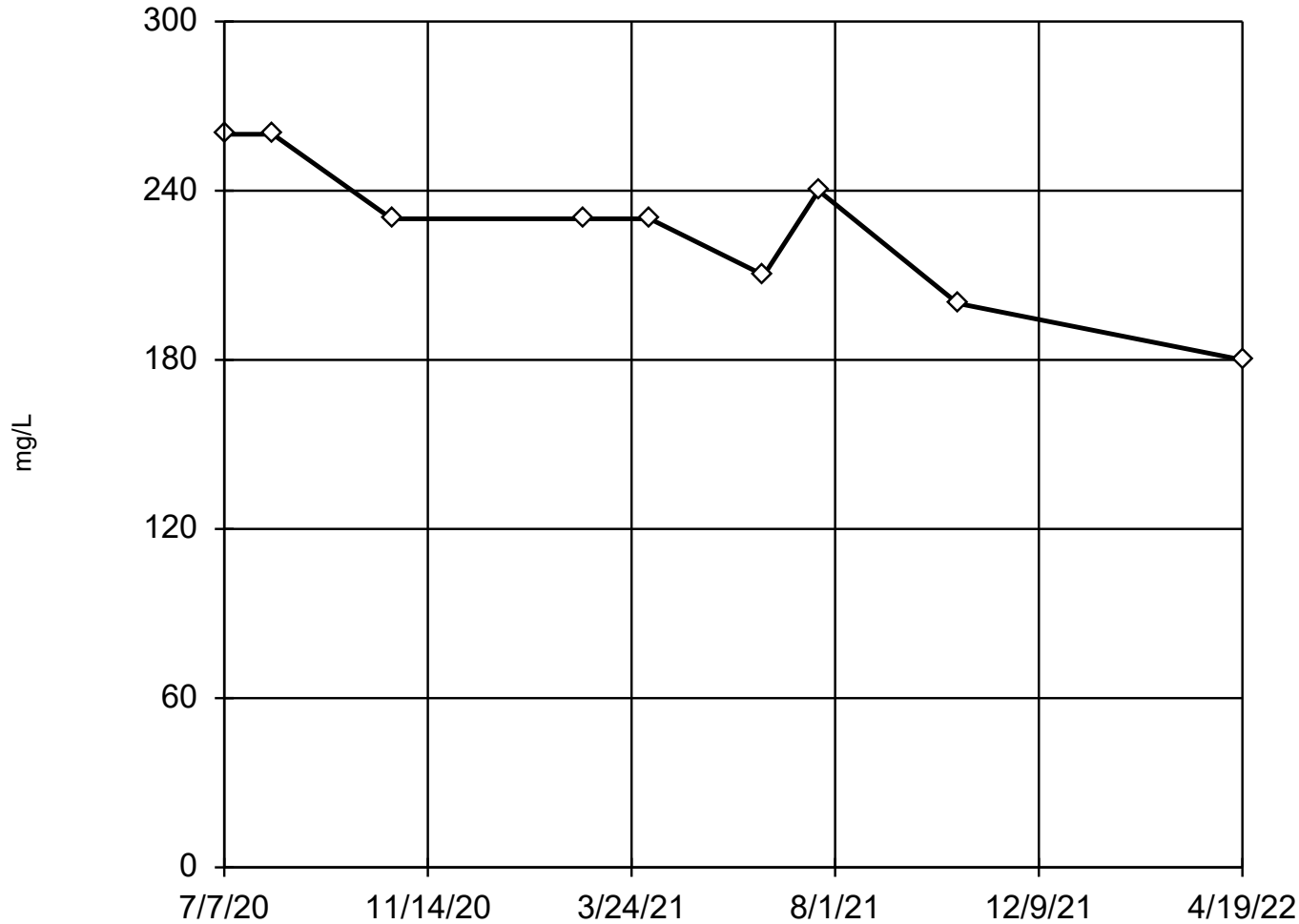
Constituent: Cadmium (ug/L) Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)
7/7/2020	0.098 (J)
8/7/2020	0.13
10/22/2020	0.13
2/22/2021	0.21
4/5/2021	<0.2 (U)
6/17/2021	0.11
7/22/2021	0.083 (J)
10/19/2021	0.085 (J)
4/19/2022	0.07 (J)

EPA Screening (suspected outliers for Dixon's Test)

MW-307 (bg)



n = 9

Dixon's will not be run.
No suspect values identified
or unable to establish
suspect values.
Mean 226.7, std. dev.
26.46, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9385
Critical = 0.859
The distribution was found
to be normally distrib-
uted.

Constituent: Calcium Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

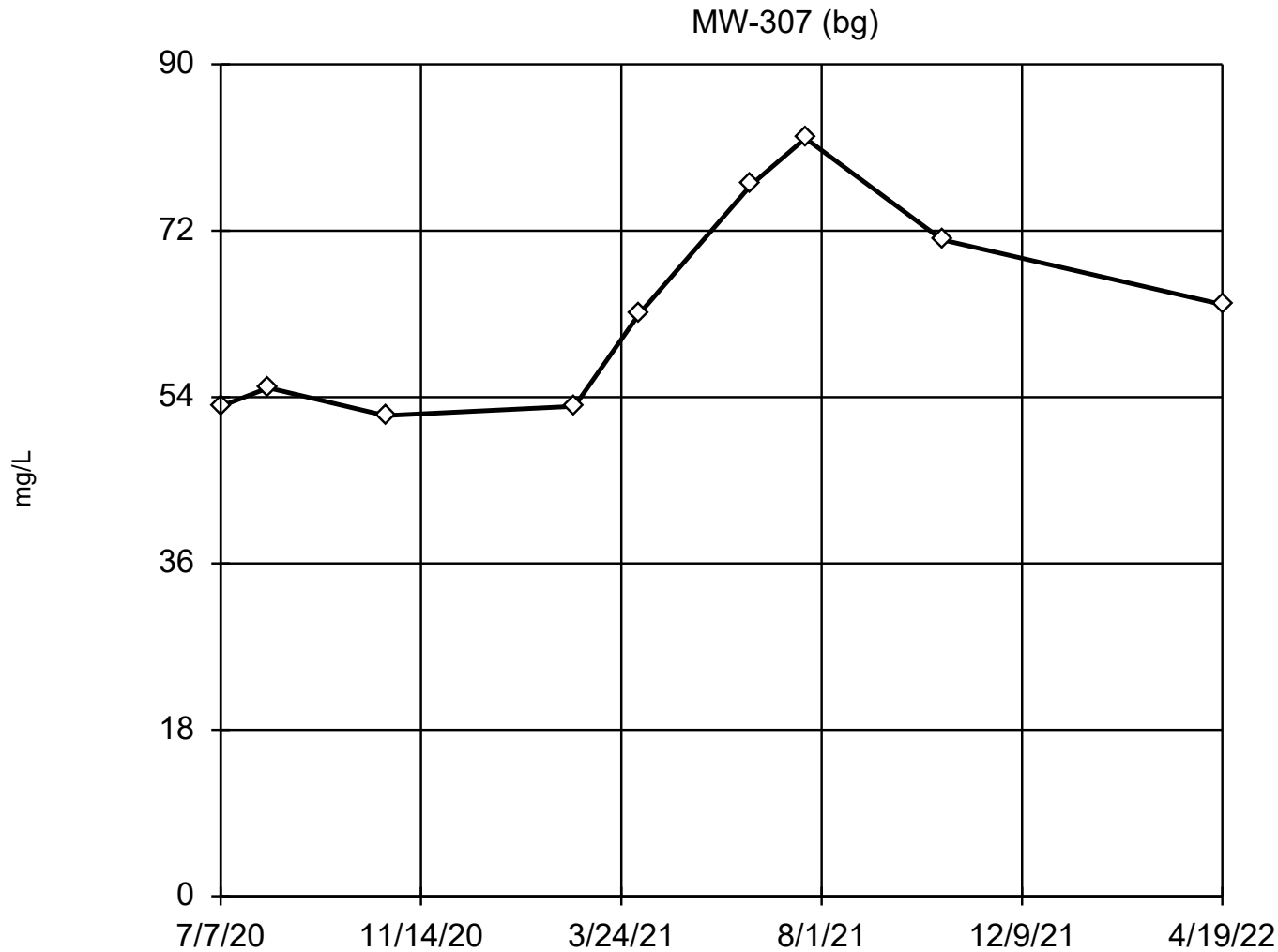
EPA 1989 Outlier Screening

Constituent: Calcium (mg/L) Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)
7/7/2020	260
8/7/2020	260
10/22/2020	230
2/22/2021	230
4/5/2021	230
6/17/2021	210
7/22/2021	240
10/19/2021	200
4/19/2022	180

EPA Screening (suspected outliers for Dixon's Test)



n = 9

Dixon's will not be run.
No suspect values identified
or unable to establish
suspect values.
Mean 63.33, std. dev.
11.21, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.8862
Critical = 0.859
The distribution was found
to be normally distrib-
uted.

Constituent: Chloride Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

EPA 1989 Outlier Screening

Constituent: Chloride (mg/L) Analysis Run 6/26/2022 11:35 AM

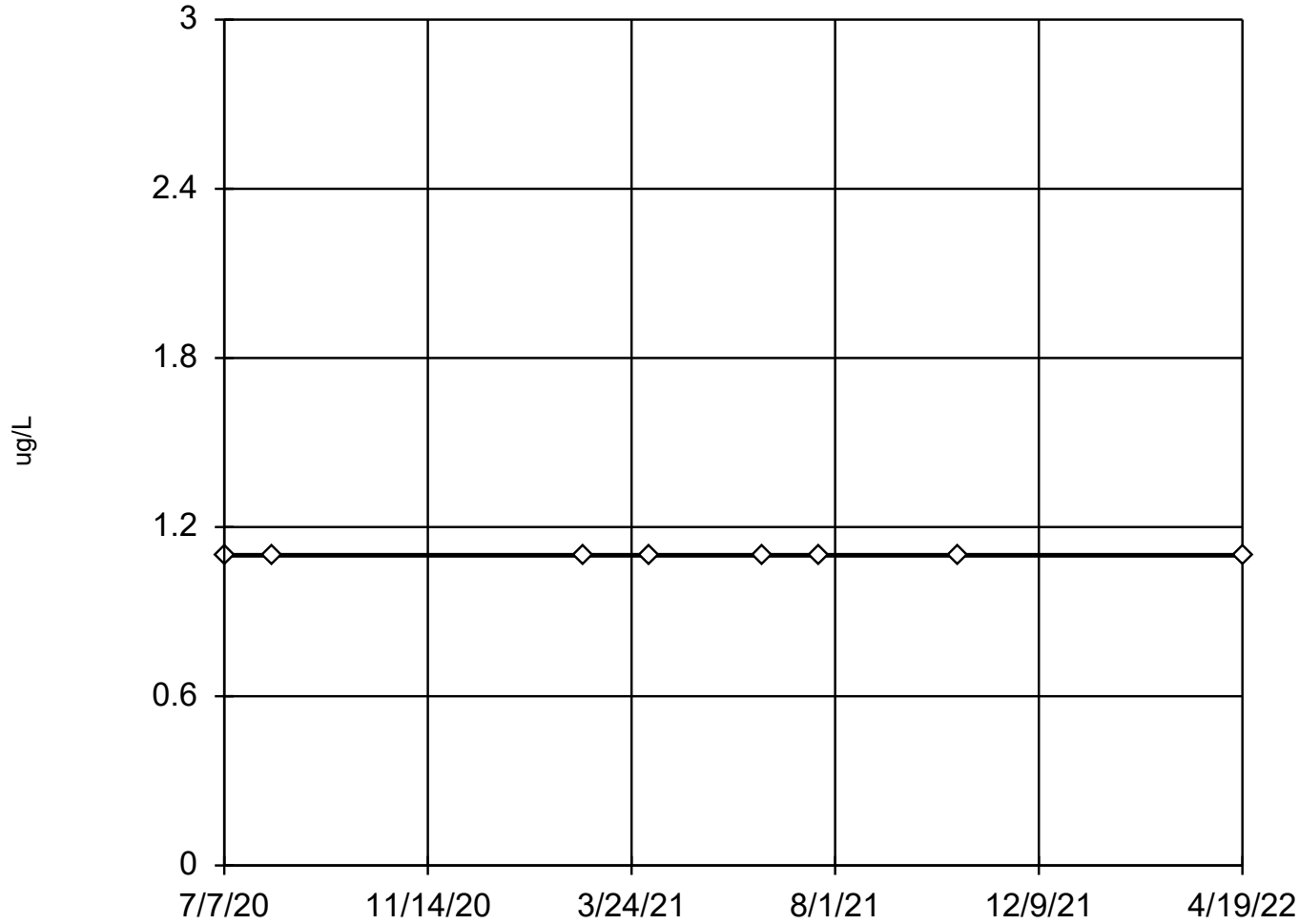
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	53
8/7/2020	55
10/22/2020	52
2/22/2021	53
4/5/2021	63
6/17/2021	77
7/22/2021	82
10/19/2021	71
4/19/2022	64

Tukey's Outlier Screening

MW-307 (bg)



n = 8

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were square root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Chromium Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

Constituent: Chromium (ug/L) Analysis Run 6/26/2022 11:35 AM

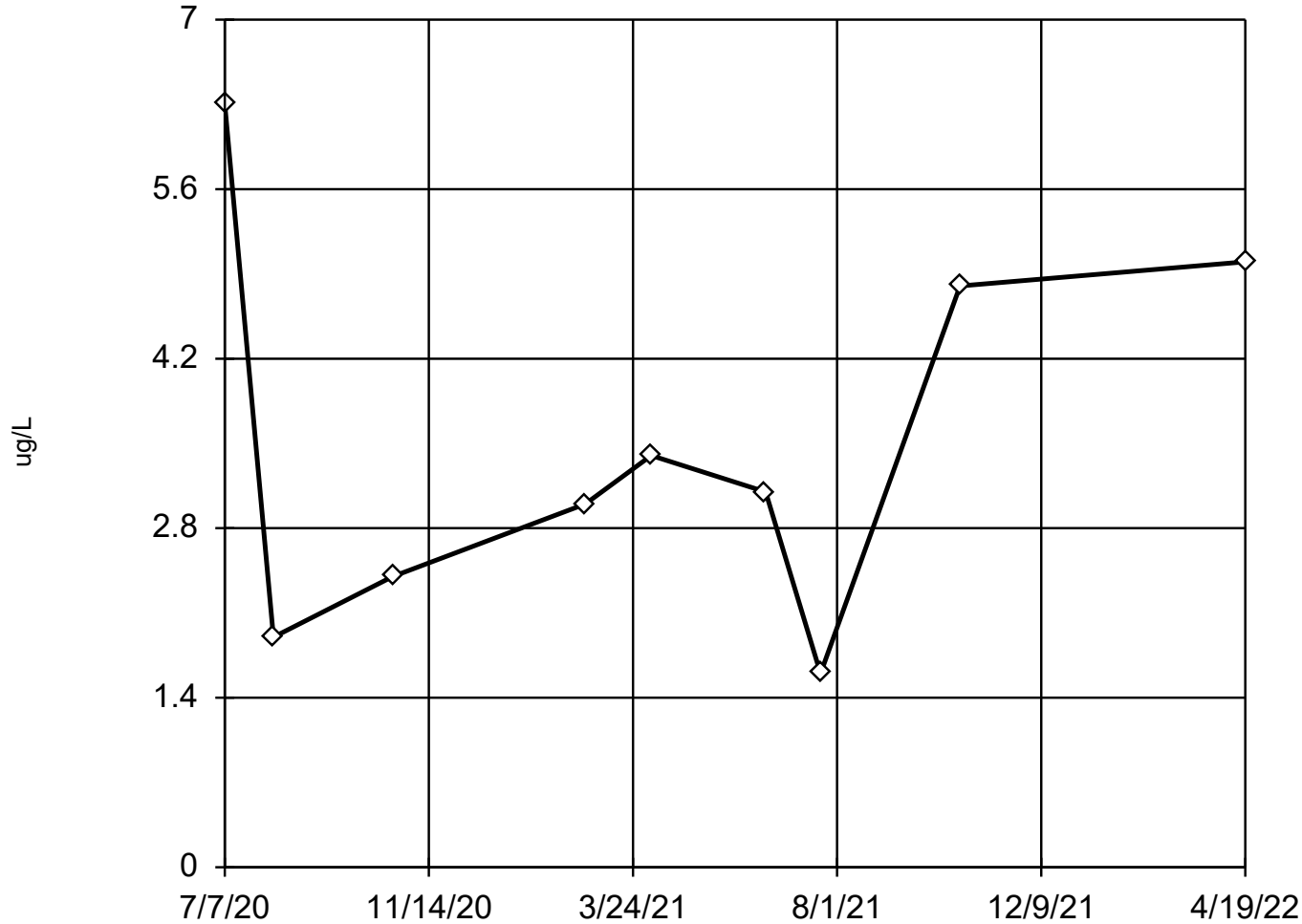
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	<1.1 (U)
8/7/2020	<1.1 (U)
2/22/2021	<1.1 (U)
4/5/2021	<1.1 (U)
6/17/2021	<1.1 (U)
7/22/2021	<1.1 (U)
10/19/2021	<1.1 (U)
4/19/2022	<1.1 (U)

EPA Screening (suspected outliers for Dixon's Test)

MW-307 (bg)



n = 9

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 3.5, std. dev. 1.564, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9378
Critical = 0.859
The distribution was found to be normally distributed.

Constituent: Cobalt Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

EPA 1989 Outlier Screening

Constituent: Cobalt (ug/L) Analysis Run 6/26/2022 11:35 AM

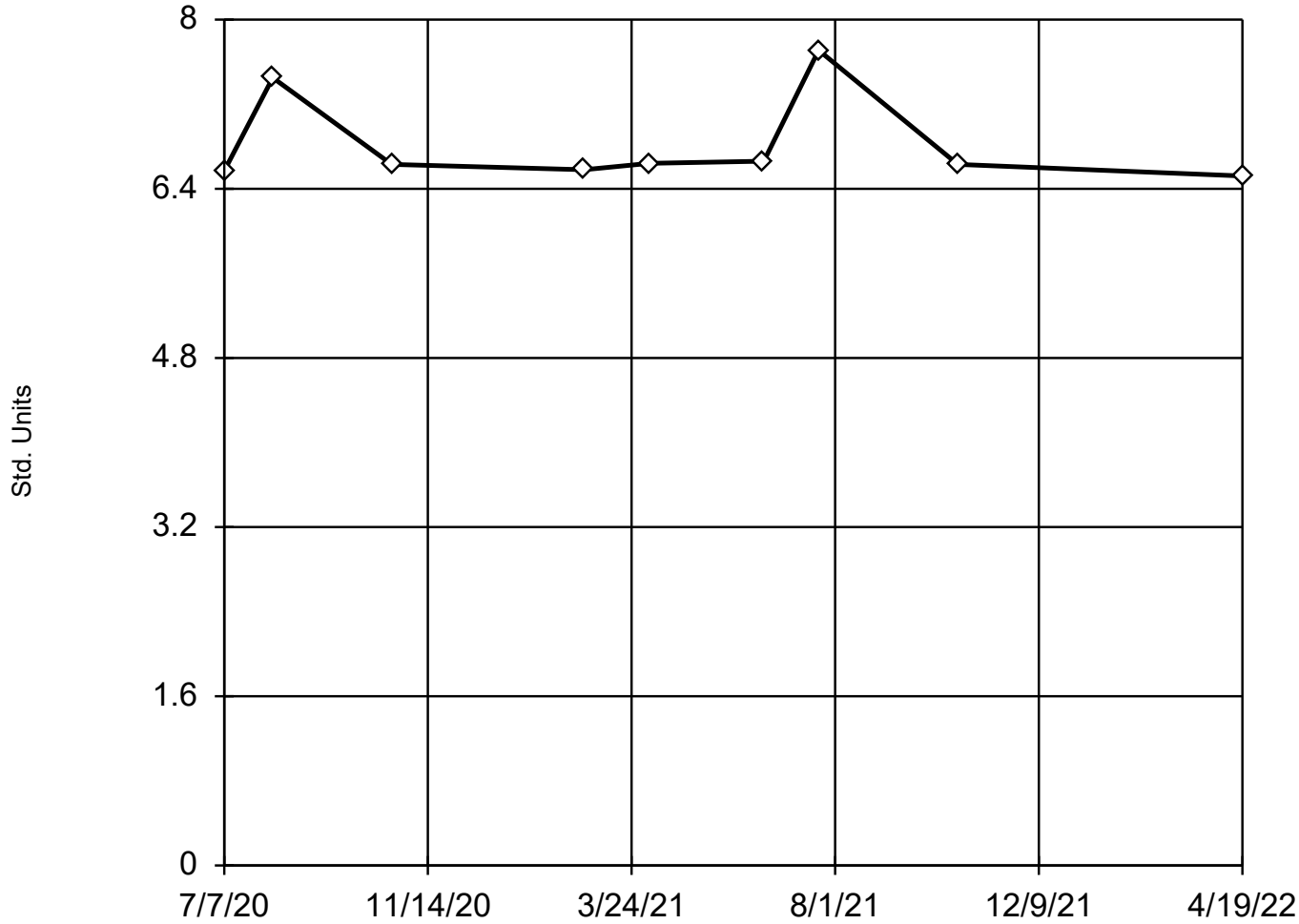
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	6.3
8/7/2020	1.9
10/22/2020	2.4
2/22/2021	3
4/5/2021	3.4
6/17/2021	3.1
7/22/2021	1.6
10/19/2021	4.8
4/19/2022	5

Tukey's Outlier Screening

MW-307 (bg)



n = 9

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 8.661, low cutoff = 5.347, based on IQR multiplier of 3.

Constituent: Field pH Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

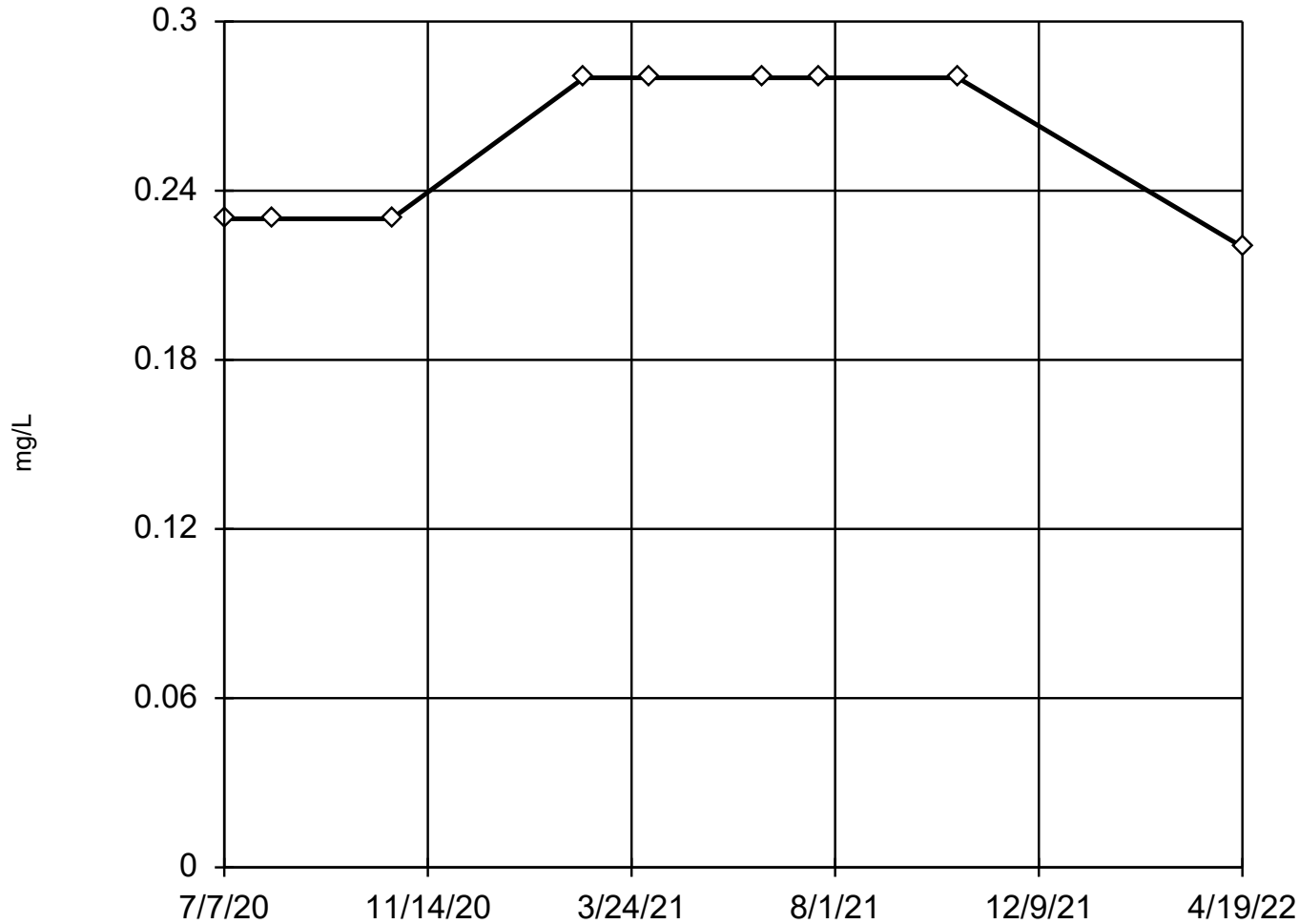
Constituent: Field pH (Std. Units) Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	6.57
8/7/2020	7.45
10/22/2020	6.63
2/22/2021	6.58
4/5/2021	6.64
6/17/2021	6.66
7/22/2021	7.71
10/19/2021	6.63
4/19/2022	6.52

Tukey's Outlier Screening MW-307 (bg)



n = 9

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because both the lower and upper quartiles represent reporting limits.

Constituent: Fluoride Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

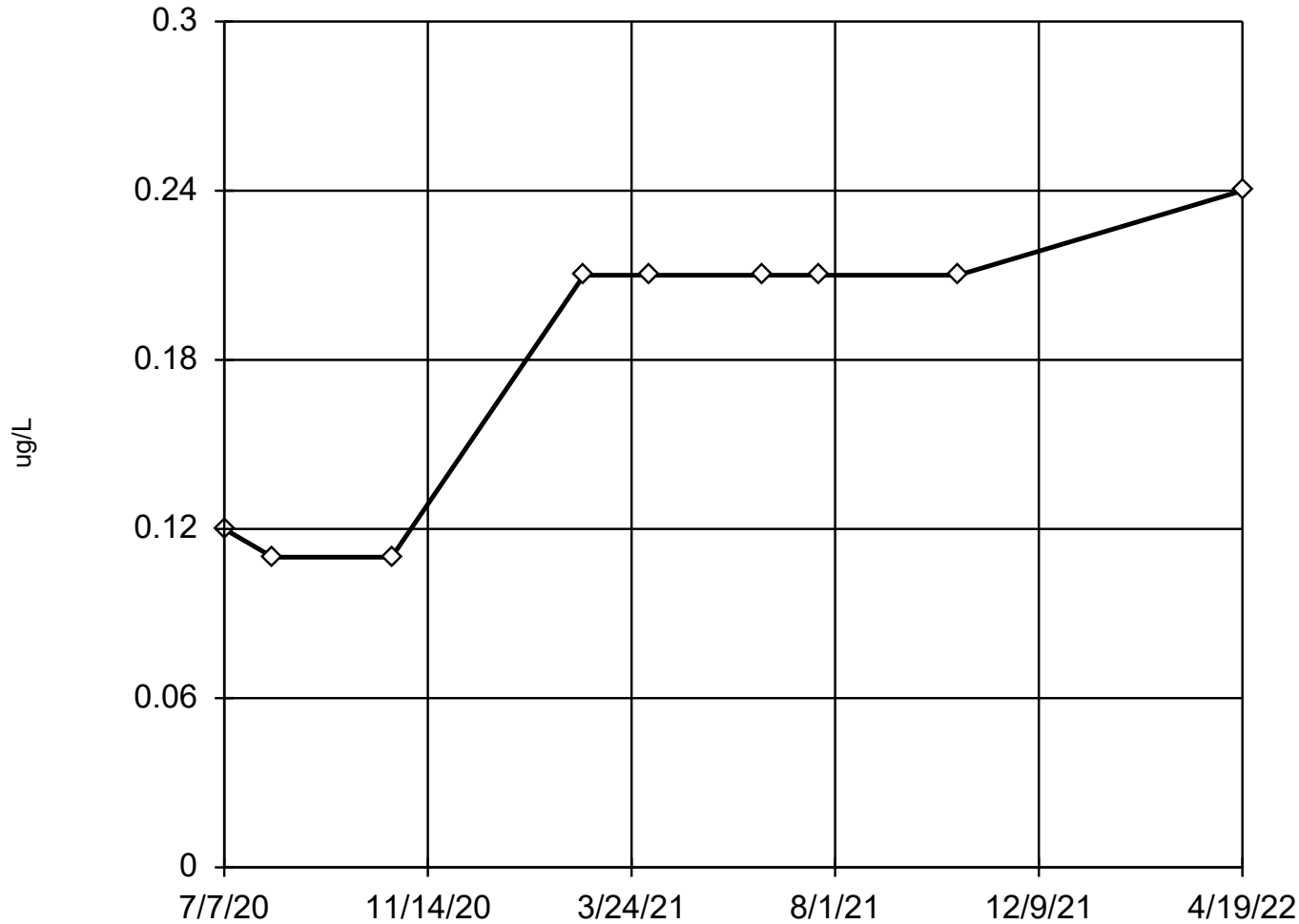
Constituent: Fluoride (mg/L) Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	<0.23 (U)
8/7/2020	<0.23 (U)
10/22/2020	<0.23 (U)
2/22/2021	<0.28 (U)
4/5/2021	<0.28 (U)
6/17/2021	<0.28 (U)
7/22/2021	<0.28 (U)
10/19/2021	<0.28 (U)
4/19/2022	<0.22 (U)

Tukey's Outlier Screening MW-307 (bg)



n = 9

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were x⁵ transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.275, low cutoff = -0.258, based on IQR multiplier of 3.

Constituent: Lead Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

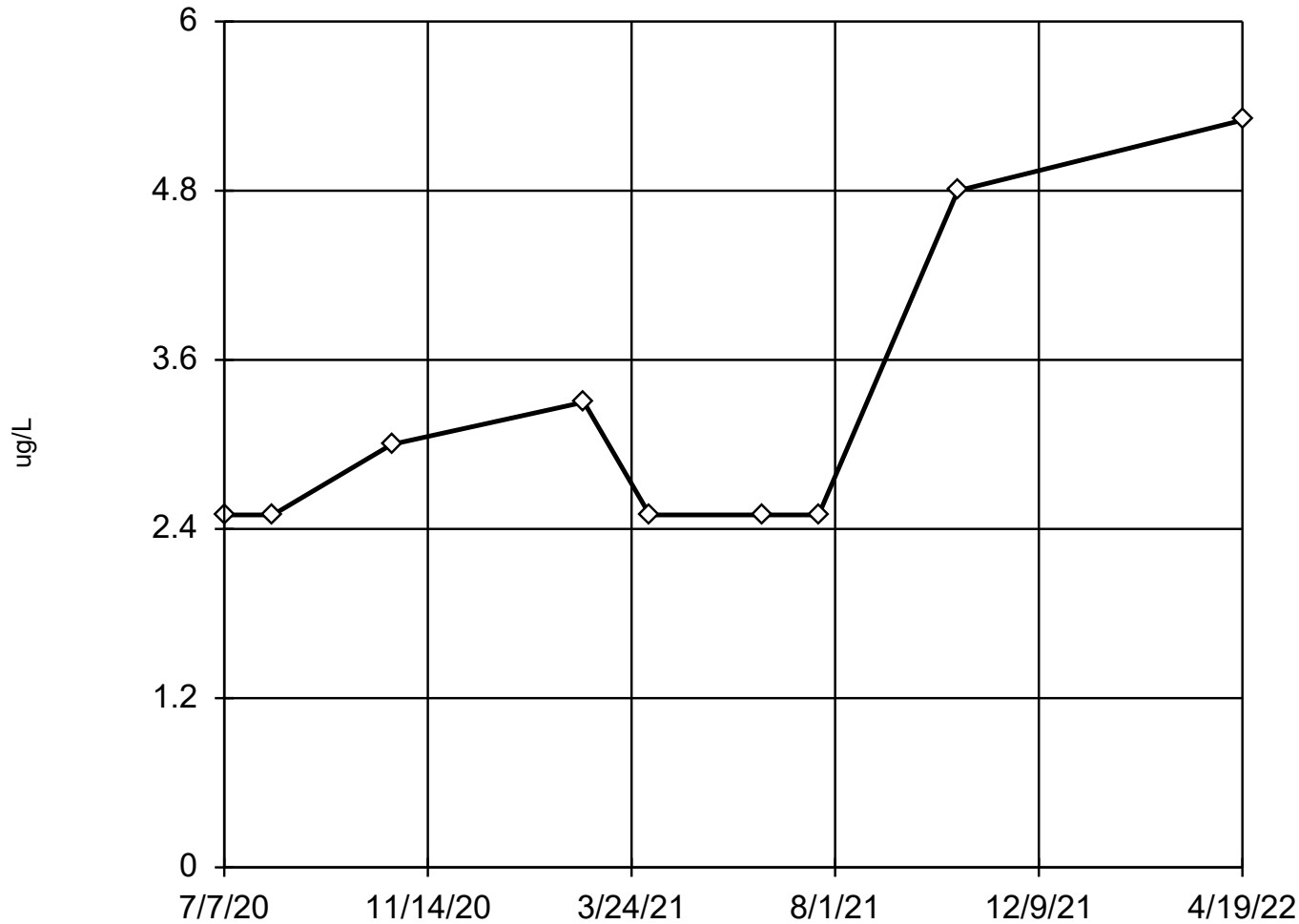
Constituent: Lead (ug/L) Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	0.12 (J)
8/7/2020	<0.11 (U)
10/22/2020	<0.11 (U)
2/22/2021	<0.21 (U)
4/5/2021	<0.21 (U)
6/17/2021	<0.21 (U)
7/22/2021	<0.21 (U)
10/19/2021	<0.21 (U)
4/19/2022	<0.24 (U)

Tukey's Outlier Screening MW-307 (bg)



n = 9

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 16.06, low cutoff = 0.6196, based on IQR multiplier of 3.

Constituent: Lithium Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

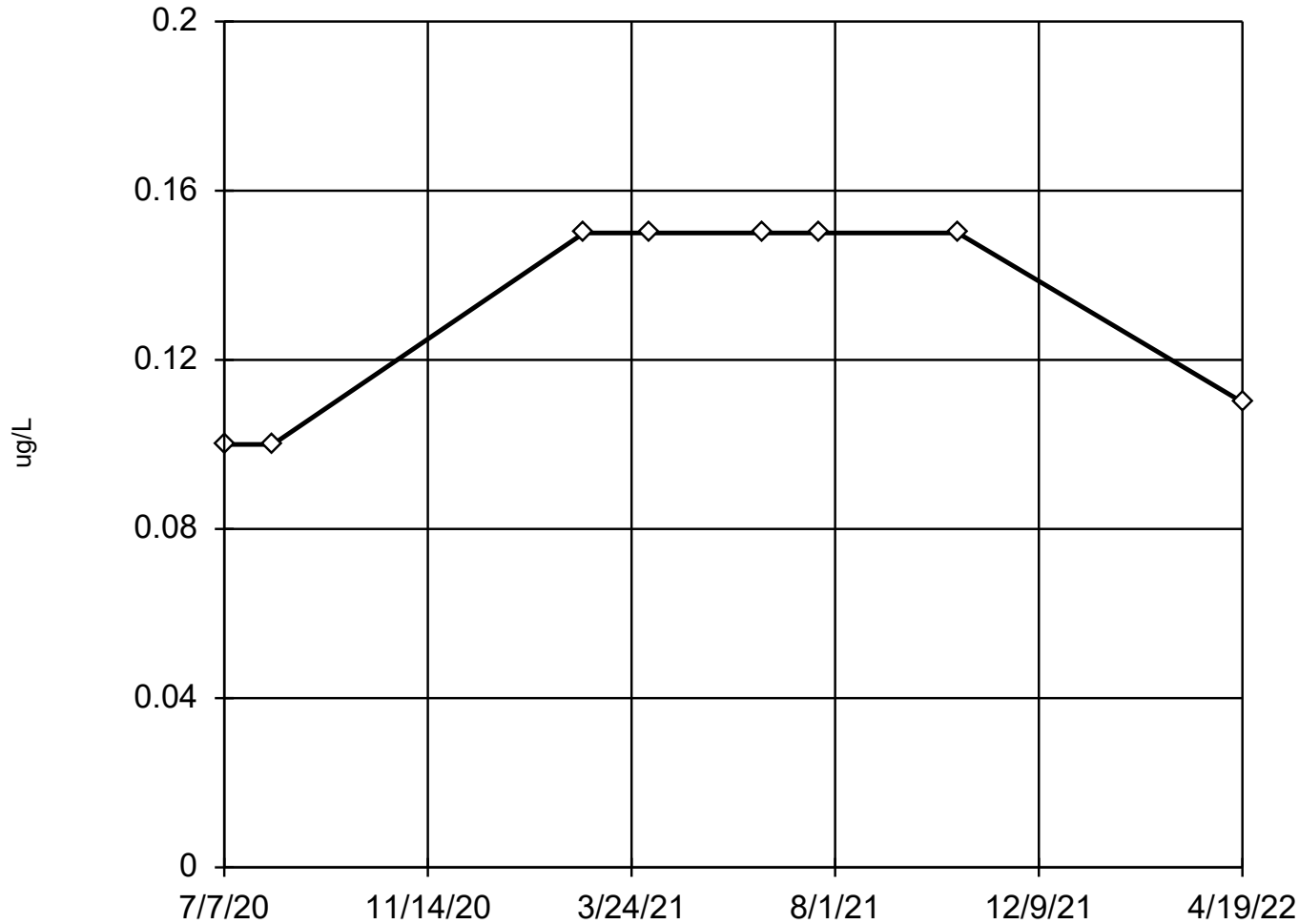
Constituent: Lithium (ug/L) Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	<2.5 (U)
8/7/2020	<2.5 (U)
10/22/2020	3 (J)
2/22/2021	3.3 (J)
4/5/2021	2.5 (J)
6/17/2021	<2.5 (U)
7/22/2021	<2.5 (U)
10/19/2021	4.8 (J)
4/19/2022	5.3 (J)

Tukey's Outlier Screening MW-307 (bg)



n = 8

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.4388,
low cutoff = 0.03585,
based on IQR multiplier of 3.

Constituent: Mercury Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

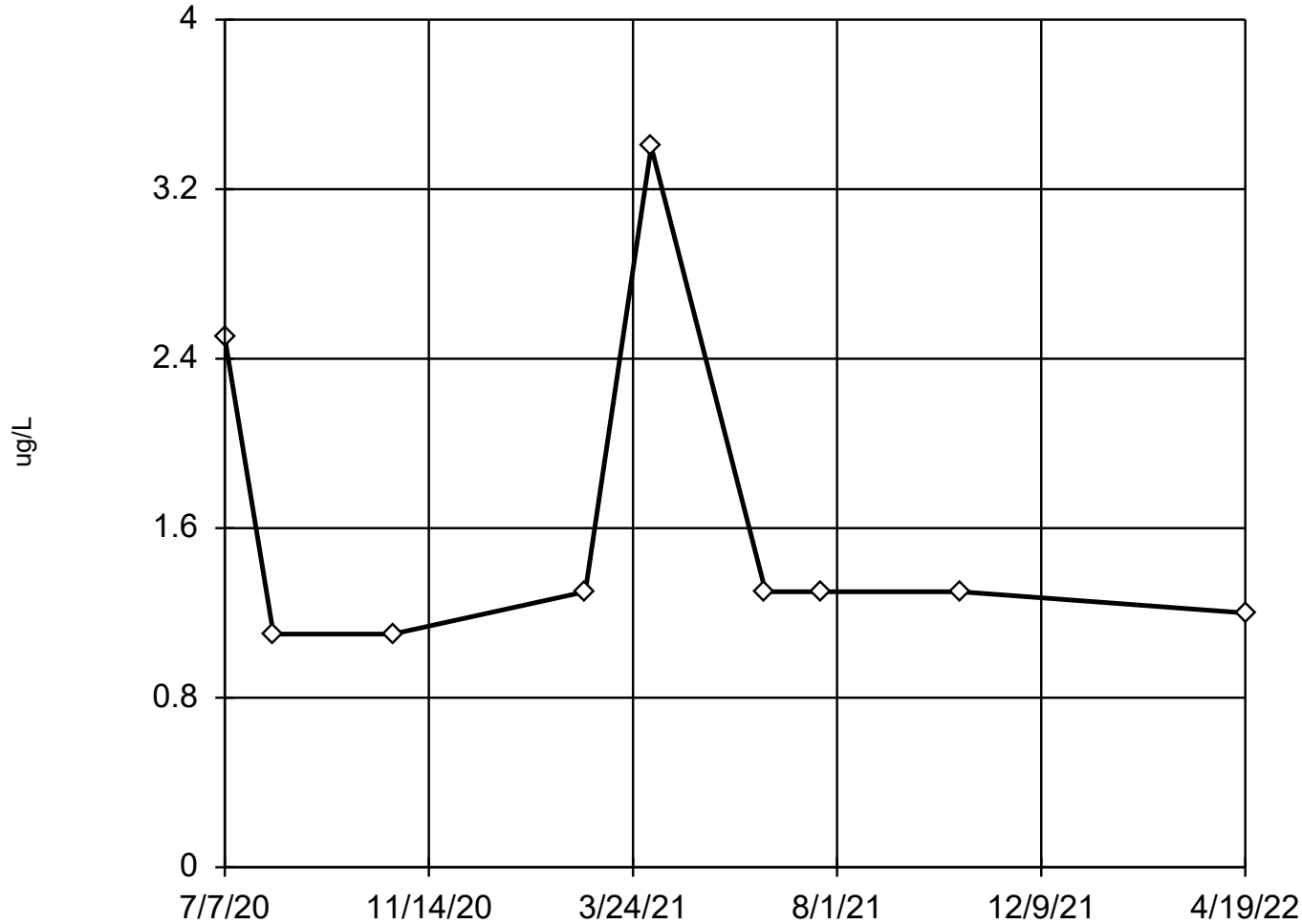
Constituent: Mercury (ug/L) Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)
7/7/2020	<0.1 (U)
8/7/2020	<0.1 (U)
2/22/2021	<0.15 (U)
4/5/2021	<0.15 (U)
6/17/2021	<0.15
7/22/2021	<0.15 (U)
10/19/2021	<0.15 (U)
4/19/2022	<0.11 (U)

Tukey's Outlier Screening

MW-307 (bg)



n = 9

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 6.965, low cutoff = 0.2974, based on IQR multiplier of 3.

Constituent: Molybdenum Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

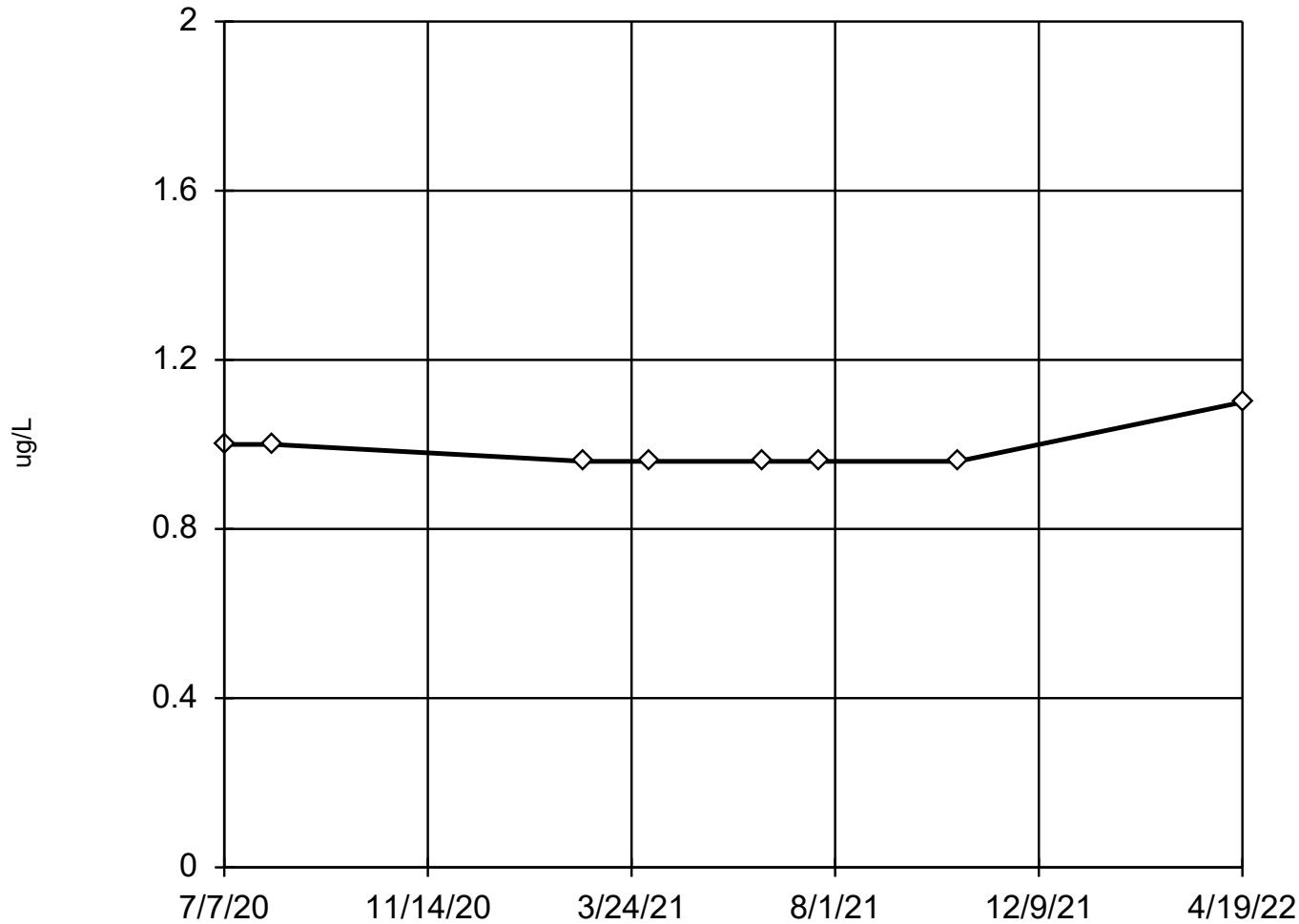
Tukey's Outlier Screening

Constituent: Molybdenum (ug/L) Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)
7/7/2020	2.5
8/7/2020	<1.1 (U)
10/22/2020	<1.1 (U)
2/22/2021	<1.3 (U)
4/5/2021	3.4
6/17/2021	<1.3 (U)
7/22/2021	<1.3 (U)
10/19/2021	<1.3 (U)
4/19/2022	<1.2 (U)

Tukey's Outlier Screening MW-307 (bg)



n = 8

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because both the lower and upper quartiles represent reporting limits.

Constituent: Selenium Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

Constituent: Selenium (ug/L) Analysis Run 6/26/2022 11:35 AM

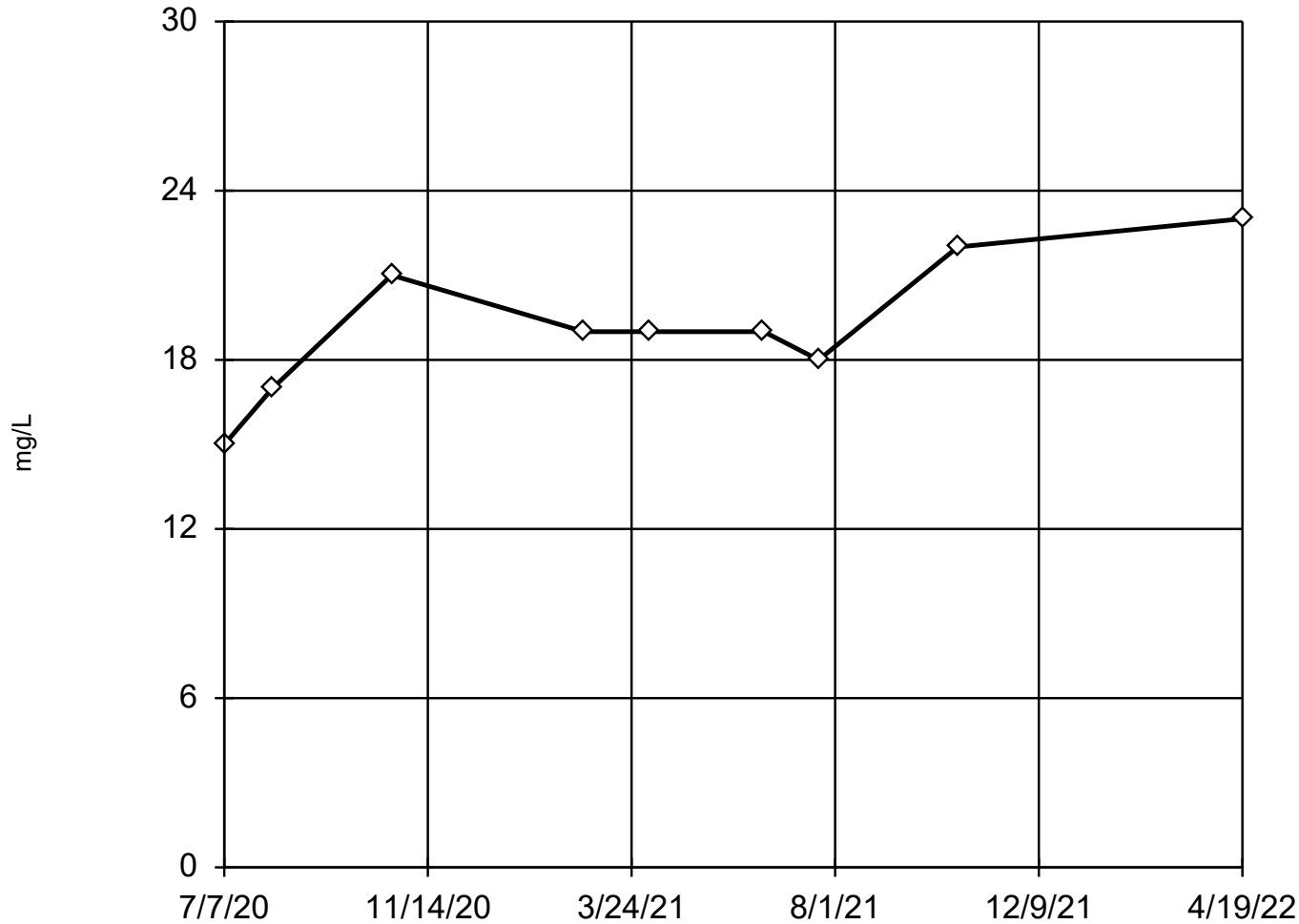
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	<1 (U)
8/7/2020	<1 (U)
2/22/2021	<0.96 (U)
4/5/2021	<0.96 (U)
6/17/2021	<0.96 (U)
7/22/2021	<0.96 (U)
10/19/2021	<0.96 (U)
4/19/2022	1.1 (J)

EPA Screening (suspected outliers for Dixon's Test)

MW-307 (bg)



n = 9

Dixon's will not be run.
No suspect values identified
or unable to establish
suspect values.
Mean 19.22, std. dev.
2.489, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9678
Critical = 0.859
The distribution was found
to be normally distrib-
uted.

Constituent: Sulfate Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

EPA 1989 Outlier Screening

Constituent: Sulfate (mg/L) Analysis Run 6/26/2022 11:35 AM

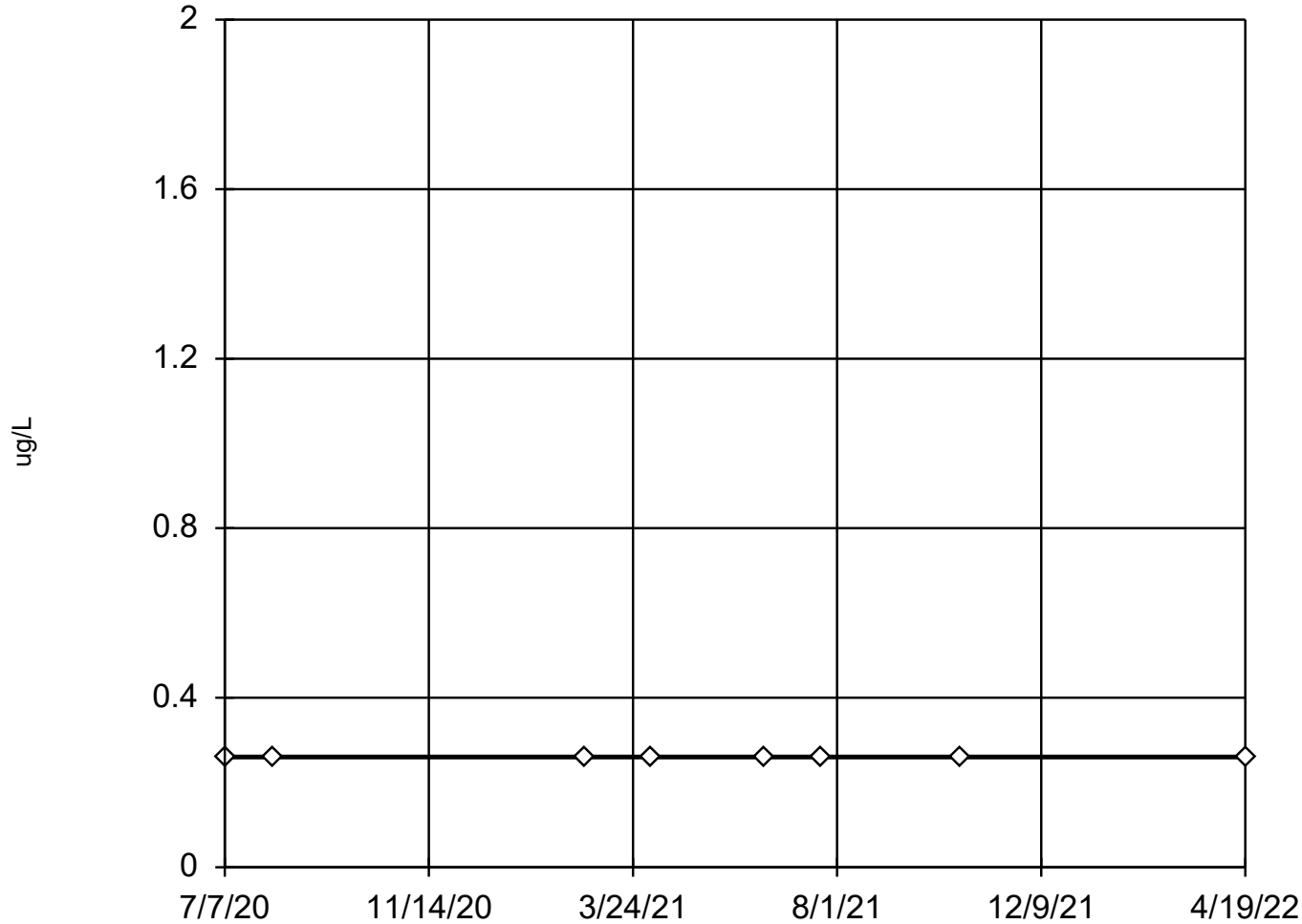
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	15
8/7/2020	17
10/22/2020	21
2/22/2021	19
4/5/2021	19
6/17/2021	19
7/22/2021	18
10/19/2021	22
4/19/2022	23

Tukey's Outlier Screening

MW-307 (bg)



n = 8

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Thallium Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Tukey's Outlier Screening

Constituent: Thallium (ug/L) Analysis Run 6/26/2022 11:36 AM

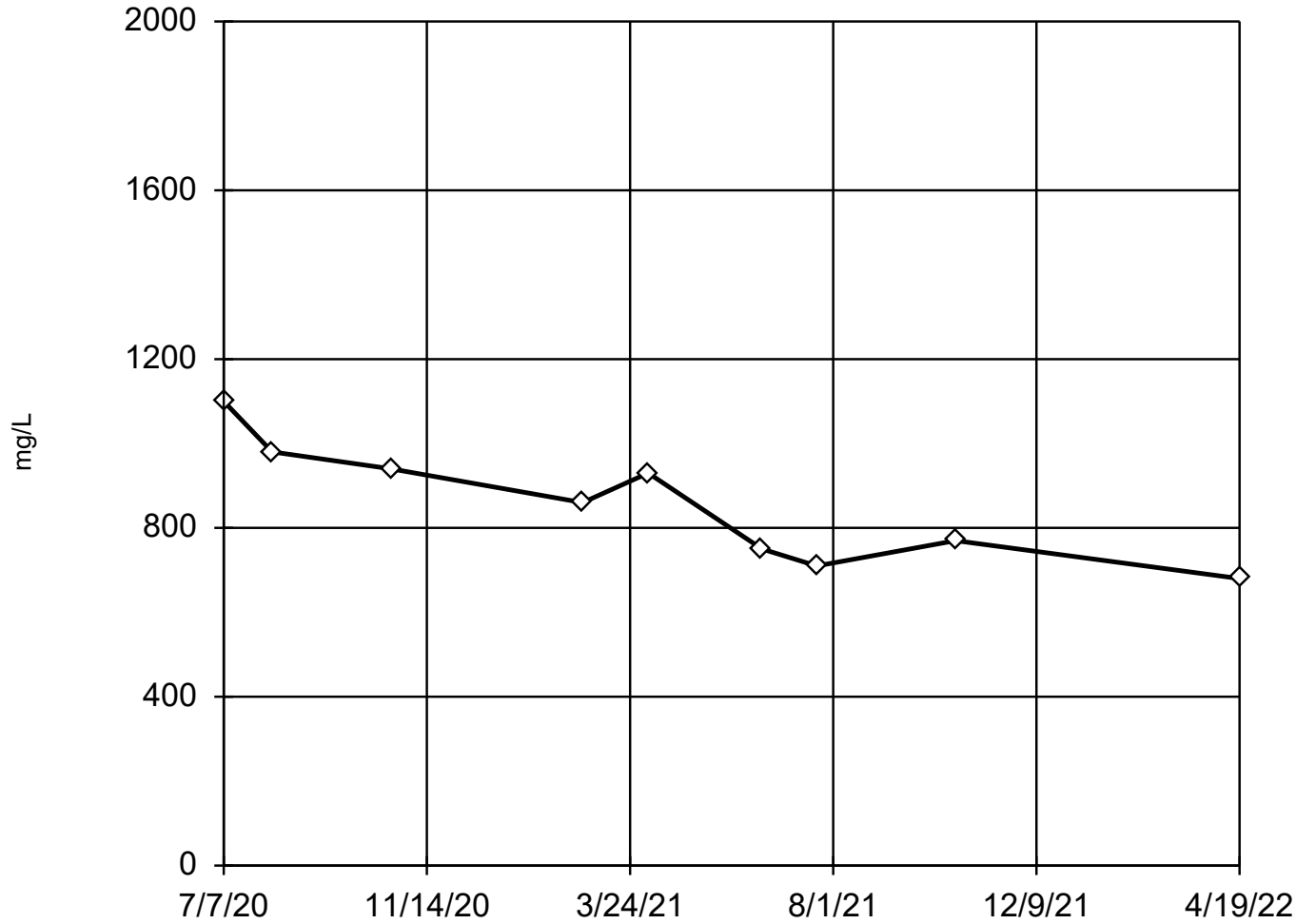
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

MW-307 (bg)

7/7/2020	<0.26 (U)
8/7/2020	<0.26 (U)
2/22/2021	<0.26 (U)
4/5/2021	<0.26 (U)
6/17/2021	<0.26 (U)
7/22/2021	<0.26 (U)
10/19/2021	<0.26 (U)
4/19/2022	<0.26 (U)

EPA Screening (suspected outliers for Dixon's Test)

MW-307 (bg)



n = 9

Dixon's will not be run.
No suspect values identified
or unable to establish
suspect values.
Mean 857.8, std. dev.
140.7, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9486
Critical = 0.859
The distribution was found
to be normally distrib-
uted.

Constituent: Total Dissolved Solids Analysis Run 6/26/2022 11:34 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

EPA 1989 Outlier Screening

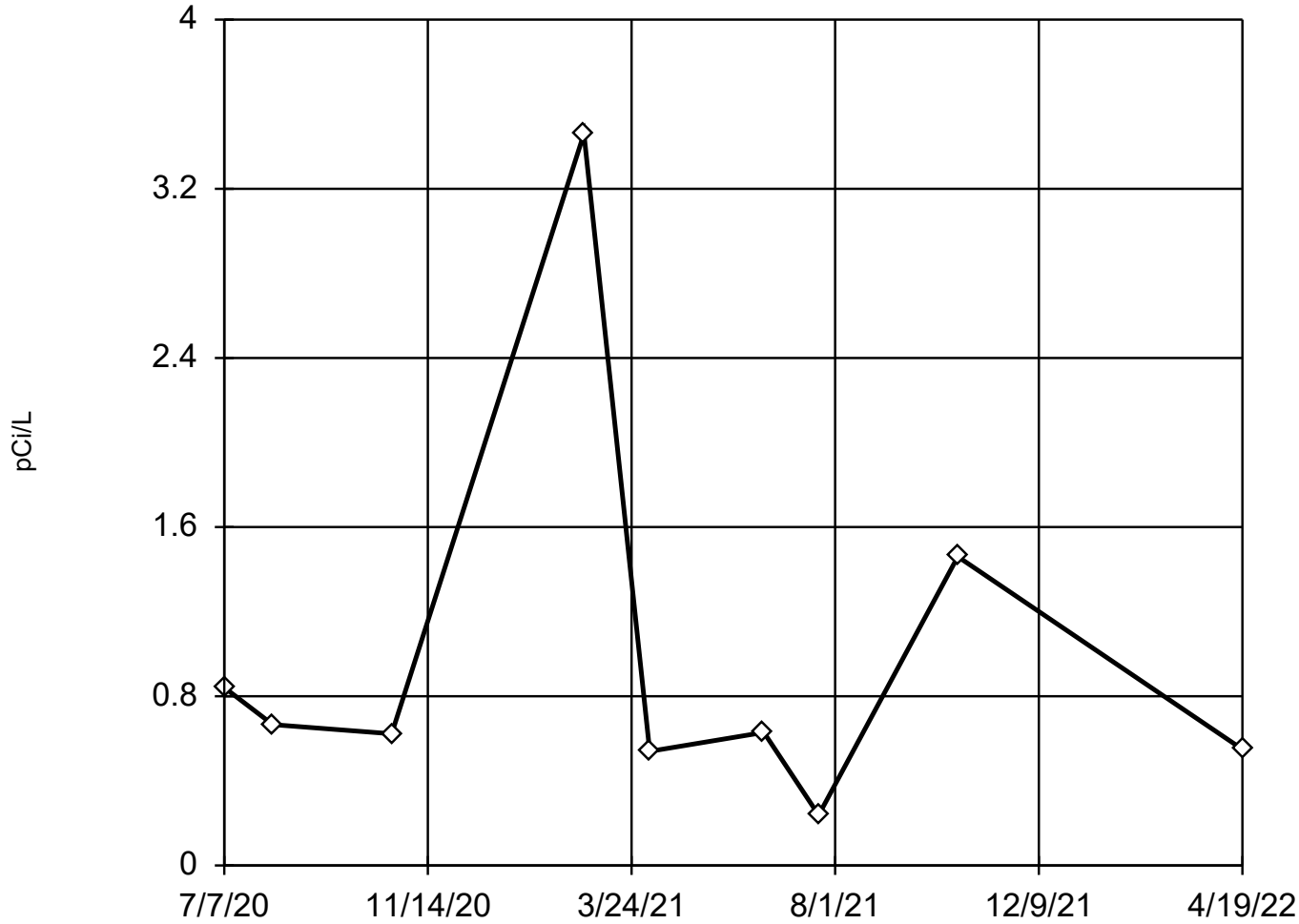
Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/26/2022 11:36 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)
7/7/2020	1100
8/7/2020	980
10/22/2020	940
2/22/2021	860
4/5/2021	930
6/17/2021	750
7/22/2021	710
10/19/2021	770
4/19/2022	680

EPA Screening (suspected outliers for Dixon's Test)

MW-307 (bg)



n = 9

Dixon's will not be run.
No suspect values identified
or unable to establish
suspect values.
Mean 1.001, std. dev.
0.9795, critical Tn 2.11

Normality test used:
Shapiro Wilk@alpha = 0.1
Calculated = 0.9001
Critical = 0.859 (after
natural log transforma-
tion)
The distribution was found
to be log-normal.

Constituent: Total Radium Analysis Run 6/26/2022 11:35 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

EPA 1989 Outlier Screening

Constituent: Total Radium (pCi/L) Analysis Run 6/26/2022 11:36 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-307 (bg)
7/7/2020	0.841
8/7/2020	0.666
10/22/2020	0.623
2/22/2021	3.46
4/5/2021	0.54
6/17/2021	0.629
7/22/2021	0.238
10/19/2021	1.46
4/19/2022	0.549

Attachment 3

Interwell Prediction Limit Analysis - Appendix III parameters

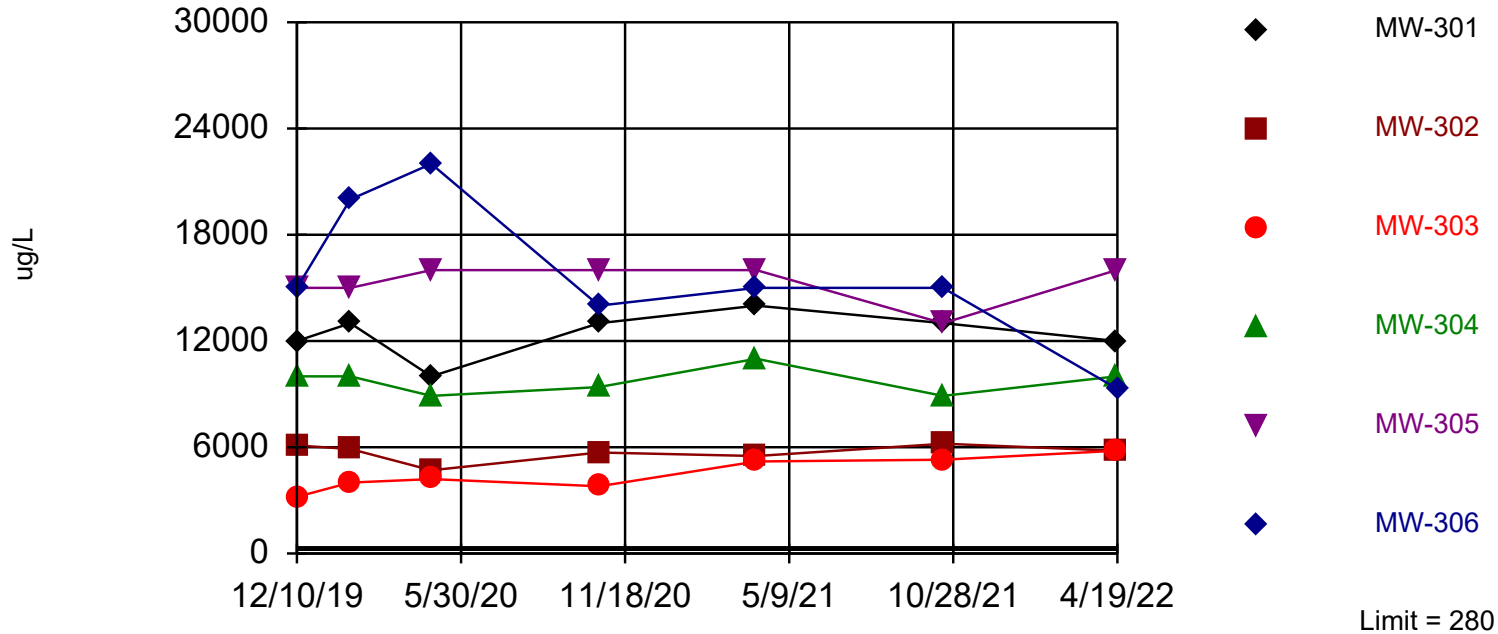
Prediction Limit

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020 Printed 6/29/2022, 12:21 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Boron (ug/L)	MW-301	280	n/a	4/18/2022	12000	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Boron (ug/L)	MW-302	280	n/a	4/18/2022	5800	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Boron (ug/L)	MW-303	280	n/a	4/18/2022	5800	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Boron (ug/L)	MW-304	280	n/a	4/18/2022	10000	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Boron (ug/L)	MW-305	280	n/a	4/18/2022	16000	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Boron (ug/L)	MW-306	280	n/a	4/19/2022	9300	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Calcium (mg/L)	MW-301	294	n/a	4/18/2022	120	No	9	0	No	0.001462	Param Inter 1 of 2
Calcium (mg/L)	MW-302	294	n/a	4/18/2022	120	No	9	0	No	0.001462	Param Inter 1 of 2
Calcium (mg/L)	MW-303	294	n/a	4/18/2022	230	No	9	0	No	0.001462	Param Inter 1 of 2
Calcium (mg/L)	MW-304	294	n/a	4/18/2022	130	No	9	0	No	0.001462	Param Inter 1 of 2
Calcium (mg/L)	MW-305	294	n/a	4/18/2022	200	No	9	0	No	0.001462	Param Inter 1 of 2
Calcium (mg/L)	MW-306	294	n/a	4/19/2022	210	No	9	0	No	0.001462	Param Inter 1 of 2
Chloride (mg/L)	MW-301	91.9	n/a	4/18/2022	53	No	9	0	No	0.001462	Param Inter 1 of 2
Chloride (mg/L)	MW-302	91.9	n/a	4/18/2022	10	No	9	0	No	0.001462	Param Inter 1 of 2
Chloride (mg/L)	MW-303	91.9	n/a	4/18/2022	13	No	9	0	No	0.001462	Param Inter 1 of 2
Chloride (mg/L)	MW-304	91.9	n/a	4/18/2022	20	No	9	0	No	0.001462	Param Inter 1 of 2
Chloride (mg/L)	MW-305	91.9	n/a	4/18/2022	15	No	9	0	No	0.001462	Param Inter 1 of 2
Chloride (mg/L)	MW-306	91.9	n/a	4/19/2022	210	Yes	9	0	No	0.001462	Param Inter 1 of 2
Field pH (Std. Units)	MW-301	7.71	n/a	4/18/2022	6.69	No	9	0	n/a	0.01423	NP Inter (normality) ...
Field pH (Std. Units)	MW-302	7.71	n/a	4/18/2022	7.42	No	9	0	n/a	0.01423	NP Inter (normality) ...
Field pH (Std. Units)	MW-303	7.71	n/a	4/18/2022	6.81	No	9	0	n/a	0.01423	NP Inter (normality) ...
Field pH (Std. Units)	MW-304	7.71	n/a	4/18/2022	6.97	No	9	0	n/a	0.01423	NP Inter (normality) ...
Field pH (Std. Units)	MW-305	7.71	n/a	4/18/2022	7.36	No	9	0	n/a	0.01423	NP Inter (normality) ...
Field pH (Std. Units)	MW-306	7.71	n/a	4/19/2022	6.88	No	9	0	n/a	0.01423	NP Inter (normality) ...
Sulfate (mg/L)	MW-301	25.6	n/a	4/18/2022	240	Yes	9	0	No	0.001462	Param Inter 1 of 2
Sulfate (mg/L)	MW-302	25.6	n/a	4/18/2022	240	Yes	9	0	No	0.001462	Param Inter 1 of 2
Sulfate (mg/L)	MW-303	25.6	n/a	4/18/2022	600	Yes	9	0	No	0.001462	Param Inter 1 of 2
Sulfate (mg/L)	MW-304	25.6	n/a	4/18/2022	380	Yes	9	0	No	0.001462	Param Inter 1 of 2
Sulfate (mg/L)	MW-305	25.6	n/a	4/18/2022	810	Yes	9	0	No	0.001462	Param Inter 1 of 2
Sulfate (mg/L)	MW-306	25.6	n/a	4/19/2022	170	Yes	9	0	No	0.001462	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-301	1220	n/a	4/18/2022	660	No	9	0	No	0.001462	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-302	1220	n/a	4/18/2022	590	No	9	0	No	0.001462	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-303	1220	n/a	4/18/2022	1300	Yes	9	0	No	0.001462	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-304	1220	n/a	4/18/2022	830	No	9	0	No	0.001462	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-305	1220	n/a	4/18/2022	1200	No	9	0	No	0.001462	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	MW-306	1220	n/a	4/19/2022	1100	No	9	0	No	0.001462	Param Inter 1 of 2

Exceeds Limit: MW-301, MW-302, MW-303,
MW-304, MW-305, MW-306

Boron Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 9 background values. 77.78% NDs. Annual per-constituent alpha = 0.158. Individual comparison alpha = 0.01423 (1 of 2). Comparing 6 points to limit.

Prediction Limit Analysis Run 6/29/2022 12:09 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

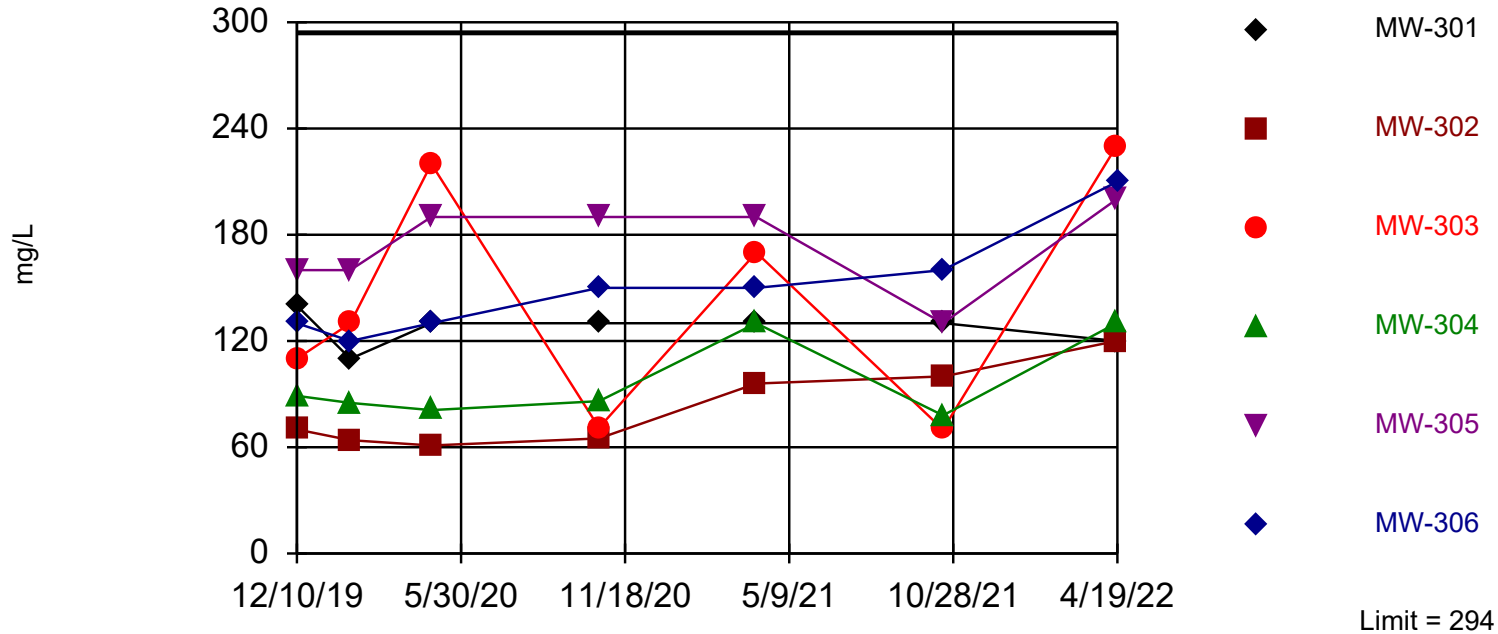
Constituent: Boron (ug/L) Analysis Run 6/29/2022 12:21 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	12000	15000	15000	10000	6100	3200	
2/4/2020	13000	15000	20000	10000	5900	4000	
4/29/2020	10000	16000	22000	8900	4700	4200	
7/7/2020							280
8/7/2020							<80 (U)
10/22/2020	13000	16000	14000	9400	5700	3800	130
2/22/2021							<58 (U)
4/5/2021	14000	16000	15000	11000	5500	5200	<230 (U)
6/17/2021							<58 (U)
7/22/2021							<58 (U)
10/18/2021		13000	15000	8900		5300	
10/19/2021	13000				6200		<58 (U)
4/18/2022	12000	16000		10000	5800	5800	
4/19/2022			9300				<58 (U)

Within Limit

Calcium Interwell Parametric



Background Data Summary: Mean=226.7, Std. Dev.=26.46, n=9. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9385, critical = 0.764. Kappa = 2.546 (c=6, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.008742. Individual comparison alpha = 0.001462. Comparing 6 points to limit.

Prediction Limit Analysis Run 6/29/2022 12:09 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

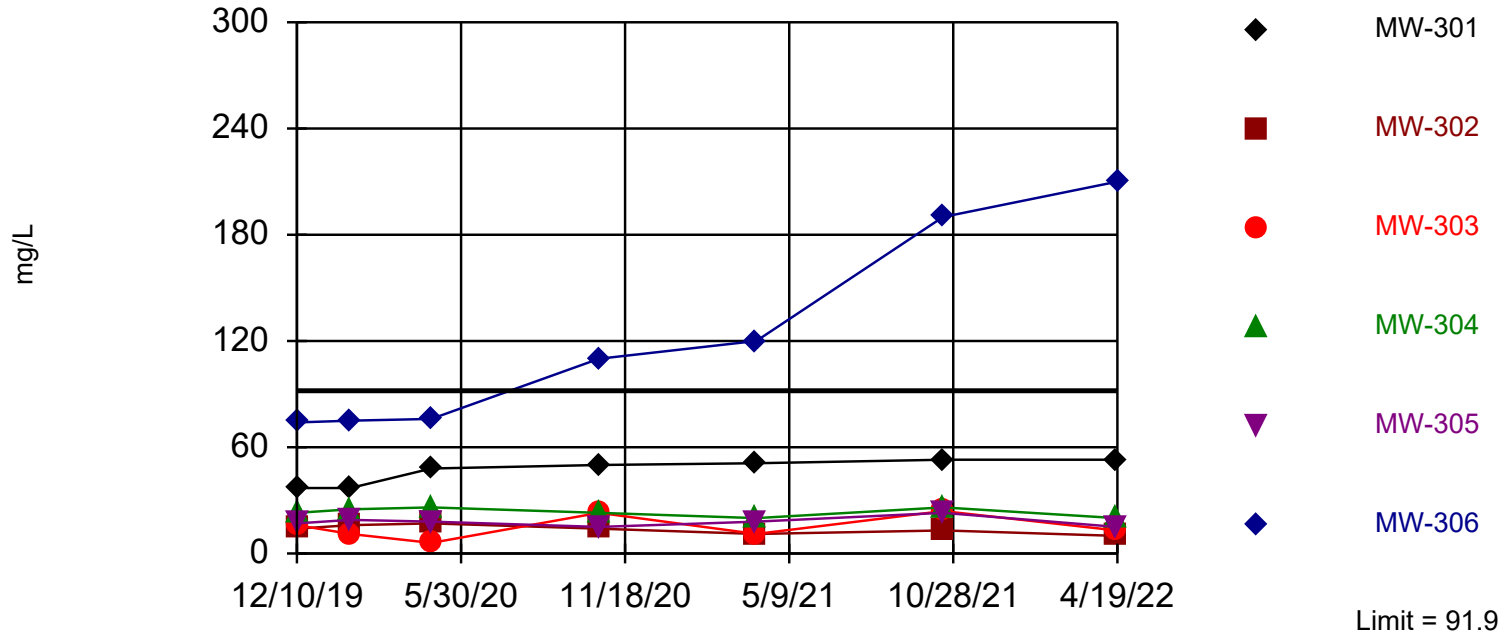
Constituent: Calcium (mg/L) Analysis Run 6/29/2022 12:21 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	140	160	130	89	70	110	
2/4/2020	110	160	120	85	64	130	
4/29/2020	130	190	130	81	61	220	
7/7/2020							260
8/7/2020							260
10/22/2020	130	190	150	86	65	71	230
2/22/2021							230
4/5/2021	130	190	150	130	96	170	230
6/17/2021							210
7/22/2021							240
10/18/2021		130	160	78		70	
10/19/2021	130				100		200
4/18/2022	120	200		130	120	230	
4/19/2022			210				180

Exceeds Limit: MW-306

Chloride Interwell Parametric



Background Data Summary: Mean=63.33, Std. Dev.=11.21, n=9. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8862, critical = 0.764. Kappa = 2.546 (c=6, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.008742. Individual comparison alpha = 0.001462. Comparing 6 points to limit.

Prediction Limit Analysis Run 6/29/2022 12:09 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

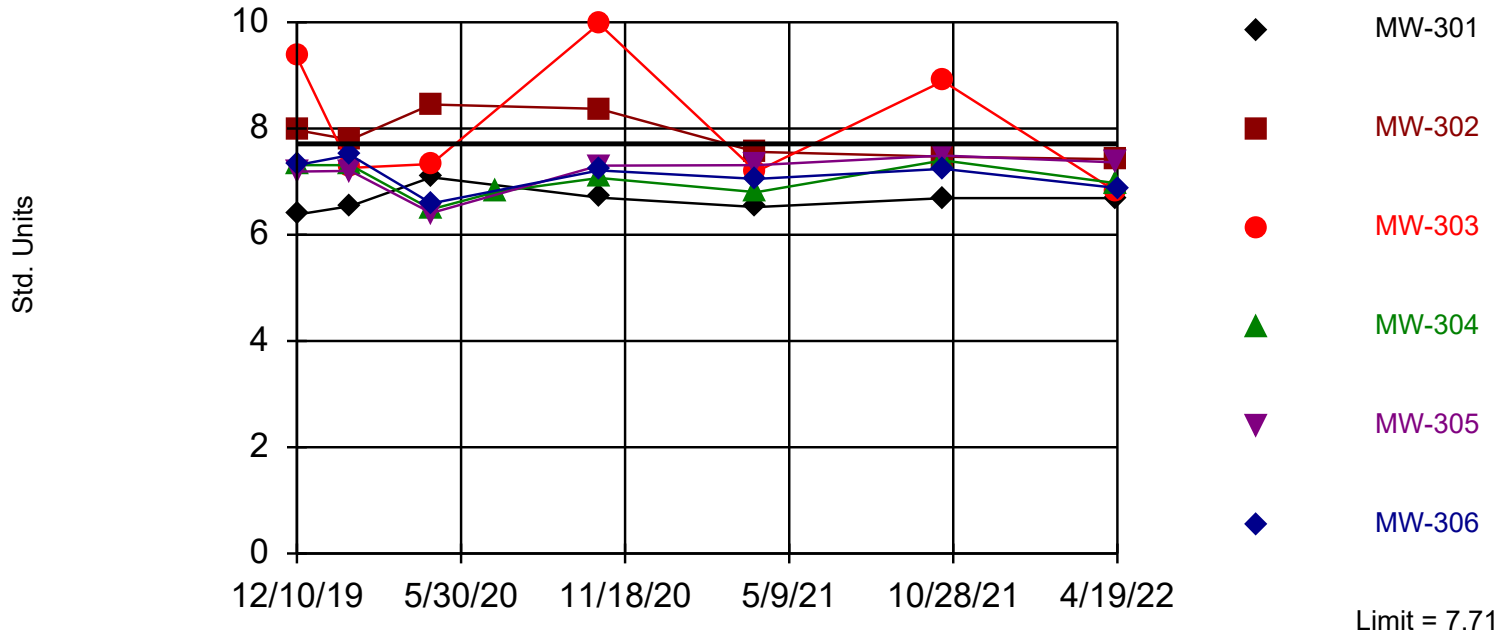
Constituent: Chloride (mg/L) Analysis Run 6/29/2022 12:21 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	37	17	74	23	14	16	
2/4/2020	37	19	75	25	16	11	
4/29/2020	48	18	76	26	17	6	
7/7/2020							53
8/7/2020							55
10/22/2020	50	15	110	23	14	23	52
2/22/2021							53
4/5/2021	51	18	120	20	11	11	63
6/17/2021							77
7/22/2021							82
10/18/2021		23	190	26		24	
10/19/2021	53				13		71
4/18/2022	53	15		20	10	13	
4/19/2022			210				64

Within Limit

Field pH Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 9 background values. Annual per-constituent alpha = 0.158. Individual comparison alpha = 0.01423 (1 of 2). Comparing 6 points to limit.

Prediction Limit Analysis Run 6/29/2022 12:09 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

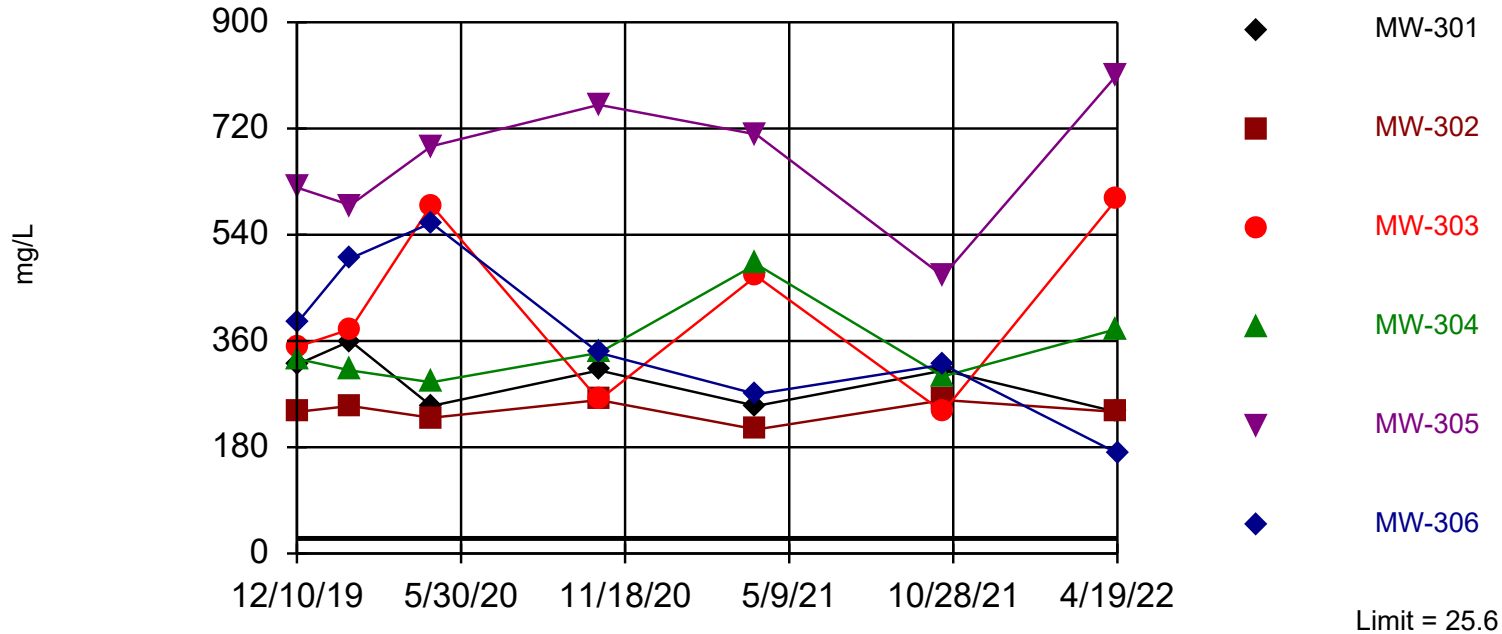
Constituent: Field pH (Std. Units) Analysis Run 6/29/2022 12:21 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-304	MW-305	MW-303	MW-306	MW-302	MW-307 (bg)
12/10/2019	6.38	7.31	7.19	9.35	7.31	7.97	
2/4/2020	6.54	7.31	7.2	7.26	7.5	7.79	
4/29/2020	7.08	6.48	6.41	7.33	6.59	8.45	
7/7/2020		6.81					6.57
8/7/2020							7.45
10/22/2020	6.7	7.07	7.3	9.97	7.21	8.37	6.63
2/22/2021							6.58
4/5/2021	6.52	6.8	7.31	7.19	7.05	7.56	6.64
6/17/2021							6.66
7/22/2021							7.71
10/18/2021		7.4	7.49	8.89	7.24		
10/19/2021	6.69					7.47	6.63
4/18/2022	6.69	6.97	7.36	6.81		7.42	
4/19/2022					6.88		6.52

Exceeds Limit: MW-301, MW-302, MW-303,
MW-304, MW-305, MW-306

Sulfate Interwell Parametric



Background Data Summary: Mean=19.22, Std. Dev.=2.489, n=9. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9678, critical = 0.764. Kappa = 2.546 (c=6, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.008742. Individual comparison alpha = 0.001462. Comparing 6 points to limit.

Prediction Limit Analysis Run 6/29/2022 12:09 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

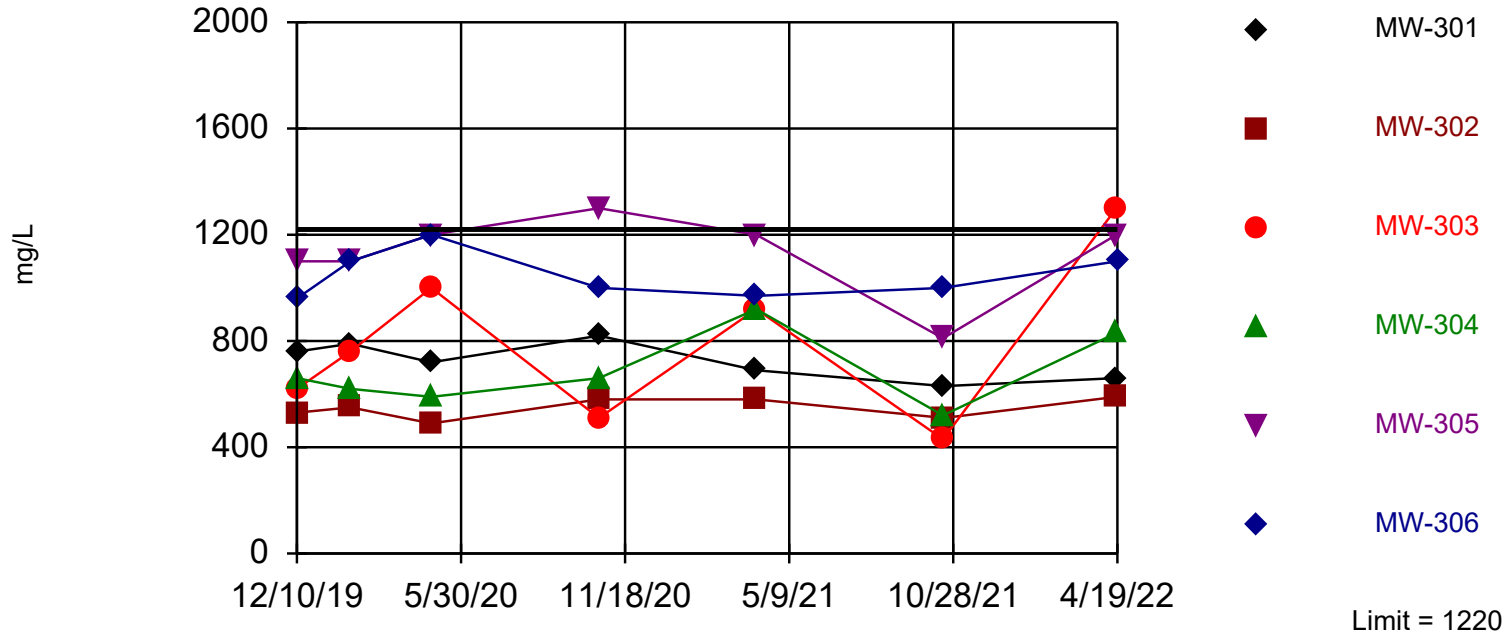
Constituent: Sulfate (mg/L) Analysis Run 6/29/2022 12:21 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	320	620	390	330	240	350	
2/4/2020	360	590	500	310	250	380	
4/29/2020	250	690	560	290	230	590	
7/7/2020							15
8/7/2020							17
10/22/2020	310	760	340	340	260	260	21
2/22/2021							19
4/5/2021	250	710	270	490	210	470	19
6/17/2021							19
7/22/2021							18
10/18/2021		470	320	300		240	
10/19/2021	310				260		22
4/18/2022	240	810		380	240	600	
4/19/2022			170				23

Exceeds Limit: MW-303

Total Dissolved Solids Interwell Parametric



Background Data Summary: Mean=857.8, Std. Dev.=140.7, n=9. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9486, critical = 0.764. Kappa = 2.546 (c=6, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.008742. Individual comparison alpha = 0.001462. Comparing 6 points to limit.

Prediction Limit Analysis Run 6/29/2022 12:09 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 6/29/2022 12:21 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	760	1100	960	660	530	620	
2/4/2020	790	1100	1100	620	550	760	
4/29/2020	720	1200	1200	590	490	1000	
7/7/2020							1100
8/7/2020							980
10/22/2020	820	1300	1000	660	580	510	940
2/22/2021							860
4/5/2021	690	1200	970	920	580	920	930
6/17/2021							750
7/22/2021							710
10/18/2021		810	1000	520		430	
10/19/2021	630				510		770
4/18/2022	660	1200		830	590	1300	
4/19/2022			1100				680

Attachment 4

Interwell Prediction Limit Analysis - Appendix IV parameters

Prediction Limit

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020 Printed 8/14/2022, 2:14 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Arsenic (ug/L)	MW-301	1.85	n/a	4/18/2022	3ND	No	9	22.22	ln(x)	0.000...	Param Inter 1 of 2
Arsenic (ug/L)	MW-302	1.85	n/a	4/18/2022	6.6J	No	9	22.22	ln(x)	0.000...	Param Inter 1 of 2
Arsenic (ug/L)	MW-303	1.85	n/a	4/18/2022	34	Yes	9	22.22	ln(x)	0.000...	Param Inter 1 of 2
Arsenic (ug/L)	MW-304	1.85	n/a	4/18/2022	3.3J	No	9	22.22	ln(x)	0.000...	Param Inter 1 of 2
Arsenic (ug/L)	MW-305	1.85	n/a	4/18/2022	3ND	No	9	22.22	ln(x)	0.000...	Param Inter 1 of 2
Arsenic (ug/L)	MW-306	1.85	n/a	4/19/2022	3ND	No	9	22.22	ln(x)	0.000...	Param Inter 1 of 2
Barium (ug/L)	MW-301	357	n/a	4/18/2022	71	No	9	0	No	0.000...	Param Inter 1 of 2
Barium (ug/L)	MW-302	357	n/a	4/18/2022	83	No	9	0	No	0.000...	Param Inter 1 of 2
Barium (ug/L)	MW-303	357	n/a	4/18/2022	140	No	9	0	No	0.000...	Param Inter 1 of 2
Barium (ug/L)	MW-304	357	n/a	4/18/2022	93	No	9	0	No	0.000...	Param Inter 1 of 2
Barium (ug/L)	MW-305	357	n/a	4/18/2022	82	No	9	0	No	0.000...	Param Inter 1 of 2
Barium (ug/L)	MW-306	357	n/a	4/19/2022	76	No	9	0	No	0.000...	Param Inter 1 of 2
Cadmium (ug/L)	MW-301	0.263	n/a	4/18/2022	0.23J	No	9	11.11	No	0.000...	Param Inter 1 of 2
Cadmium (ug/L)	MW-302	0.263	n/a	4/18/2022	0.22ND	No	9	11.11	No	0.000...	Param Inter 1 of 2
Cadmium (ug/L)	MW-303	0.263	n/a	4/18/2022	0.22ND	No	9	11.11	No	0.000...	Param Inter 1 of 2
Cadmium (ug/L)	MW-304	0.263	n/a	4/18/2022	0.22ND	No	9	11.11	No	0.000...	Param Inter 1 of 2
Cadmium (ug/L)	MW-305	0.263	n/a	4/18/2022	0.22ND	No	9	11.11	No	0.000...	Param Inter 1 of 2
Cadmium (ug/L)	MW-306	0.263	n/a	4/19/2022	0.22ND	No	9	11.11	No	0.000...	Param Inter 1 of 2
Cobalt (ug/L)	MW-301	7.83	n/a	4/18/2022	3.4	No	9	0	No	0.000...	Param Inter 1 of 2
Cobalt (ug/L)	MW-302	7.83	n/a	4/18/2022	0.38ND	No	9	0	No	0.000...	Param Inter 1 of 2
Cobalt (ug/L)	MW-303	7.83	n/a	4/18/2022	2	No	9	0	No	0.000...	Param Inter 1 of 2
Cobalt (ug/L)	MW-304	7.83	n/a	4/18/2022	0.78J	No	9	0	No	0.000...	Param Inter 1 of 2
Cobalt (ug/L)	MW-305	7.83	n/a	4/18/2022	0.38ND	No	9	0	No	0.000...	Param Inter 1 of 2
Cobalt (ug/L)	MW-306	7.83	n/a	4/19/2022	0.38ND	No	9	0	No	0.000...	Param Inter 1 of 2
Lead (ug/L)	MW-301	0.240	n/a	4/18/2022	0.96ND	No	9	88.89	n/a	0.01423	NP Inter (NDs) 1 of 2
Lead (ug/L)	MW-302	0.240	n/a	4/18/2022	0.96ND	No	9	88.89	n/a	0.01423	NP Inter (NDs) 1 of 2
Lead (ug/L)	MW-303	0.240	n/a	4/18/2022	0.96ND	No	9	88.89	n/a	0.01423	NP Inter (NDs) 1 of 2
Lead (ug/L)	MW-304	0.240	n/a	4/18/2022	0.96ND	No	9	88.89	n/a	0.01423	NP Inter (NDs) 1 of 2
Lead (ug/L)	MW-305	0.240	n/a	4/18/2022	0.96ND	No	9	88.89	n/a	0.01423	NP Inter (NDs) 1 of 2
Lead (ug/L)	MW-306	0.240	n/a	4/19/2022	0.96ND	No	9	88.89	n/a	0.01423	NP Inter (NDs) 1 of 2
Lithium (ug/L)	MW-301	5.30	n/a	4/18/2022	10ND	No	9	44.44	n/a	0.01423	NP Inter (normality) ...
Lithium (ug/L)	MW-302	5.30	n/a	4/18/2022	19J	No	9	44.44	n/a	0.01423	NP Inter (normality) ...
Lithium (ug/L)	MW-303	5.30	n/a	4/18/2022	67	Yes	9	44.44	n/a	0.01423	NP Inter (normality) ...
Lithium (ug/L)	MW-304	5.30	n/a	4/18/2022	10ND	No	9	44.44	n/a	0.01423	NP Inter (normality) ...
Lithium (ug/L)	MW-305	5.30	n/a	4/18/2022	21J	No	9	44.44	n/a	0.01423	NP Inter (normality) ...
Lithium (ug/L)	MW-306	5.30	n/a	4/19/2022	51	Yes	9	44.44	n/a	0.01423	NP Inter (normality) ...
Molybdenum (ug/L)	MW-301	3.40	n/a	4/18/2022	380	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Molybdenum (ug/L)	MW-302	3.40	n/a	4/18/2022	140	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Molybdenum (ug/L)	MW-303	3.40	n/a	4/18/2022	96	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Molybdenum (ug/L)	MW-304	3.40	n/a	4/18/2022	500	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Molybdenum (ug/L)	MW-305	3.40	n/a	4/18/2022	560	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Molybdenum (ug/L)	MW-306	3.40	n/a	4/19/2022	8.8	Yes	9	77.78	n/a	0.01423	NP Inter (NDs) 1 of 2
Selenium (ug/L)	MW-301	1.10	n/a	4/18/2022	3.8ND	No	8	87.5	n/a	0.01648	NP Inter (NDs) 1 of 2
Selenium (ug/L)	MW-302	1.10	n/a	4/18/2022	46	Yes	8	87.5	n/a	0.01648	NP Inter (NDs) 1 of 2
Selenium (ug/L)	MW-303	1.10	n/a	4/18/2022	3.8ND	No	8	87.5	n/a	0.01648	NP Inter (NDs) 1 of 2
Selenium (ug/L)	MW-304	1.10	n/a	4/18/2022	3.8ND	No	8	87.5	n/a	0.01648	NP Inter (NDs) 1 of 2
Selenium (ug/L)	MW-305	1.10	n/a	4/18/2022	3.8ND	No	8	87.5	n/a	0.01648	NP Inter (NDs) 1 of 2
Selenium (ug/L)	MW-306	1.10	n/a	4/19/2022	7.1J	No	8	87.5	n/a	0.01648	NP Inter (NDs) 1 of 2
Total Radium (pCi/L)	MW-301	5.85	n/a	4/18/2022	0.472	No	9	0	ln(x)	0.000...	Param Inter 1 of 2
Total Radium (pCi/L)	MW-302	5.85	n/a	4/18/2022	0.598	No	9	0	ln(x)	0.000...	Param Inter 1 of 2

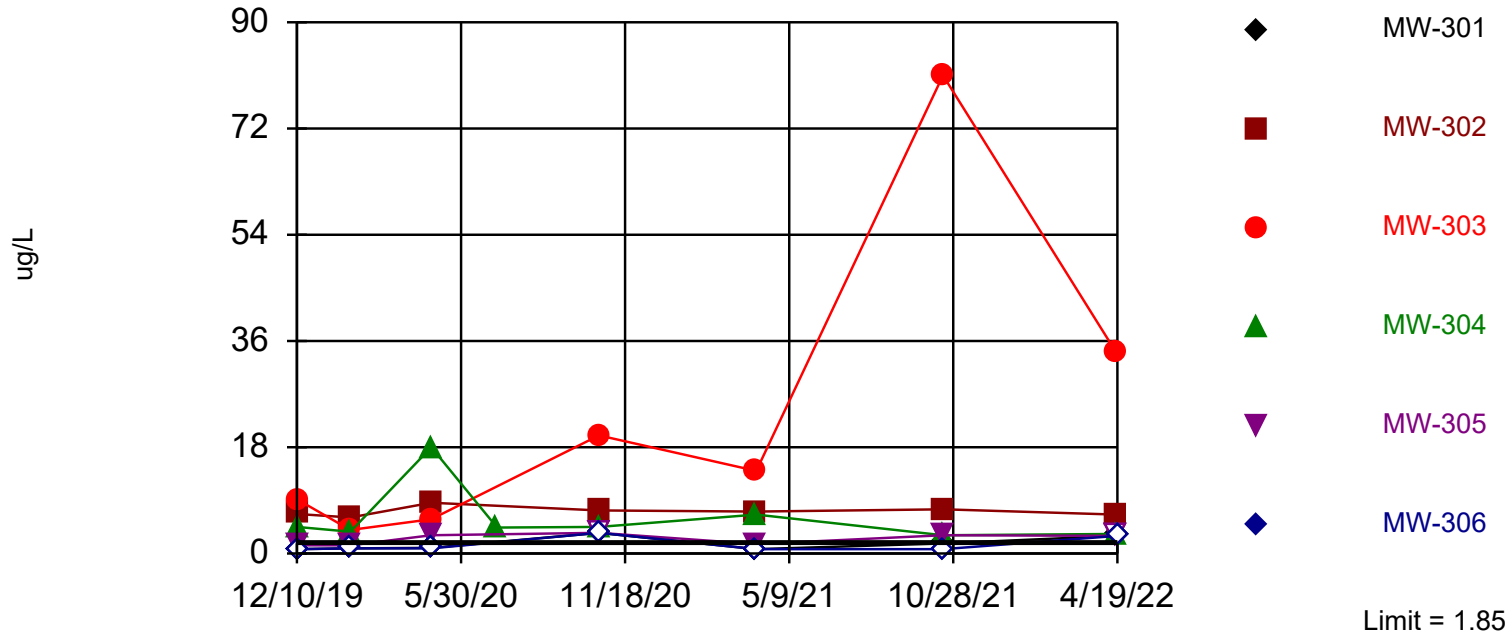
Prediction Limit

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020 Printed 8/14/2022, 2:14 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Total Radium (pCi/L)	MW-303	5.85	n/a	4/18/2022	1.72	No	9	0	ln(x)	0.000...	Param Inter 1 of 2
Total Radium (pCi/L)	MW-304	5.85	n/a	4/18/2022	0.898	No	9	0	ln(x)	0.000...	Param Inter 1 of 2
Total Radium (pCi/L)	MW-305	5.85	n/a	4/18/2022	0.496	No	9	0	ln(x)	0.000...	Param Inter 1 of 2
Total Radium (pCi/L)	MW-306	5.85	n/a	4/19/2022	0.154	No	9	0	ln(x)	0.000...	Param Inter 1 of 2

Exceeds Limit: MW-303

Arsenic Interwell Parametric



Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=-0.01154, Std. Dev.=0.2271, n=9, 22.22% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8429, critical = 0.764. Kappa = 2.765 (c=9, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.005836. Individual comparison alpha = 0.0009751. Comparing 6 points to limit.

Prediction Limit Analysis Run 8/14/2022 2:12 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

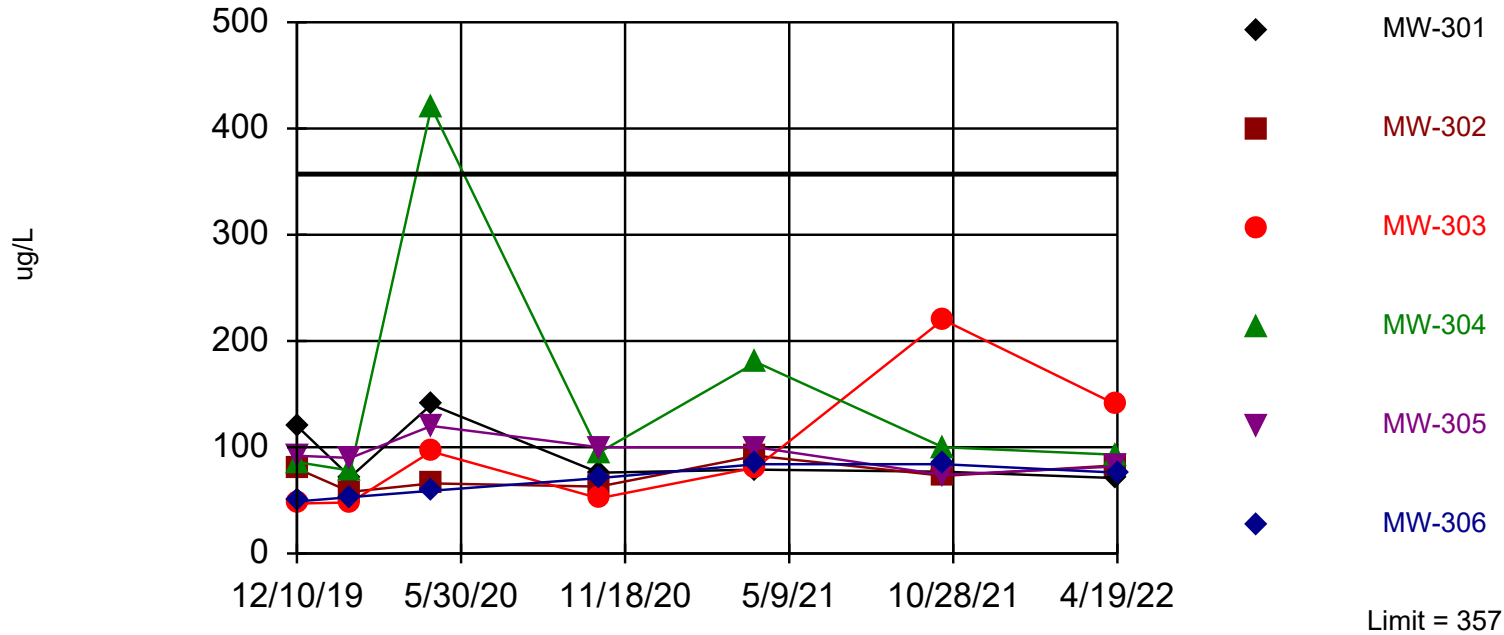
Constituent: Arsenic (ug/L) Analysis Run 8/14/2022 2:14 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-304	MW-305	MW-303	MW-306	MW-302	MW-307 (bg)
12/10/2019	<0.75 (U)	4.5	1.4 (J)	9.2	<0.75 (U)	6.7	
2/4/2020	<0.88 (U)	3.7	1.4 (J)	4	<0.88 (U)	6.1	
4/29/2020	0.95 (J)	18	3.1	5.8	<0.88 (U)	8.6	
7/7/2020		4.4					1.7 (J)
8/7/2020							1.1 (J)
10/22/2020	<3.5 (U)	4.5 (J)	<3.5 (U)	20	<3.5 (U)	7.3	0.92 (J)
2/22/2021							<0.75 (U)
4/5/2021	<0.75 (U)	6.6	1.6 (J)	14	<0.75 (U)	7.1	0.96 (J)
6/17/2021							<0.75 (U)
7/22/2021							0.98 (J)
10/18/2021		3.1	3.1	81	<0.75 (U)		
10/19/2021	1.7 (J)					7.5	0.99 (J)
4/18/2022	<3 (U)	3.3 (J)	<3 (U)	34		6.6 (J)	
4/19/2022					<3 (U)		1 (J)

Within Limit

Barium Interwell Parametric



Background Data Summary: Mean=313.3, Std. Dev.=15.81, n=9. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8581, critical = 0.764. Kappa = 2.765 (c=9, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.005836. Individual comparison alpha = 0.0009751. Comparing 6 points to limit.

Prediction Limit Analysis Run 8/14/2022 2:12 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

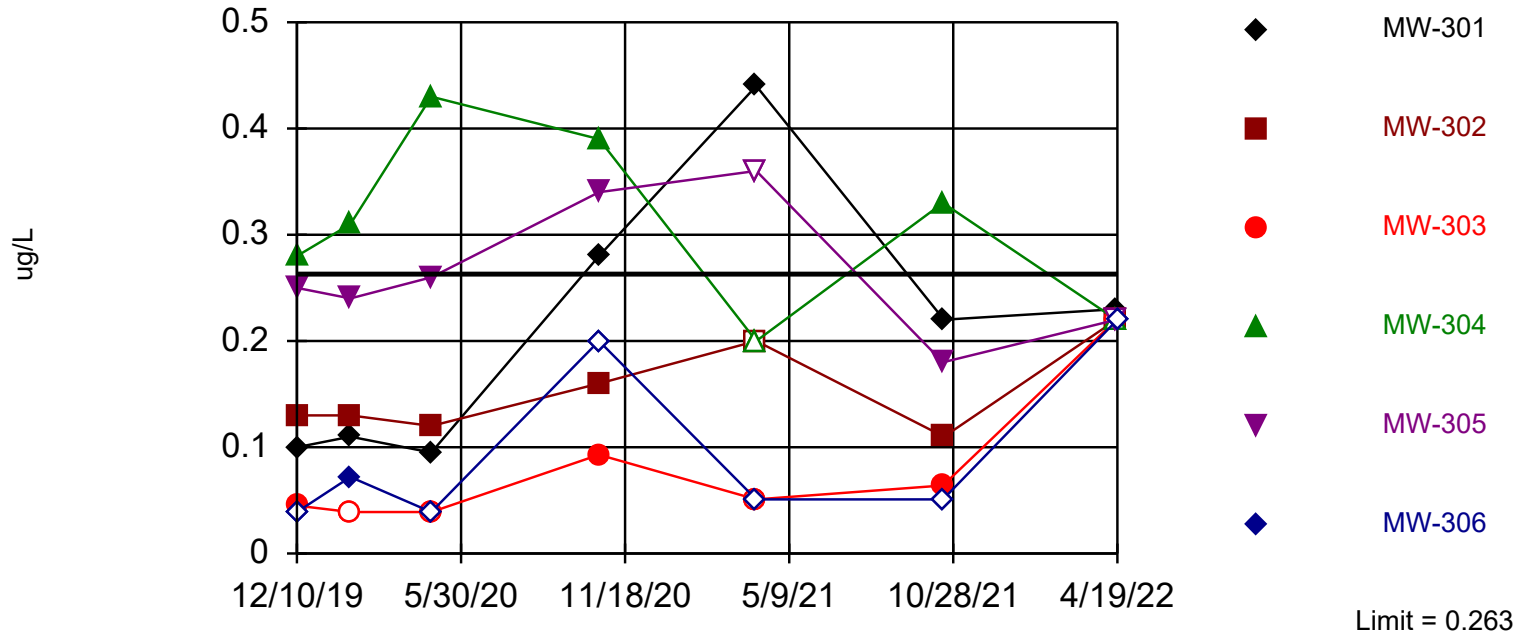
Constituent: Barium (ug/L) Analysis Run 8/14/2022 2:14 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	120	92	49	86	80	47	
2/4/2020	72	90	53	78	58	48	
4/29/2020	140	120	59	420	66	96	
7/7/2020							320
8/7/2020							330
10/22/2020	76	100	71	95	63	52	330
2/22/2021							310
4/5/2021	79	100	84	180	92	81	310
6/17/2021							310
7/22/2021							290
10/18/2021		74	84	100		220	
10/19/2021	77				73		330
4/18/2022	71	82		93	83	140	
4/19/2022			76				290

Within Limit

Cadmium Interwell Parametric



Background Data Summary: Mean=0.124, Std. Dev.=0.05029, n=9, 11.11% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8652, critical = 0.764. Kappa = 2.765 (c=9, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.005836. Individual comparison alpha = 0.0009751. Comparing 6 points to limit.

Prediction Limit Analysis Run 8/14/2022 2:12 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

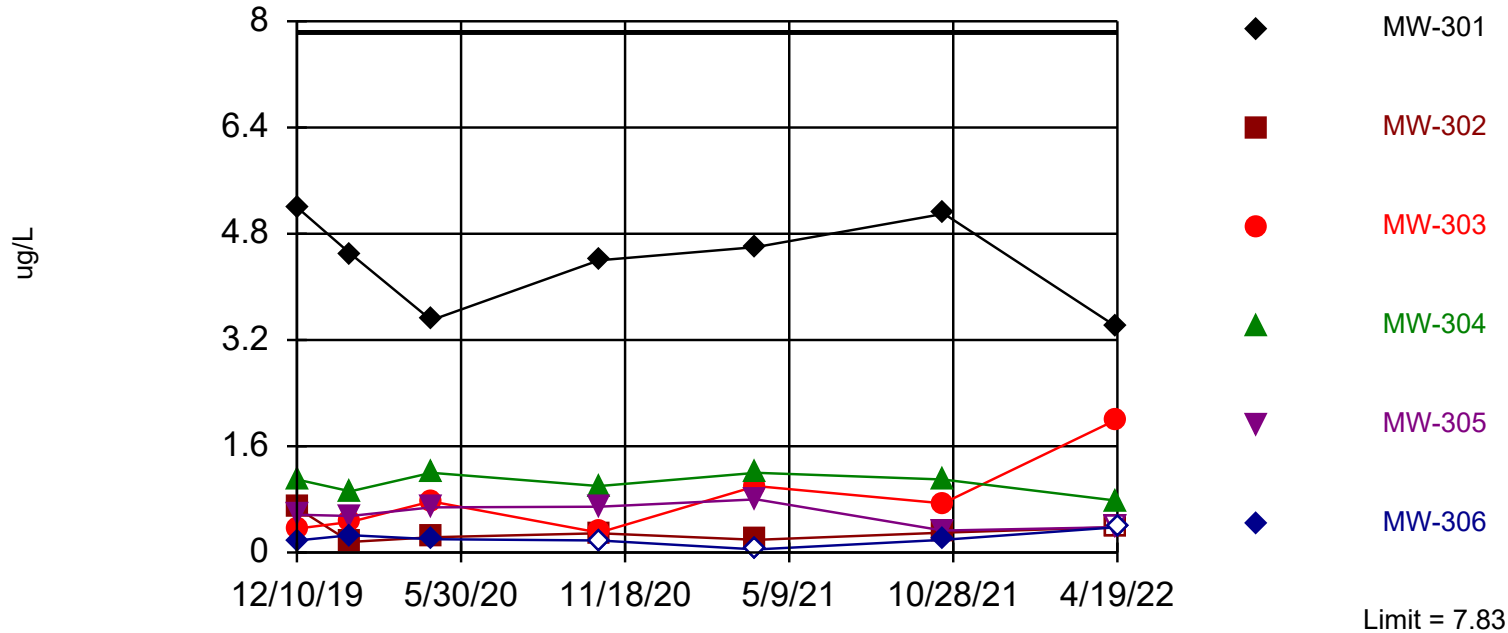
Constituent: Cadmium (ug/L) Analysis Run 8/14/2022 2:14 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	0.1	0.25	<0.039 (U)	0.28	0.13	0.045 (J)	
2/4/2020	0.11	0.24	0.072 (J)	0.31	0.13	<0.039 (U)	
4/29/2020	0.095 (J)	0.26	<0.039 (U)	0.43	0.12	<0.039 (U)	
7/7/2020							0.098 (J)
8/7/2020							0.13
10/22/2020	0.28 (J)	0.34 (J)	<0.2 (U)	0.39 (J)	0.16	0.093 (J)	0.13
2/22/2021							0.21
4/5/2021	0.44	<0.36 (U)	<0.051 (U)	<0.2 (U)	<0.2	<0.051 (U)	<0.2 (U)
6/17/2021							0.11
7/22/2021							0.083 (J)
10/18/2021		0.18	<0.051 (U)	0.33		0.064 (J)	
10/19/2021	0.22				0.11		0.085 (J)
4/18/2022	0.23 (J)	<0.22 (U)		<0.22 (U)	<0.22 (U)	<0.22 (U)	
4/19/2022			<0.22 (U)				0.07 (J)

Within Limit

Cobalt Interwell Parametric



Background Data Summary: Mean=3.5, Std. Dev.=1.564, n=9. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9378, critical = 0.764. Kappa = 2.765 (c=9, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.005836. Individual comparison alpha = 0.0009751. Comparing 6 points to limit.

Prediction Limit Analysis Run 8/14/2022 2:12 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

Constituent: Cobalt (ug/L) Analysis Run 8/14/2022 2:14 PM

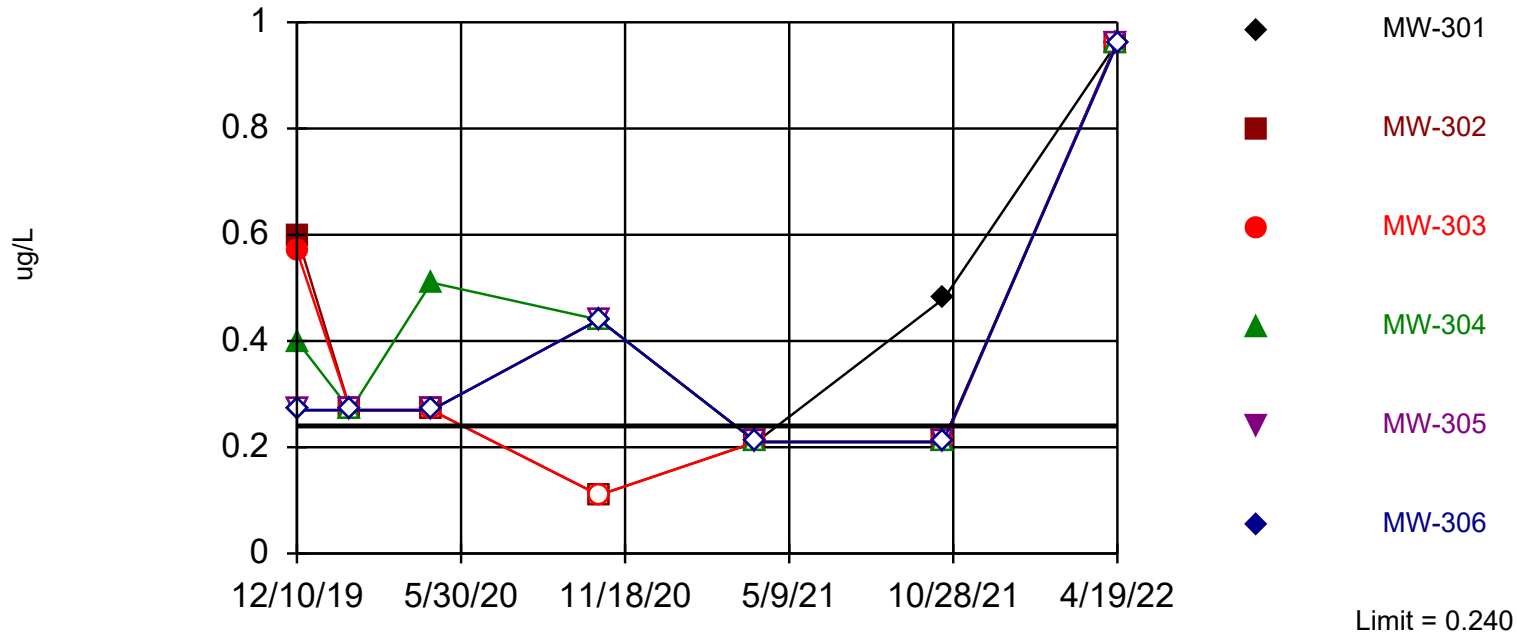
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	5.2	0.57	0.18 (J)	1.1	0.67	0.36 (J)	
2/4/2020	4.5	0.55	0.26 (J)	0.92	0.16 (J)	0.46 (J)	
4/29/2020	3.5	0.68	0.2 (J)	1.2	0.23 (J)	0.77	
7/7/2020							6.3
8/7/2020							1.9
10/22/2020	4.4	0.69 (J)	<0.36 (U)	1 (J)	0.29 (J)	0.3 (J)	2.4
2/22/2021							3
4/5/2021	4.6	0.8	<0.091 (U)	1.2	0.19 (J)	1	3.4
6/17/2021							3.1
7/22/2021							1.6
10/18/2021		0.33 (J)	0.19 (J)	1.1		0.74	
10/19/2021	5.1				0.3 (J)		4.8
4/18/2022	3.4	<0.76 (U)		0.78 (J)	<0.76 (U)	2	
4/19/2022			<0.76 (U)				5

Within Limit

Lead

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 9 background values. 88.89% NDs. Annual per-constituent alpha = 0.158. Individual comparison alpha = 0.01423 (1 of 2). Comparing 6 points to limit.

Prediction Limit Analysis Run 8/14/2022 2:12 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

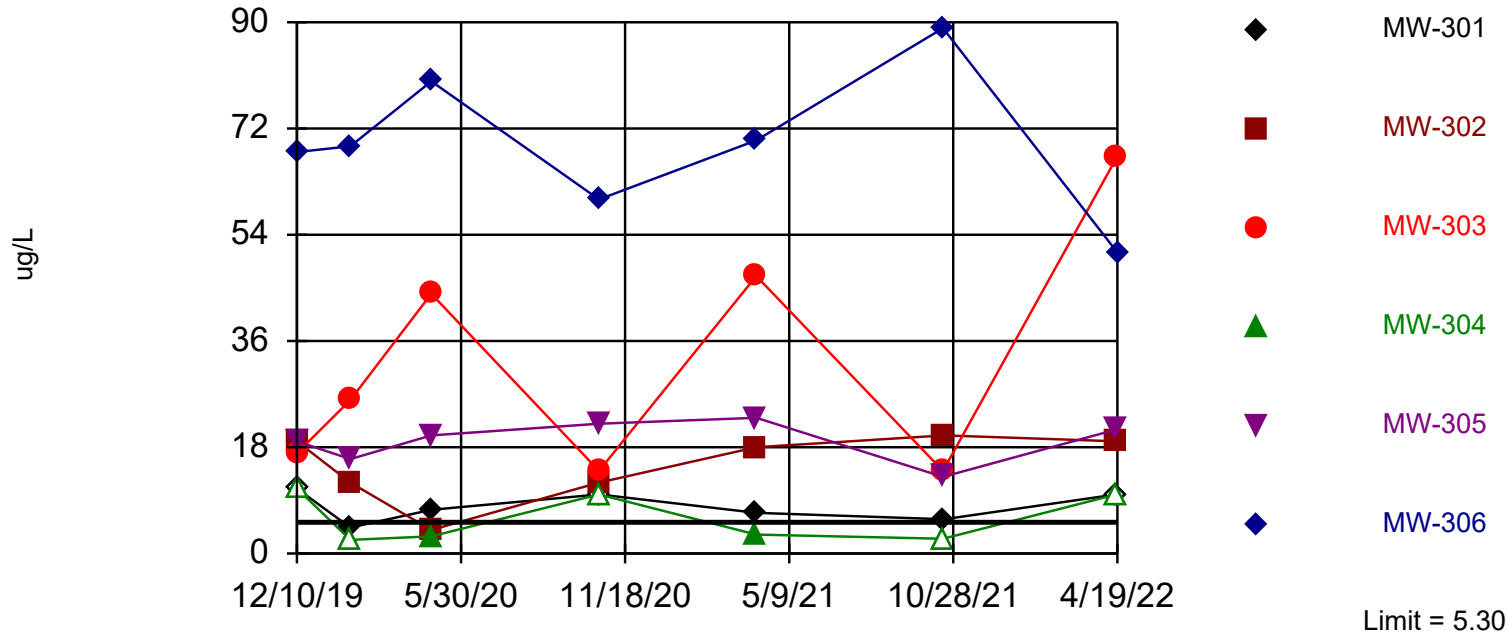
Constituent: Lead (ug/L) Analysis Run 8/14/2022 2:14 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	<0.27 (U)	<0.27 (U)	<0.27 (U)	0.4 (J)	0.6	0.57	
2/4/2020	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	<0.27 (U)	
4/29/2020	<0.27 (U)	<0.27 (U)	<0.27 (U)	0.51	<0.27 (U)	<0.27 (U)	
7/7/2020							0.12 (J)
8/7/2020							<0.11 (U)
10/22/2020	<0.44 (U)	<0.44 (U)	<0.44 (U)	<0.44 (U)	<0.11 (U)	<0.11 (U)	<0.11 (U)
2/22/2021							<0.21 (U)
4/5/2021	<0.21 (U)	<0.21 (U)	<0.21 (U)	<0.21 (U)	<0.21 (U)	<0.21 (U)	<0.21 (U)
6/17/2021							<0.21 (U)
7/22/2021							<0.21 (U)
10/18/2021		<0.21 (U)	<0.21 (U)	<0.21 (U)		<0.21 (U)	
10/19/2021	0.48 (J)				<0.21 (U)		<0.21 (U)
4/18/2022	<0.96 (U)	<0.96 (U)		<0.96 (U)	<0.96 (U)	<0.96 (U)	
4/19/2022			<0.96 (U)				<0.24 (U)

Exceeds Limit: MW-303, MW-306

Lithium Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 9 background values. 44.44% NDs. Annual per-constituent alpha = 0.158. Individual comparison alpha = 0.01423 (1 of 2). Comparing 6 points to limit.

Prediction Limit Analysis Run 8/14/2022 2:12 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

Constituent: Lithium (ug/L) Analysis Run 8/14/2022 2:14 PM

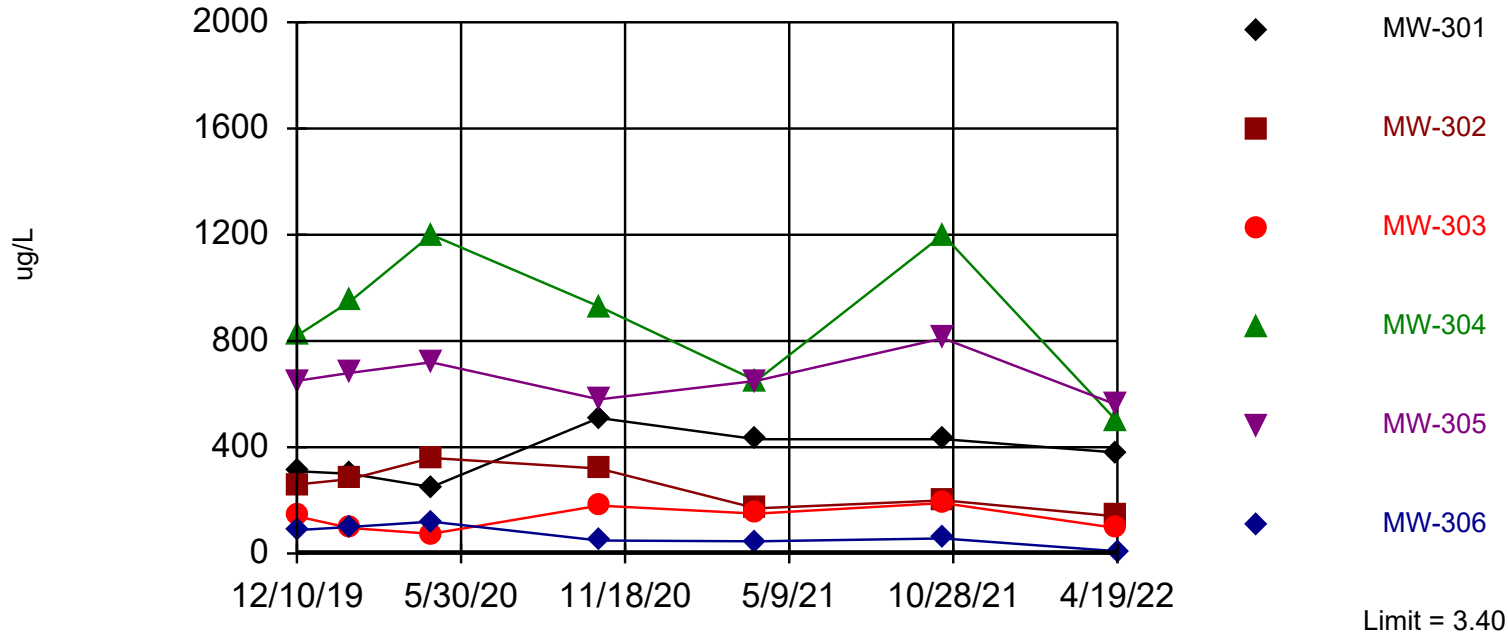
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	<11 (U)	19 (J)	68	<11 (U)	19 (J)	17	
2/4/2020	4.4 (J)	16	69	<2.3 (U)	12	26	
4/29/2020	7.4 (J)	20	80	2.9 (J)	4 (J)	44	
7/7/2020							<2.5 (U)
8/7/2020							<2.5 (U)
10/22/2020	<10 (U)	22 (J)	60	<10 (U)	12	14	3 (J)
2/22/2021							3.3 (J)
4/5/2021	6.9 (J)	23	70	3.2 (J)	18	47	2.5 (J)
6/17/2021							<2.5 (U)
7/22/2021							<2.5 (U)
10/18/2021		13	89	<2.5 (U)		14	
10/19/2021	5.8 (J)				20		4.8 (J)
4/18/2022	<10 (U)	21 (J)		<10 (U)	19 (J)	67	
4/19/2022			51				5.3 (J)

Exceeds Limit: MW-301, MW-302, MW-303,
MW-304, MW-305, MW-306

Molybdenum

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 9 background values. 77.78% NDs. Annual per-constituent alpha = 0.158. Individual comparison alpha = 0.01423 (1 of 2). Comparing 6 points to limit.

Prediction Limit Analysis Run 8/14/2022 2:12 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

Constituent: Molybdenum (ug/L) Analysis Run 8/14/2022 2:14 PM

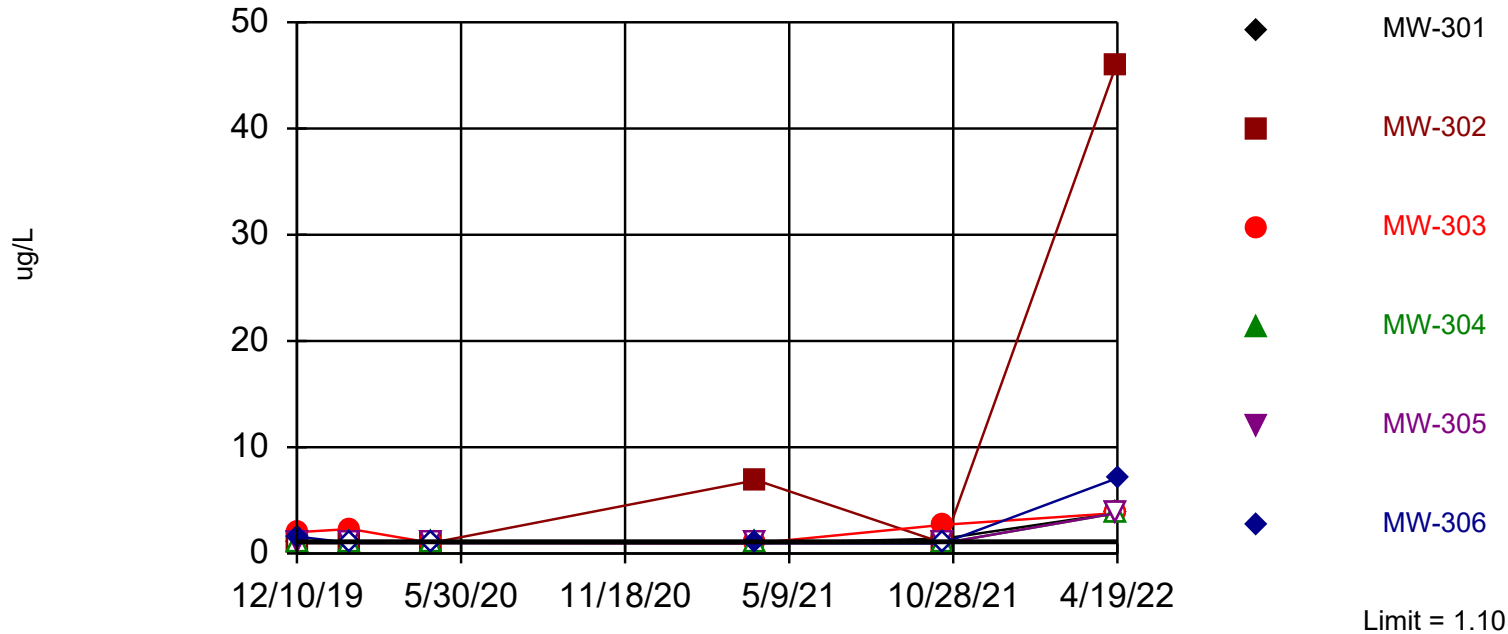
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	310	650	88	820	260	140	
2/4/2020	300	680	100	950	280	96	
4/29/2020	250	720	120	1200	360	74	
7/7/2020							2.5
8/7/2020							<1.1 (U)
10/22/2020	510	580	49	930	320	180	<1.1 (U)
2/22/2021							<1.3 (U)
4/5/2021	430	650	46	650	170	150	3.4
6/17/2021							<1.3 (U)
7/22/2021							<1.3 (U)
10/18/2021		810	57	1200		190	
10/19/2021	430				200		<1.3 (U)
4/18/2022	380	560		500	140	96	
4/19/2022			8.8				<1.2 (U)

Exceeds Limit: MW-302

Selenium

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 87.5% NDs. Annual per-constituent alpha = 0.1808. Individual comparison alpha = 0.01648 (1 of 2). Comparing 6 points to limit.

Prediction Limit Analysis Run 8/14/2022 2:12 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

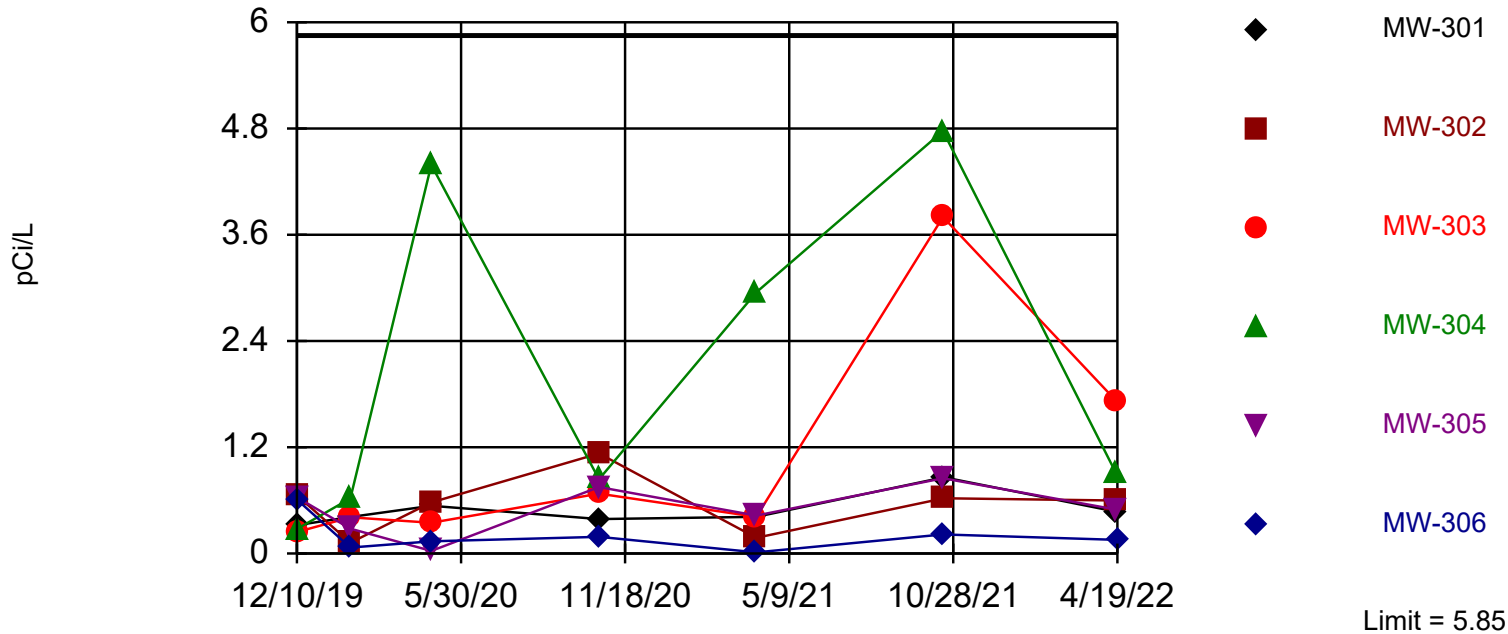
Constituent: Selenium (ug/L) Analysis Run 8/14/2022 2:14 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-304	MW-306	MW-303	MW-302	MW-305	MW-307 (bg)
12/10/2019	<1 (U)	<1 (U)	1.6 (J)	2 (J)	<1 (U)	<1 (U)	
2/4/2020	<1 (U)	<1 (U)	<1 (U)	2.3 (J)	<1 (U)	<1 (U)	
4/29/2020	<1 (U)	<1 (U)	<1 (U)	<1 (U)	<1 (U)	<1 (U)	
7/7/2020							<1 (U)
8/7/2020							<1 (U)
2/22/2021							<0.96 (U)
4/5/2021	<0.96 (U)	<0.96 (U)	1 (J)	<0.96 (U)	6.9	<0.96 (U)	<0.96 (U)
6/17/2021							<0.96 (U)
7/22/2021							<0.96 (U)
10/18/2021		<0.96 (U)	<0.96 (U)	2.7 (J)		<0.96 (U)	
10/19/2021	1.4 (J)				<0.96 (U)		<0.96 (U)
4/18/2022	<3.8 (U)	<3.8 (U)		<3.8 (U)	46	<3.8 (U)	
4/19/2022			7.1 (J)				1.1 (J)

Within Limit

Total Radium Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=-0.2831, Std. Dev.=0.7413, n=9. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9001, critical = 0.764. Kappa = 2.765 (c=9, w=6, 1 of 2, event alpha = 0.05132). Report alpha = 0.005836. Individual comparison alpha = 0.0009751. Comparing 6 points to limit.

Prediction Limit Analysis Run 8/14/2022 2:12 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Prediction Limit

Constituent: Total Radium (pCi/L) Analysis Run 8/14/2022 2:14 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-305	MW-306	MW-304	MW-302	MW-303	MW-307 (bg)
12/10/2019	0.321	0.634	0.61	0.277	0.659	0.242	
2/4/2020	0.413	0.28	0.068	0.622	0.122	0.409	
4/29/2020	0.538	0.0301	0.137	4.39	0.577	0.348	
7/7/2020							0.841
8/7/2020							0.666
10/22/2020	0.388	0.75	0.189	0.839	1.13	0.676	0.623
2/22/2021							3.46
4/5/2021	0.414	0.429	0.0138	2.95	0.178	0.415	0.54
6/17/2021							0.629
7/22/2021							0.238
10/18/2021		0.849	0.216	4.77		3.8	
10/19/2021	0.861				0.624		1.46
4/18/2022	0.472	0.496		0.898	0.598	1.72	
4/19/2022			0.154				0.549