2023 Annual Groundwater Monitoring and Corrective Action Report

M.L. Kapp Generating Station
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Prepared for:

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25224077.00 | July 30, 2024

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OVERVIEW OF CURRENT STATUS

M.L. Kapp Generating Station
2023 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	SSIs initially determined on July 18, 2019, based on April 2019 monitoring results. In 2023, SSIs for semiannual events for compliance wells at the waste boundary included the following; see **Table 5** for complete results. <u>May 2023</u> Boron: MW-301, MW-302, MW-303, MW-304, MW-305, MW-306 Chloride: MW-306 Sulfate: MW-301, MW-302, MW-303, MW-304, MW-305, MW-306

Category	Rule Requirement	Site Status
		October 2023 Boron: MW-301, MW-302, MW-303, MW-304, MW-305, MW-306 Chloride: MW-306 Sulfate: MW-301, MW-302, MW-303, MW-304, MW-305, MW-306
	(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;	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. Lithium: Initially determined to be at an SSL above the GPS on August 5, 2021, at compliance monitoring well MW-306. Arsenic: Initially determined to be at an SSL above the GPS following the March 6, 2023, statistical analysis of the November 2022 sampling event at monitoring well MW-303.

Category	Rule Requirement	Site Status
		For the 2023 monitoring events, compliance wells/parameters determined to be at SSL above the GPS were as follows:
		<u>May 2023</u> Arsenic: MW-303 Lithium: MW-306 Molybdenum: MW-301, MW-302, MW-304, MW-305 <u>October 2023</u> Lithium: MW-306 Molybdenum: MW-301, MW-302, MW-304, MW-305 Note: See **Table 5** for complete results from 2023.
	(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.	March 11, 2021 (Molybdenum) Updated ACM information for lithium and arsenic will be included with the Selection of Remedy Report, which is in progress.
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

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1.0 INTRODUCTION

This 2023 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 2023 Annual Groundwater Monitoring and Corrective Action Report for the CCR unit.

This report covers the period of groundwater monitoring from January 1, 2023, through December 31, 2023.

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 2023, the groundwater monitoring system consisted of one upgradient background well, six downgradient compliance wells at the waste boundary, five downgradient delineation wells, one sidegradient/downgradient delineation well, and two sidegradient supplemental background wells (Table 1, Figure 1, and Figure 2). Note that MW-313 can also be downgradient of MW-311, depending on the seasonal direction of groundwater flow when measurements are made.

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 feet 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. Wells MW-312 and MW-313, installed in February 2023, encountered limestone bedrock at 17 feet bgs to a total depth of 66 in MW-312; and encountered bedrock at 7 feet bgs to 27 feet bgs in MW-313. The boring logs for monitoring wells MW-301 through MW-314A are provided in **Appendix B**.

Shallow groundwater at the site generally flows to the southeast and east; however, historically the groundwater flow direction has been variable and the hydraulic gradient at the water table is generally relatively flat across the CCR Unit. Shallow groundwater flow on the site is influenced by water levels in a ditch to the south of the pond closure area (MW-303) and a small creek to the east, as well as the Mississippi River to the south and southeast. The groundwater flow patterns for May 2023 and October 2023 are shown on **Figures 3** and **4**, respectively. In May and October 2023, the groundwater flow direction was primarily toward the Mississippi 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, MW-302, MW-303, MW-304, MW-305, and 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, MW-311A, and MW-313. Downgradient delineation well MW-304A was installed in February 2021, and wells 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.

Well MW-312 was installed in February 2023 for the purpose of collecting additional background water quality data in the bedrock aquifer near the site. The sidegradient delineation well MW-313 was installed in February 2023 as an additional downgradient well to provide additional groundwater elevation data and to delineate concentrations detected at MW-311.

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.

From 2020 through 2023, multiple attempts were made to negotiate with additional off-site property owners for the installation of delineation wells on their properties. An access agreement was successfully negotiated in 2023 to install an additional off-site nested delineation water table well and piezometer with one neighboring property. The well installations were scheduled for early 2024.

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;

Wells MW-312 and MW-313 were installed in 2023. MW-312 was installed to provide additional background water quality data in the bedrock near the site. MW-313 was installed as an additional sidegradient/downgradient well in the highway right-of-way to provide additional groundwater elevation data and to delineate the concentrations detected at MW-311.

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;

Two groundwater sampling events were completed for the KAP CCR unit in 2023. Semiannual sampling events were completed in May and October 2023, as required by the assessment monitoring program.

A summary of the 2023 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 May and October events were analyzed for both Appendix III and Appendix IV constituents.

The sampling results for Appendix III and Appendix IV parameters in 2023 are summarized in Table 5. Field parameter results for the 2023 sampling events are provided in Table 6. The analytical laboratory reports for 2023 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 2023.

Assessment monitoring for KAP was initiated in January 2020 and continued through 2023. 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. Arsenic was added to the selection of remedy process, following a determination that arsenic was at an SSL above the GPS at MW-303 in the evaluation of the November 2022 monitoring event.

The statistical evaluation of the May 2023 assessment monitoring event was completed in September 2023. Statistical evaluation of the October 2023 assessment monitoring results was completed in March 2024.

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, molybdenum. The LCLs were calculated with Sanitas™ using historical concentrations measured since assessment monitoring began in January 2020. The LCL evaluations completed for the May and October 2023 events are provided in **Appendix E**.

Consistent with previous determinations, arsenic, lithium, and molybdenum were determined to be at SSLs above the GPS's in the evaluation of the 2023 assessment monitoring results. The selection of remedy process continues, 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 2023 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.

- Requested and received approval from the Iowa Department of Transportation to relocate the planned Highway 67 right-of-way well to the opposite side of a walking path to avoid conflict with an underground gas line. (January 2023).
- Installed and developed supplemental background well MW-312 (February 2023).
- Installed and developed delineation well MW-313 within the Highway 67 right-of-way (February 2023).
- Performed statistical evaluation for the November 2022 assessment monitoring event in the Assessment Groundwater Monitoring Results letter– November 2022 dated March 6, 2023.

- Completed hydraulic conductivity testing, surveying, and initial sample collection for newly installed monitoring wells MW-312 and MW-313 (April 2023).
- Completed first semiannual groundwater sampling and analysis event (May 2023).
- Met with neighboring property owner personnel to negotiate property access for potential well installation (June 2023).
- Prepared Monitoring Well Construction Report for MW-312 and MW-313 (July 2023).
- Completed Annual Groundwater Monitoring and Corrective Action Report (August 2023).
- Sent revised Access Agreement to neighboring property owner reflecting agreed upon well location as identified during site visit (August 2023).
- Completed statistical evaluation for the May 2023 assessment monitoring event (September 2023).
- Two Semiannual progress reports for Selection of Remedy completed (March 2023 and September 2023).
- Completed second semiannual groundwater sampling and analysis event (October 2023).
- Access obtained for installation of off-site monitoring well nest on neighboring property (October 2023).

Description of Any Problems Encountered. No problems were encountered during the groundwater sampling events in 2023.

Discussion of Actions to Resolve the Problems. Not applicable.

Projection of Key Activities for the Upcoming Year (2024):

- Install additional delineation monitoring wells on neighboring property MW-314 and MW-314A (completed February 2024).
- Drill and sample CCR borings to characterize the CCR materials and identify the elevation of the native soil contact beneath the Ash Pond.
- Conduct groundwater pumping test to evaluate the feasibility of hydraulic controls to contain groundwater plumes, define the capture zone and effective pumping rates for a full-scale groundwater remediation system.
- Complete statistical evaluation and determination of any SSLs exceeding the GPS for the October 2023 monitoring event (completed March 1, 2024, and provided in **Appendix E**).
- Collect samples in two semiannual groundwater sampling and analysis events (April and October 2024).

- Two Semiannual progress reports for Selection of Remedy (March and September 2024).
- Statistical evaluation and determination of any SSLs exceeding the GPS for the April 2024 monitoring event.
- Prepare an ACM Addendum with an updated site conceptual model that includes arsenic in addition to treatment options for molybdenum and lithium.
- Conduct a public meeting for the ACM Addendum.
- Continue to evaluate if additional off-site groundwater delineation wells are necessary and pursue access agreements if so.

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 2023 assessment monitoring results, background upper prediction limits (UPLs), and GPSs established for the site are provided in Table 5.

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 2023.

The 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

Table 1. Groundwater Monitoring Well Network
M.L. Kapp Generating Station / SCS Engineers Project #25224077.00

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
MW-312	Sidegradient	Supplemental Background
MW-313	Sidegradient/Downgradient	Delineation

Notes:
(1) Groundwater data from MW-310 and MW-312 are not used in statistical evaluations.
(2) MW-313 can be either sidegradient or downgradient of MW-311, depending on time of sampling event.

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Last revision by: NLB Date: 3/22/2024
Checked by: RM Date: 3/26/2024

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Table 2. Groundwater Sample Summary
M.L. Kapp Generating Station / SCS Engineers Project #25224077.00

Sample Dates	Background Well	Supplemental Background Wells		Compliance Wells						Delineation Wells					
	MW-307	MW-310	MW-312	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-304A	MW-308	MW-309	MW-311	MW-311A	MW-313
5/1-4/2023	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
10/24-26/2023	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Total Samples	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Abbreviations:
A = Assessment Monitoring Program

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Table 3. Water Level Summary
IPL - M.L. Kapp / SCS Engineers Project #25224077.00

Ground Water 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**	**MW-312**	**MW-313**
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	594.28	588.24
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	5.00	10.00
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	65.90	26.10
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	533.38	572.14
Measurement Date															
March 28, 2018	577.65	576.62	577.37	577.05	NI	576.58	577.93	NI	NI	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	NI	NI
June 25, 2018	578.57	578.04	577.24	570.77	NI	571.28	576.93	NI	NI	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	NI	NI
October 5, 2018	580.04	579.88	579.74	579.32	NI	579.15	579.46	NI	NI	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	NI	NI
January 10, 2019	577.36	577.05	579.06	578.56	NI	578.84	579.47	NI	NI	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	NI	NI
April 9, 2019	585.25	585.29	584.61	585.25	NI	585.23	585.29	NI	NI	NI	NI	NI	NI	NI	NI
September 6, 2019	--	--	--	--	NI	577.42	--	NI	NI	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	NI	NI
December 10, 2019	577.39	577.41	578.90	578.85	NI	578.89	579.49	NI	NI	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	NI	NI
April 29, 2020	578.76	579.38	580.82	580.95	NI	580.40	580.70	--	NI	NI	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	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	NI	NI
August 7, 2020	--	--	--	--	NI	--	--	593.06	NI	NI	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	NI	NI
February 9, 2021	--	--	--	--	570.48	--	--	--	NI	NI	NI	NI	NI	NI	NI
February 22, 2021	--	--	--	573.90	573.92	--	--	592.12	NI	NI	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	NI	NI
June 17, 2021	--	--	--	--	--	--	--	593.33	576.05	571.84	NI	NI	NI	NI	NI
July 22, 2021	--	--	--	--	--	--	--	592.65	--	--	NI	NI	NI	NI	NI
October 5, 2021	--	--	--	--	--	--	--	--	--	--	588.92	NI	NI	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	NI	NI
December 30, 2021	--	--	--	--	--	--	--	--	--	--	--	572.33	572.54	NI	NI
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	NI	NI
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	NI	NI
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	NI	NI
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	NI	NI
February 21, 2023	--	--	--	--	--	--	--	--	--	--	--	--	--	572.53	573.54
May 1-4, 2023	586.13	586.44	585.50	586.17	586.14	586.15	586.28	593.89	585.90	585.33	589.98	583.83	583.44	577.84	577.93
October 24-26,2023	576.21	573.31	574.45	573.43	573.53	573.29	574.58	590.47	573.76	571.70	589.30	572.75	573.05	573.84	573.34
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	528.38	562.14

Notes:
-- = Location not measured NI = Not Installed

Created by: AJR Date: 10/9/2018
Last rev. by: BAS Date: 11/6/2023
Checked by: RM Date: 11/6/2023

I:\25224077.00\Deliverables\2023 - Federal Annual Report\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 #25224077.00
January - December 2023

	South/Southwest				
Sampling Dates	**h1 (ft)**	**h2 (ft)**	**Δl (ft)**	**Δh/Δl (ft/ft)**	**V (ft/d)**
5/1-4/2023	586.13	586.28	1670	0.000	0.00

	Southeast				
Sampling Dates	**h1 (ft)**	**h2 (ft)**	**Δl (ft)**	**Δh/Δl (ft/ft)**	**V (ft/d)**
10/24-26/2023	576.21	573.43	1270	0.002	0.084

Wells	**K Values (cm/sec)**	**K Values (ft/d)**
MW-301	5.30E-02	150
MW-302	3.11E-03	8.8
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

Assumed Porosity, n
0.40

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 Date: 3/10/2023
Last revision by: NLB Date: 4/5/2024
Checked by: JM Date: 5/3/2024

I:\25224077.00\Deliverables\2023 - Federal Annual Report\Tables\[Table 4A - Horizontal Gradients and Flow Velocity Table.xlsx]Sheet1

Table 4B. Vertical Gradients
IPL - M.L. Kapp / SCS Engineers Project #25224077.00
2023

Vertical Hydraulic Gradients	**MW-304/MW-304A**		**MW-311/MW-311A**	
Shallow Well	MW-304		MW-311	
Screen midpoint[(2)] (feet amsl)	569.87		567.79	
Deep Well	MW-304A		MW-311A	
Screen midpoint (feet amsl)	539.38		522.79	
Measurement Date	**Distance Between Midpoints[(2)] (ft)**	**Vertical Gradient (ft/ft)**	**Distance Between Midpoints[(2)] (ft)**	**Vertical Gradient (ft/ft)**
May 1-4, 2023	30.5	-0.001	45.0	-0.009
October 24-26, 2023	30.5	0.006	45.0	0.007

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:	NLB	Date:	4/5/2024
Checked by:	JM	Date:	5/3/2024
Proj Mgr QA/QC:	TK	Date:	7/30/2024

I:\25224077.00\Deliverables\2023 - Federal Annual Report\Tables\[Table 4B - Groundwater Vertical Gradients 2023.xls]Table 4B - Vert Gradients

Table 5. Groundwater Analytical Results Summary - Assessment Monitoring
M.L. Kapp Generating Station / SCS Engineers Project #25224077.00

Parameter Name	UPL Method	UPL	GPS	Background Well		Supplemental Background Wells				Compliance Wells											
				MW-307		MW-310		MW-312		MW-301		MW-302		MW-303		MW-304		MW-305		MW-306	
				5/2/2023	10/24/2023	5/4/2023	10/26/2023	5/3/2023	10/24/2023	5/2/2023	10/25/2023	5/1/2023	10/25/2023	5/2/2023	10/25/2023	5/2/2023	10/25/2023	5/2/2023	10/25/2023	5/2/2023	10/25/2023
Appendix III																					
Boron, µg/L	NP	280		170	<76	1000	1000	370	160	11,000	12,000	5,500	6,700	2400	4,100	8,700	8,800	14,000	9,000	3,900	13,000
Calcium, mg/L	P	294		260	170	110	110	78	67	110	120	140	140	210	80	81	110	210	130	120	160
Chloride, mg/L	P	91.9		64	60	74	67	10	9.5	63	79	8.1	13	14	19	27	21	12	20	99	250
Fluoride, mg/L	DQ	DQ		<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	0.51 J	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Field pH, Std. Units	NP	7.71		6.59	6.34	6.69	6.95	7.00	7.13	6.51	6.53	7.16	7.15	6.73	7.05	6.93	6.76	6.58	7.18	6.79	6.88
Sulfate, mg/L	P	25.6		26	23	130	120	33	25	220	200	230	410	680	310	260	390	650	480	72	200
Total Dissolved Solids, mg/L	P	1,220		1000	720	620	660	290	330	610	660	590	770	1,000	660	520	850	1,200	990	660	1,100
Appendix IV																					
B = Compound was found in the blank and sample.	DQ	DQ	6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0
Arsenic, ug/L	P	1.85	10	3.1	0.99 J	<0.53	<0.53	<0.53	<0.53	<1.1	0.75 J	5.2	7.8	44	9.9	4.1	2.4	<1.1	1.7 J	<0.53	<0.53
Barium, ug/L	P	357	2,000	360	410	43	43	63	44	64	75	75	97	97	61	83	110	87	79	45	110
Beryllium, ug/L	DQ	DQ	4	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.66	<0.33	<0.66	<0.33	<0.33	<0.33	<0.66	<0.33	<0.66	<0.33	<0.33	<0.33
Cadmium, ug/L	P	0.263	5	0.33	<0.10	<0.10	<0.10	<0.10	<0.10	0.22 J	0.27	<0.20	0.13 J	0.19 J	<0.10	<0.20	0.34	0.20 J	0.16 J	<0.10	<0.10
Chromium, ug/L	DQ	DQ	100	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<2.2	1.9 J	<2.2	1.4 J	1.2 J	<1.1	<2.2	<1.1	<2.2	<1.1	<1.1	<1.1
Cobalt, ug/L	P	7.83	7.83	6.8	6.8	0.45 J	0.55	<0.17	<0.17	3.5	4.3	<0.34	0.31 J	1.8	0.64	0.53 J	1.6	0.77 J	0.39 J	<0.17	<0.17
Fluoride, mg/L	DQ	DQ	4	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	0.51 J	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Lead, ug/L	NP	0.240	15	0.37 J	<0.24	0.40 J	<0.24	<0.24	<0.24	<0.48	<0.24	<0.48	<0.24	<0.24	<0.24	<0.48	<0.24	<0.48	<0.24	0.48 J	<0.24
Lithium, ug/L	NP	5.3	40	<2.5	6.5 J	2.9 J	3.9 J	<2.5	<2.5	8.2 J	<25	46	<25	30	32 J	<5.0	<25	15 J	<25	26	120
Mercury, ug/L	DQ	DQ	2	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
Molybdenum, ug/L	NP	3.40	100	2.2	4.5	<0.91	<0.91	1.4 J	1.3 J	480	550	98	270	110	250	740	900	380	790	27	63
Selenium, ug/L	NP	1.1	50	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<2.8	<1.4	36	1.4 J	5.2	<1.4	<2.8	<1.4	7.8 J	<1.4	8.5	<1.4
Thallium, ug/L	DQ	DQ	2	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.52	1.3	<0.52	<0.26	<0.26	<0.26	<0.52	<0.26	<0.52	<0.26	<0.26	<0.26
Radium 226/228 Combined, pCi/L	P	5.85	5.85	0.433	0.705	0.120	0.366	0.132	0.662	0.807	1.54	0.338	0.385	1.15	0.524	1.47	0.364	0.0603	0.465	0.193	0.251
Additional Parameters - Selection of Remedy																					
Iron, ug/L	UPL or GPS not applicable			4,200	380	43 J	<36	<36	<36	870	800	<72	<36	28,000	1,500	1,700	270	760	1,500	<36	<0.24
Magnesium, ug/L				--	--	--	--	36000	32000	--	--	--	--	--	--	--	--	--	--	--	--
Manganese, ug/L				--	--	--	--	98	26	--	--	--	--	--	--	--	--	--	--	--	--
Potassium, ug/L				--	--	--	--	890	860	--	--	--	--	--	--	--	--	--	--	--	--
Sodium, ug/L				--	--	--	--	6300	6400	--	--	--	--	--	--	--	--	--	--	--	--
Total Alkalinity, mg/L				--	--	--	--	260 B	270	--	--	--	--	--	--	--	--	--	--	--	--
Carbonate Alkalinity, mg/L				--	--	--	--	<2.5	<2.5	--	--	--	--	--	--	--	--	--	--	--	--
Bicarbonate Alkalinity, mg/L				--	--	--	--	260 B	270	--	--	--	--	--	--	--	--	--	--	--	--

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.

Table 5. Groundwater Analytical Results Summary - Assessment Monitoring
M.L. Kapp Generating Station / SCS Engineers Project #25224077.00

Parameter Name	UPL Method	UPL	GPS	Delineation Wells											
				MW-304A		MW-308		MW-309		MW-311		MW-311A		MW-313	
				5/2/2023	10/25/2023	5/3/2023	10/24/2023	5/3/2023	10/24/2023	5/3/2023	10/24/2023	5/3/2023	10/24/2023	5/3/2023	10/26/2023
Appendix III															
Boron, µg/L	NP	280		--	--	--	--	--	--	--	--	--	--	--	--
Calcium, mg/L	P	294		--	--	--	--	--	--	--	--	--	--	54	56
Chloride, mg/L	P	91.9		--	--	--	--	--	--	--	--	--	--	87	75
Fluoride, mg/L	DQ	DQ		--	--	--	--	--	--	--	--	--	--	--	--
Field pH, Std. Units	NP	7.71		7.04	7.03	6.26	6.46	6.62	6.70	6.58	7.20	7.58	7.10	7.10	7.23
Sulfate, mg/L	P	25.6		--	--	--	--	--	--	--	--	--	--	4.3 J	4.0 J
Total Dissolved Solids, mg/L	P	1,220		--	--	--	--	--	--	--	--	--	--	--	--
Appendix IV															
B = Compound was found in the blank and sample.	DQ	DQ	6	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic, ug/L	P	1.85	10	1.4 J	1.3 J	<0.53	0.58 J	5.6	2.4	<0.53	<0.53	<0.53	<0.53	2.4	3.0
Barium, ug/L	P	357	2,000	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium, ug/L	DQ	DQ	4	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium, ug/L	P	0.263	5	--	--	--	--	--	--	--	--	--	--	--	--
Chromium, ug/L	DQ	DQ	100	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt, ug/L	P	7.83	7.83	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride, mg/L	DQ	DQ	4	--	--	--	--	--	--	--	--	--	--	--	--
Lead, ug/L	NP	0.240	15	--	--	--	--	--	--	--	--	--	--	--	--
Lithium, ug/L	NP	5.3	40	<2.5	<2.5	<2.5	<2.5	2.6 J	<2.5	5.5 J	69	9.2 J	6.5 J	4.0 J	<2.5
Mercury, ug/L	DQ	DQ	2	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum, ug/L	NP	3.40	100	3.4	42	1.7 J	1.6 J	<0.91	<0.91	18	30	210	23	5.6	1.2 J
Selenium, ug/L	NP	1.1	50	--	--	--	--	--	--	--	--	--	--	--	--
Thallium, ug/L	DQ	DQ	2	--	--	--	--	--	--	--	--	--	--	--	--
Radium 226/228 Combined, pCi/L	P	5.85	5.85	--	--	--	--	--	--	--	--	--	--	--	--
Additional Parameters - Selection of Remedy															
Iron, ug/L	UPL or GPS not applicable			470	250	400	220	43,000	29,000	75 J	<36	<36	<36	250	830
Magnesium, ug/L				--	--	--	--	--	--	--	--	--	--	25000	25,000
Manganese, ug/L				--	--	--	--	--	--	--	--	--	--	550	510
Potassium, ug/L				--	--	--	--	--	--	--	--	--	--	2800	3,400
Sodium, ug/L				--	--	--	--	--	--	--	--	--	--	88000	94,000
Total Alkalinity, mg/L				--	--	--	--	--	--	--	--	--	--	280 B	280
Carbonate Alkalinity, mg/L				--	--	--	--	--	--	--	--	--	--	<2.5	<2.5
Bicarbonate Alkalinity, mg/L				--	--	--	--	--	--	--	--	--	--	280 B	280

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.

Table 5. Groundwater Analytical Results Summary - Assessment Monitoring
M.L. Kapp Generating Station / SCS Engineers Project #25224077.00

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

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.
B = Compound was found in the blank and sample.

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 report text for identification of statistically significant results.
2. GPS is the United States Environmental Protection Agency (USEPA) Maximum Contamination Level (MCLs), if established; or the values from 40 CFR 257.95(h)(2), or the background concentration (UPL) if higher.
3. Interwell UPLs calculated based on results from background well MW-307. The UPLs were updated in July 2022.
**=UPL for Total Radium is greater than the MCL and is used as the GPS.

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Last revision by: NLB Date: 3/27/2024
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I:\25224077.00\Deliverables\2023 - Federal Annual Report\Tables\[Table 5 - 2023 - CCR GW Screening Summary_ML Kapp.xlsx]Notes and Abbreviations

Table 6. Groundwater Monitoring Results - Field Parameters
IPL - M.L. Kapp / SCS Engineers Project #25224077.00
January - December 2023

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	5/2/2023	586.13	11.3	6.51	0.02	1,006	49	8.10
	10/25/2023	576.21	15.4	6.53	0.84	1,074	7	5.26
MW-302	5/1/2023	586.44	10.3	7.16	1.61	883	193	3.73
	10/25/2023	573.31	15.0	7.15	0.41	1,084	30	6.02
MW-303	5/2/2023	585.50	11.1	6.73	0.71	1,431	52	81.2
	10/25/2023	574.45	14.4	7.05	0.37	1,086	-69	78.11
MW-304	5/2/2023	586.17	11.4	6.93	0.13	844	12	40.0
	10/25/2023	573.43	13.4	6.76	0.09	1,260	11	6.32
MW-304A	5/2/2023	586.14	11.9	7.04	1.99	682	2	2.62
	10/25/2023	573.53	13.7	7.03	1.26	686	-39	10.05
MW-305	5/2/2023	586.15	10.7	6.58	0.02	1,605	66	13.4
	10/25/2023	573.29	14.9	7.18	0.38	1,244	-107	6.38
MW-306	5/2/2023	586.28	10.1	6.79	4.92	1,168	136	4.07
	10/25/2023	574.58	13.9	6.88	1.66	1,825	41	3.33
MW-307	5/2/2023	593.89	9.8	6.59	0.03	1,938	-31	3.12
	10/24/2023	590.47	16.2	6.34	0.37	1,401	15	4.64
MW-308	5/3/2023	585.90	10.4	6.26	3.34	653	165	8.45
	10/24/2023	573.76	18.8	6.46	1.14	784	45	5.22
MW-309	5/3/2023	585.33	10.4	6.62	0.02	1,528	-172	4.49
	10/24/2023	571.70	20.8	6.70	0.78	1,289	-149	6.19
MW-310	5/4/2023	589.98	12.9	6.69	0.41	1,115	44	4.80
	10/26/2023	589.30	14.1	6.95	0.37	1,164	28	3.30
MW-311	5/23/2023	583.83	10.6	6.58	7.12	903	90	44.90
	10/24/2023	572.75	16.2	7.20	2.16	833	25	10.01
MW-311A	5/3/2023	583.44	12.3	7.58	0.08	838	68	2.78
	10/24/2023	573.05	18.4	7.10	1.33	6.86	25	4.82
MW-312	5/3/2023	577.84	12.7	7.00	1.10	598	40	4.96
	10/24/2023	573.84	14.6	7.13	0.69	621	60	3.83
MW-313	5/3/2023	577.93	11.3	7.10	0.69	790	-83	11.3
	10/26/2023	573.34	14.0	7.23	1.23	845	-110	34.81

Abbreviations:
mg/L = milligrams per liter mV = millivolts amsl = above mean sea level

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Checked by: RM Date: 3/26/2024

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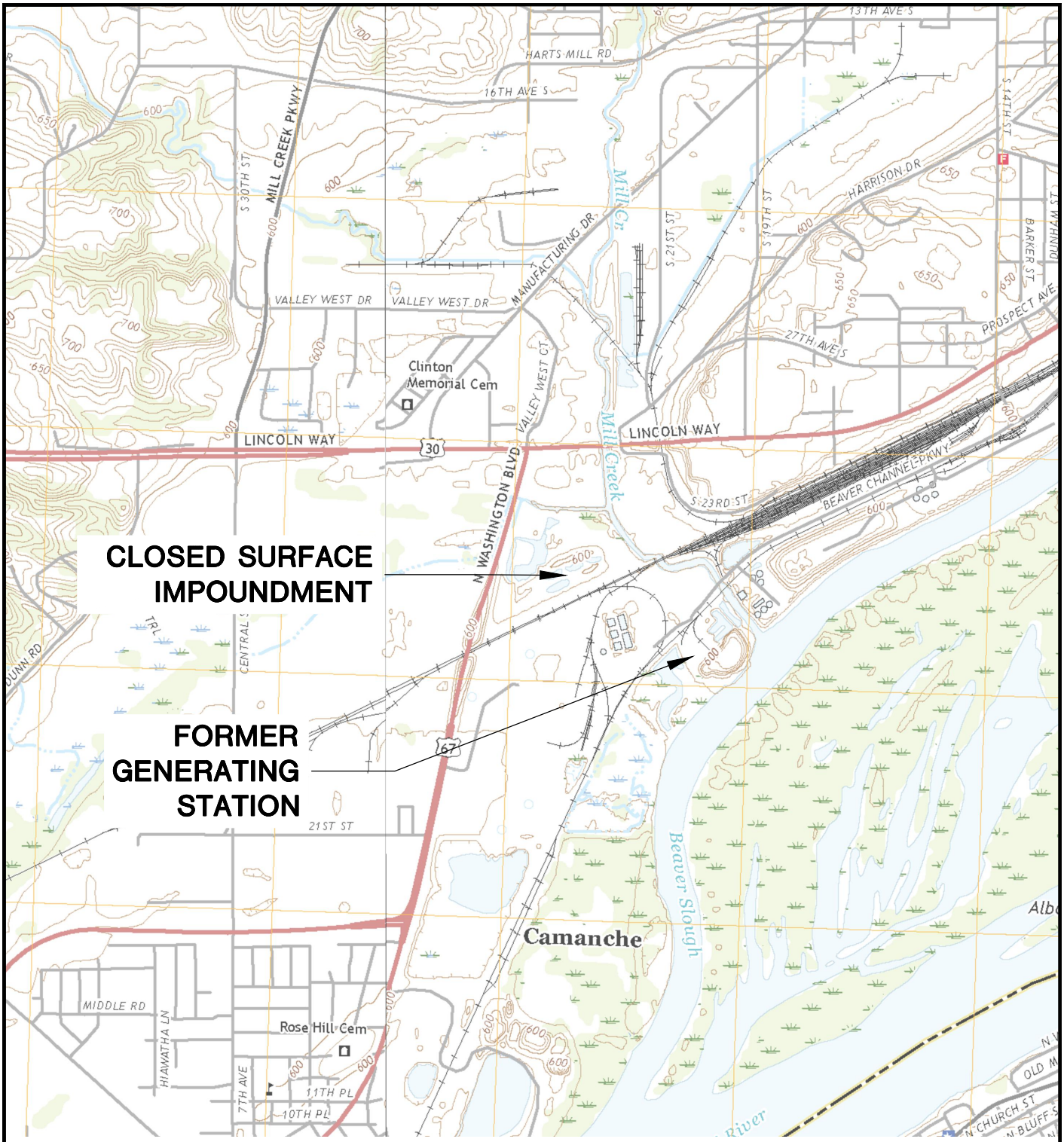
Figures



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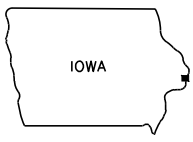
CLINTON QUADRANGLE
IOWA–ILLINOIS
7.5 MINUTE SERIES (TOPOGRAPHIC)
2018
SCALE: 1" = 2,000'



CLIENT	ALLIANT ENERGY ML-KAPP GENERATING STATION 2001 BEAVER CHANNEL PKWY CLINTON, IA 52732	SITE	M.L. KAPP GENERATING STATION 3301 HIGHWAY 67 S CLINTON, IA 52732

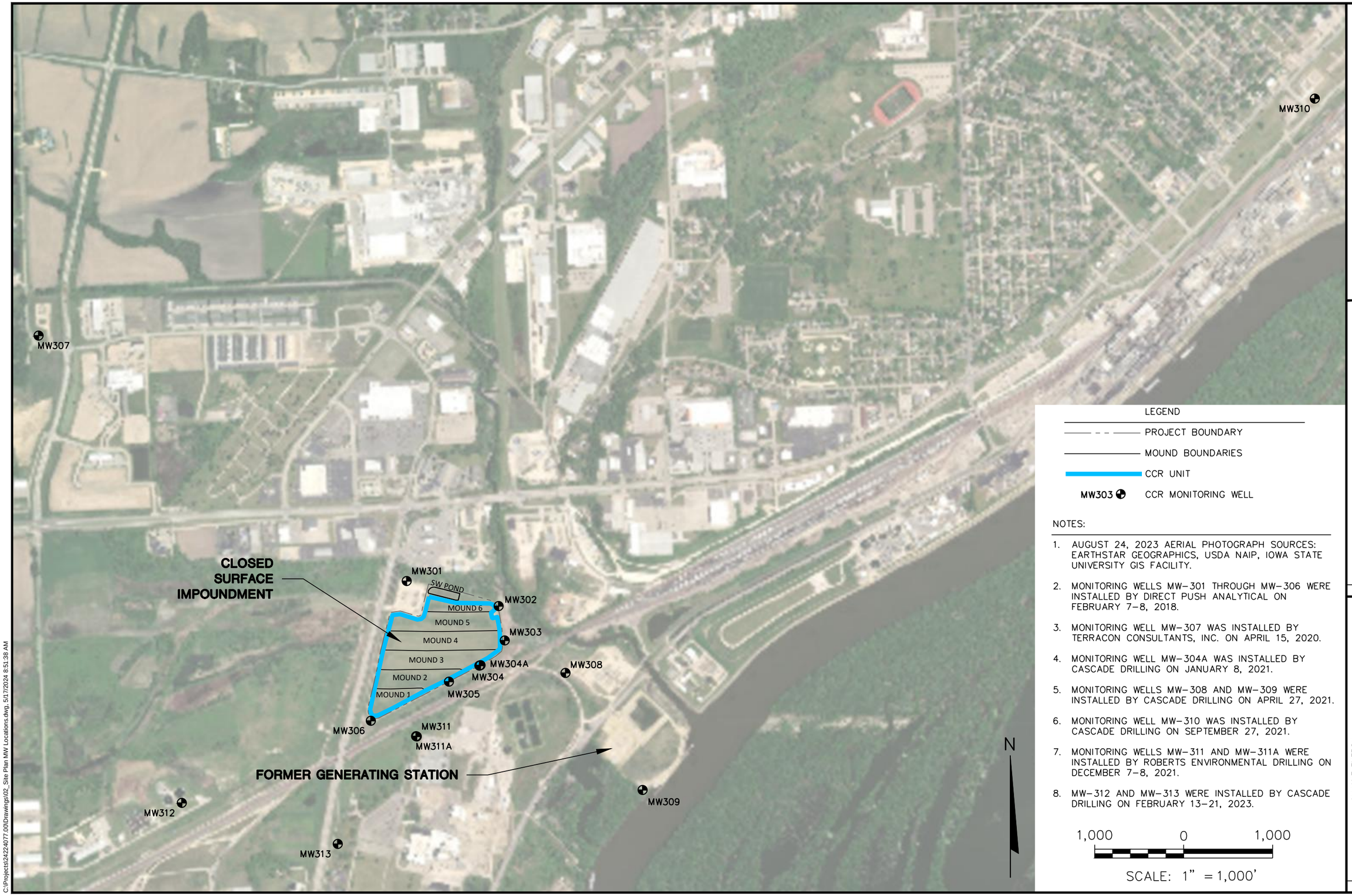
SITE LOCATION MAP

PROJECT NO.	25224077.00	DRAWN BY:	BSS
DRAWN:	11/20/2019	CHECKED BY:	NLB
REVISED:	05/17/2024	APPROVED BY:	TK 7/30/2024

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

FIGURE 1

C:\Projects\24224077.00\Drawings\01_Site Location Map.dwg, 5/17/2024 8:52:25 AM



LEGEND

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

NOTES:

1. AUGUST 24, 2023 AERIAL PHOTOGRAPH SOURCES: EARTHSTAR GEOGRAPHICS, USDA NAIP, IOWA STATE UNIVERSITY GIS FACILITY.
2. MONITORING WELLS MW-301 THROUGH MW-306 WERE INSTALLED BY DIRECT PUSH ANALYTICAL ON FEBRUARY 7-8, 2018.
3. MONITORING WELL MW-307 WAS INSTALLED BY TERRACON CONSULTANTS, INC. ON APRIL 15, 2020.
4. MONITORING WELL MW-304A WAS INSTALLED BY CASCADE DRILLING ON JANUARY 8, 2021.
5. MONITORING WELLS MW-308 AND MW-309 WERE INSTALLED BY CASCADE DRILLING ON APRIL 27, 2021.
6. MONITORING WELL MW-310 WAS INSTALLED BY CASCADE DRILLING ON SEPTEMBER 27, 2021.
7. MONITORING WELLS MW-311 AND MW-311A WERE INSTALLED BY ROBERTS ENVIRONMENTAL DRILLING ON DECEMBER 7-8, 2021.
8. MW-312 AND MW-313 WERE INSTALLED BY CASCADE DRILLING ON FEBRUARY 13-21, 2023.

1,000 0 1,000

SCALE: 1" = 1,000'

SITE PLAN AND MONITORING WELL LOCATION MAP

SITE
M.L. KAPP GENERATING STATION
3301 HIGHWAY 67 S, CLINTON, IA 52732

CLIENT
ALLIANT ENERGY
ML-KAPP GENERATING STATION
2001 BEAVER CHANNEL PKWY
CLINTON, IA 52732

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

FIGURE 2

DRAWN BY:	KP/SB
CHECKED BY:	NLB
APPROVED BY:	TK 7/30/2024
PROJECT NO.	25224077.00
DRAWN:	05/17/2024
REVISED:	

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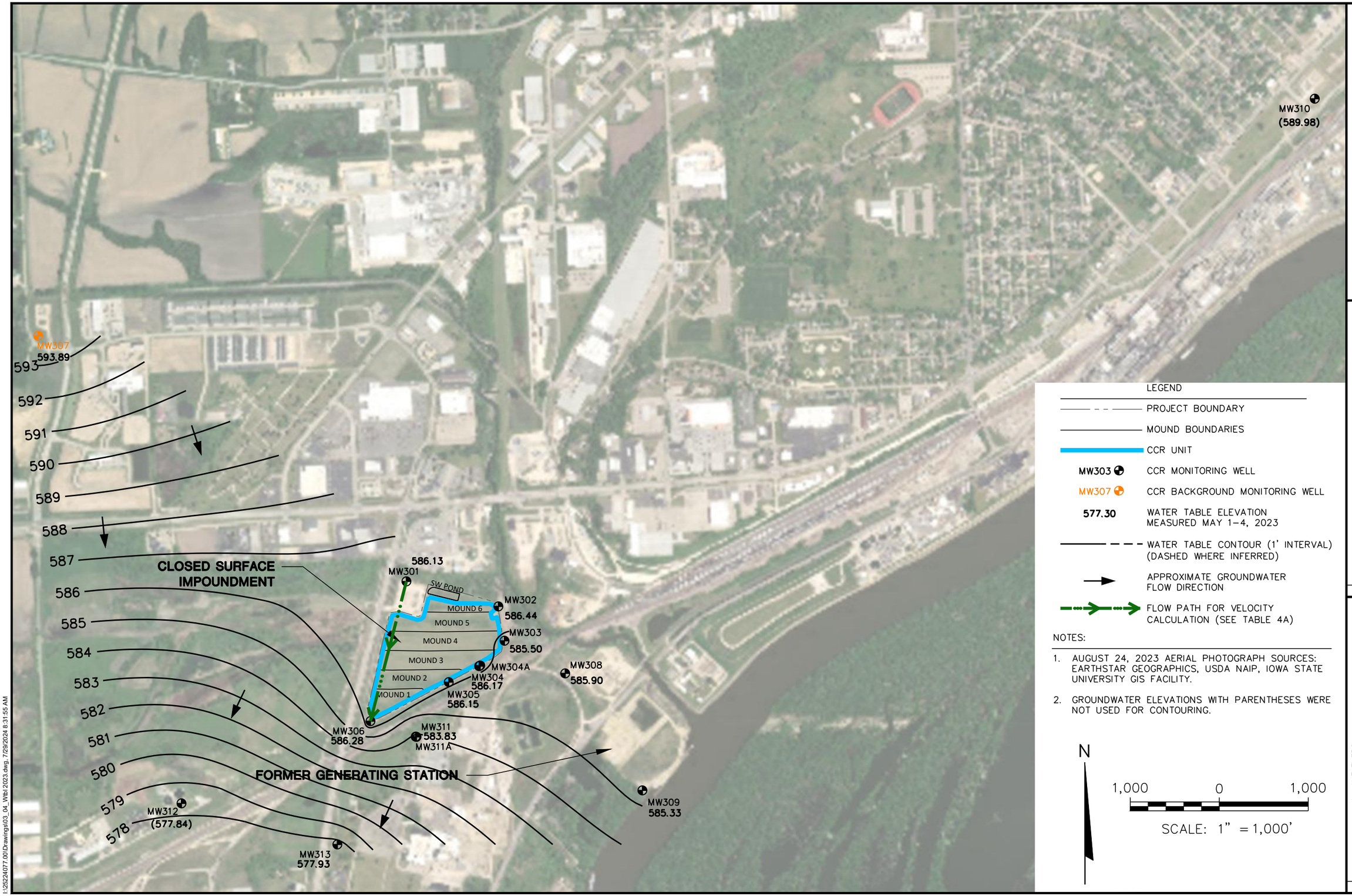

NOTES:

1. AUGUST 24, 2023 AERIAL PHOTOGRAPH SOURCES: EARTHSTAR GEOGRAPHICS, USDA NAIP, IOWA STATE UNIVERSITY GIS FACILITY.
2. GROUNDWATER ELEVATIONS WITH PARENTHESES WERE NOT USED FOR CONTOURING.

WATER TABLE MAP
MAY 2023

SITE
M.L. KAPP GENERATING STATION
3301 HIGHWAY 67 S, CLINTON, IA 52732

CLIENT
ALLIANT ENERGY
ML-KAPP GENERATING STATION
2001 BEAVER CHANNEL PKWY
CLINTON, IA 52732

FIGURE 3

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

DRAWN BY:	KP/SB
CHECKED BY:	NLB
APPROVED BY:	TK 7/30/2024
PROJECT NO.	25224077.00
DRAWN:	05/17/2024
REVISED:	07/29/2024

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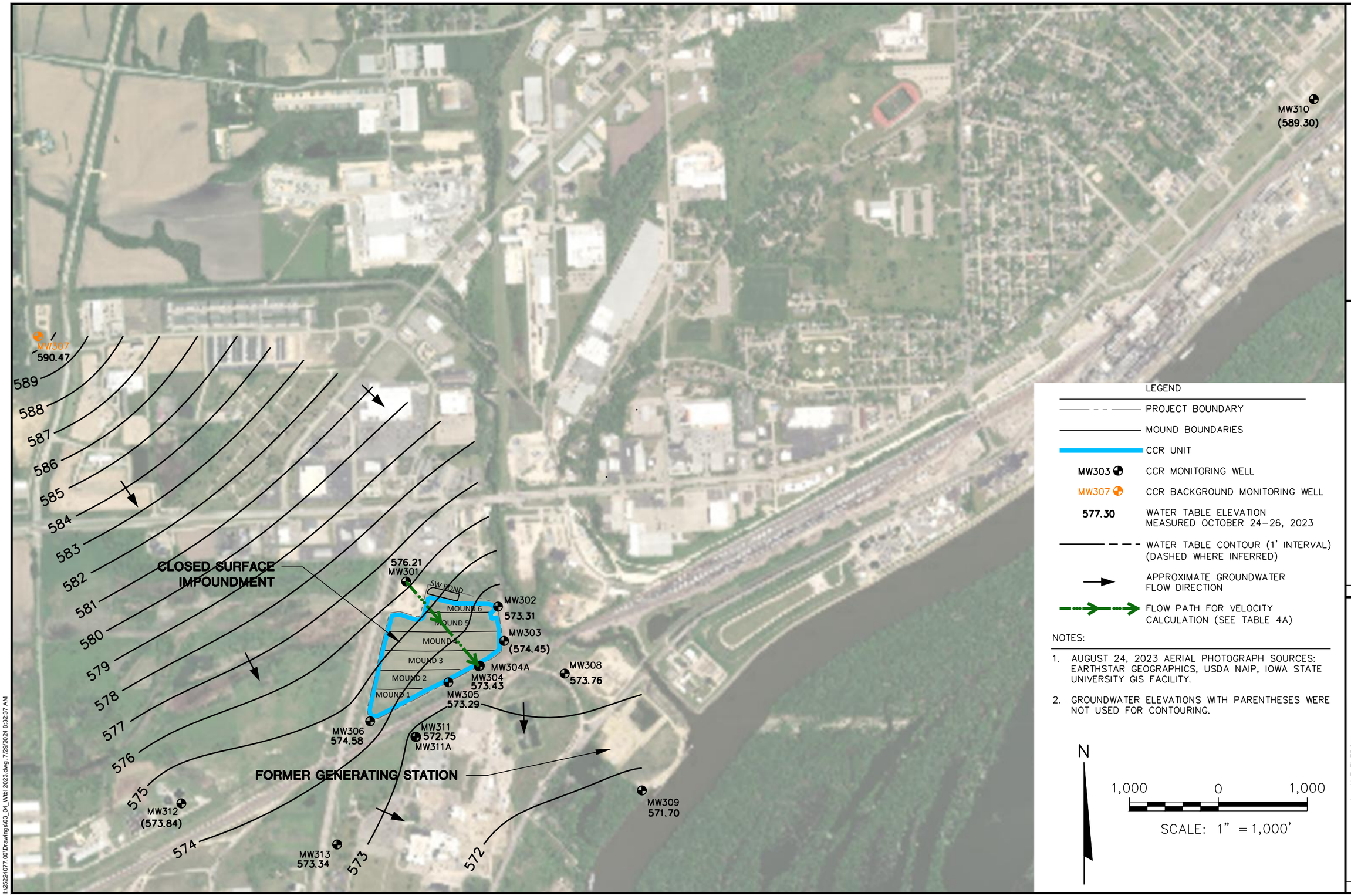

NOTES:

1. AUGUST 24, 2023 AERIAL PHOTOGRAPH SOURCES: EARTHSTAR GEOGRAPHICS, USDA NAIP, IOWA STATE UNIVERSITY GIS FACILITY.
2. GROUNDWATER ELEVATIONS WITH PARENTHESES WERE NOT USED FOR CONTOURING.

N

1,000 0 1,000

SCALE: 1" = 1,000'

WATER TABLE MAP
OCTOBER 2023

SITE
M.L. KAPP GENERATING STATION
3301 HIGHWAY 67 S, CLINTON, IA 52732

CLIENT
ALLIANT ENERGY
ML-KAPP GENERATING STATION
2001 BEAVER CHANNEL PKWY
CLINTON, IA 52732

FIGURE 4

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

DRAWN BY:	KP/SB
CHECKED BY:	NLB
APPROVED BY:	TK 7/30/2024
PROJECT NO.	25224077.00
DRAWN:	05/17/2024
REVISED:	07/29/2024

I:\25224077.00\Drawings\03_04_WTbl 2023.dwg, 7/29/2024 8:32:37 AM

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 Lime Creek Shale	Shale, dolomite and siltstone Dolomite and shale
Devonian aquifer	0 to 400		Cedar Valley Limestone Wapsipinicon Limestone	Limestone and dolomite Dolomite, limestone, and shale
Silurian aquifer	0 to 450	Silurian (400 to 425 million years old)	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.

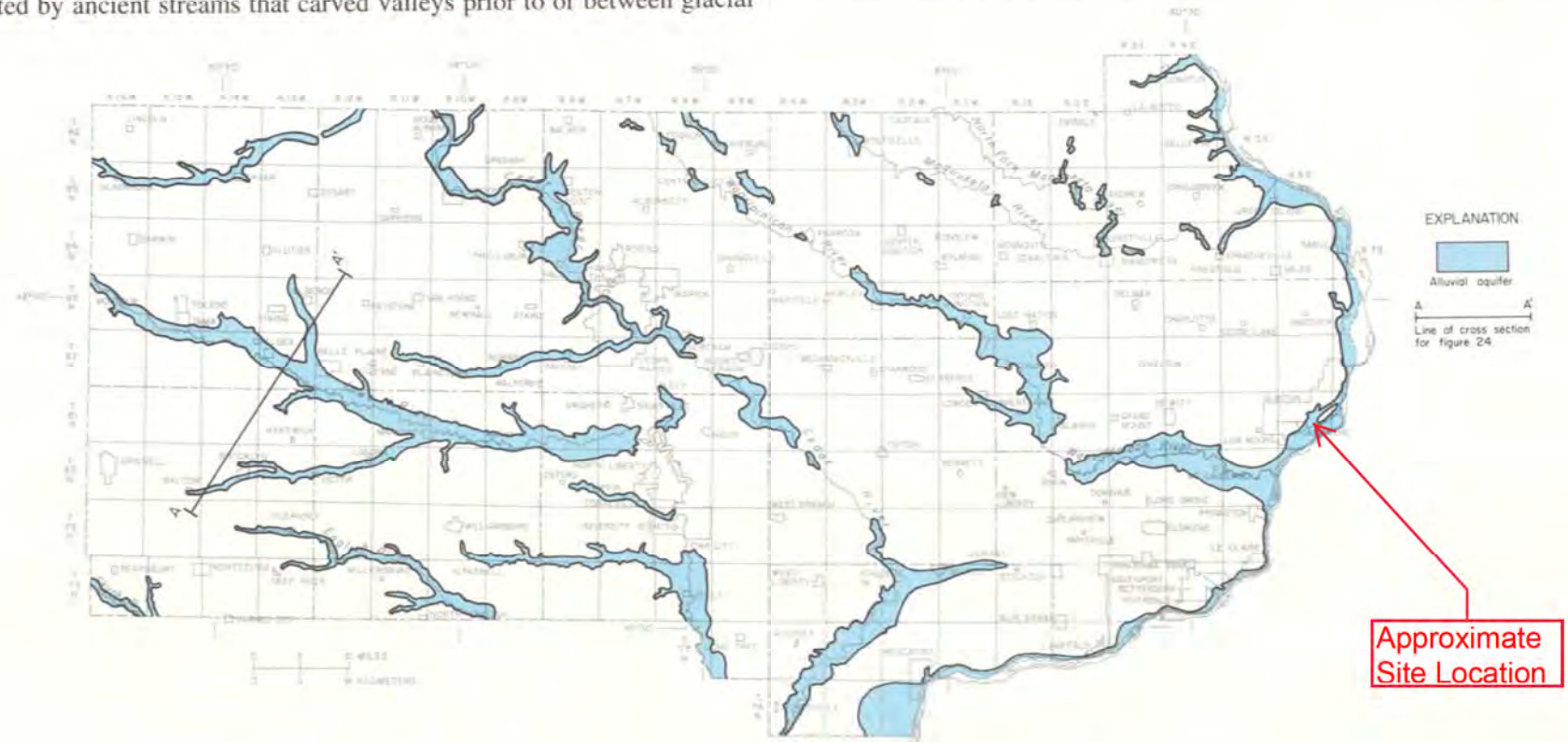

Figure 22.—Areal distribution of alluvial aquifers in east-central Iowa

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.

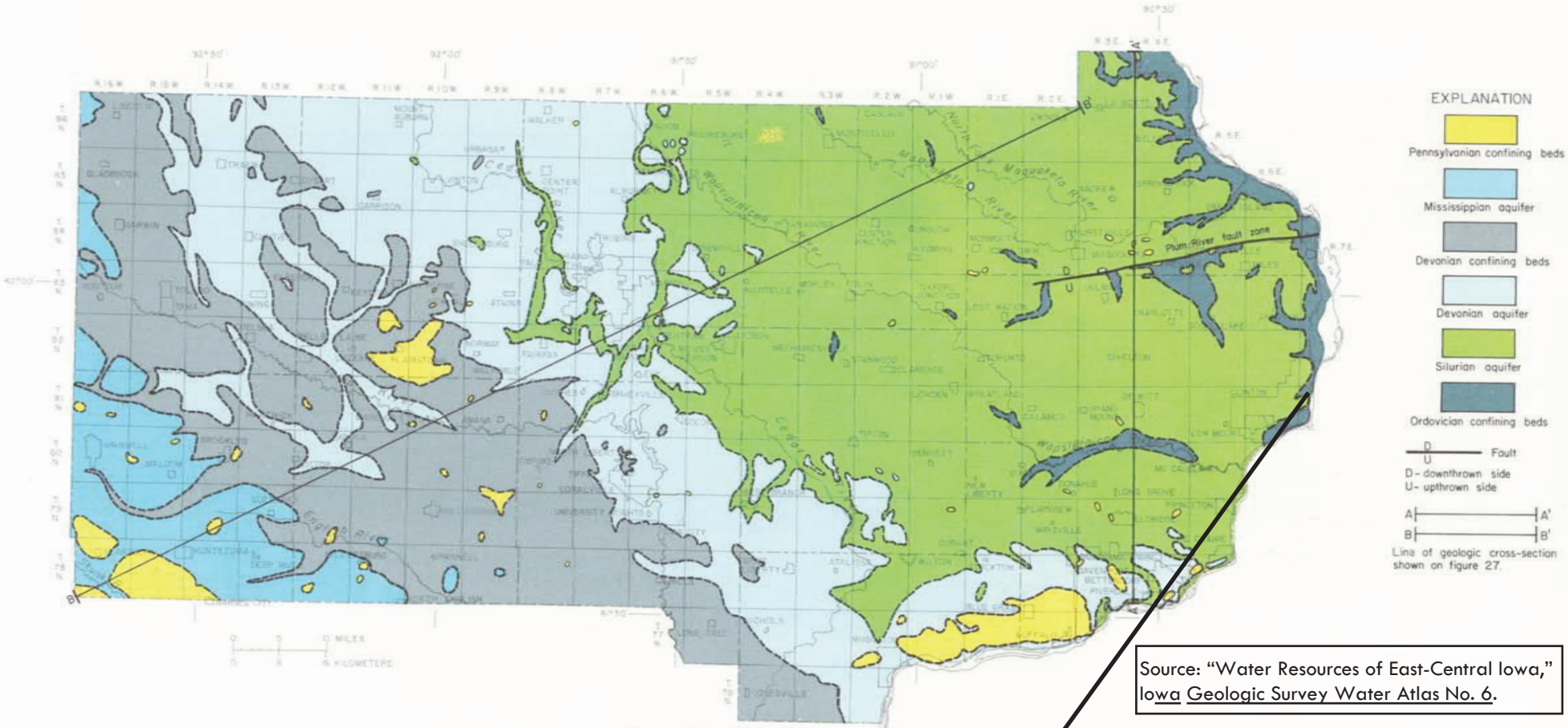

Figure 26.—Bedrock hydrogeologic map

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

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
IPL - Alliant M.L. Kapp SCS#: 25216127.00		MW-301

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Patrick Goetz Direct Push Analytical	2/8/2018	2/8/2018	HSA

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-301	Feet	589.3 Feet	8.3 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 677,257 N, 2,528,287 E S/C/N
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			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	LEAN CLAY, dark gray, (10YR 4/1), soft, low plasticity, few organic fibers.										
S1	48		9											
			10							M				
			11		CL									
			12											
			13											
S2	42		14							M/W				Depth to water at ~13 feet.
			15		ML									

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:

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-301 Page 2 of 2

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			16	SANDY SILT, fine grains, dark yellow-brown, (10YR 4/6), soft. *(continued)*	ML									
			17	POORLY GRADED SAND, fine to coarse, brown, (10YR 4/3).										
S3	36		18							W				
			19		SP									
			20											
			21											
S4	36		22	LEAN CLAY, dark gray, (10YR 4/1), soft, medium plasticity.	CL					W				
			23	SILT, dark gray, (10YR 4/1), stiff, trace organic fibers (wood chips).	ML									
			24	End of Boring at 24 feet.										

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
IPL - Alliant M.L. Kapp SCS#: 25216127.00		MW-302

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Patrick Goetz Direct Push Analytical	2/8/2018	2/8/2018	HSA

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-302	Feet	588.6 Feet	8.3 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 676,976 N, 2,529,320 E S/C/N
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	POORLY GRADED SAND, fine to coarse, tan, (fill). Hydrovaced hole to 8 feet. Bling drilled to 8 feet.										
	96		2		SP									
			3											
			4											
			5											
			6											
			7											
			8	LEAN CLAY, dark yellow brown, (10YR 4/4), medium stiffness, low to medium plasticity.										
S1	48		9		CL					M				
			10											
			11											
			12											
			13	POORLY GRADED SAND, fine, yellow-brown, (10YR 4/4).	SP									
S2	36		14	LEAN CLAY with fine sand, brown, (7.5YR 4/3), medium plasticity,	CL					M/W				Depth to water at ~14 feet.
			15											

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

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

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-302

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			16	LEAN CLAY with fine sand, brown, (7.5YR 4/3), medium plasticity, *(continued)*	CL									
			17											
S3	42		18	SANDY SILT, fine, dark gray, (10YR 4/1), soft, low plasticity.	ML					W				
			19											
			20											
			21											
S4	42		22	LEAN CLAY, soft, medium plasticity.	CL					W				
			23											
			24	POORLY GRADED SAND, fine to coarse.	SP									
				End of boring at 24 feet.										

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
IPL - Alliant M.L. Kapp SCS#: 25216127.00		MW-303

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Patrick Goetz Direct Push Analytical	2/8/2018	2/8/2018	HSA

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-303	Feet	589.7 Feet	8.3 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 676,590 N, 2,529,389 E S/C/N
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	POORLY GRADED SAND, fine to coarse, tan, (fill). Hydrovaced hole to 8 feet. Blind drilled to 8 feet.	SP									
S1	48		10	LEAN CLAY, very dark brown, (10YR 2/2), stiff, medium plasticity.						M				
			12	Same as above but dark gray (5YR 4/1) mottled with reddish brown (5YR 4/4).	CL									
S2	42		14							M/W				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: Number and Type	Sample: 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			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).										
			19											
			20		SP									
			21											
			22											
			23	LEAN CLAY, very dark gray, (10YR 3/1), soft, medium plasticity, trace organic fibers (wood chips).										
			24		CL									
			25											
				End of Boring at 25.5 feet.										

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
IPL - Alliant M.L. Kapp SCS#: 25216127.00		MW-304

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Patrick Goetz Direct Push Analytical	2/7/2018	2/7/2018	HSA

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-304	Feet	589.4 Feet	8.3 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 676,306 N, 2,529,104 E S/C/N
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			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	LEAN CLAY, very dark brown, (7.5YR 2.5/2), stiff, trace organic fibers (wood chips) at 10 feet.										
			9											
S1	48		10		CL					M				
			11											
			12	LEAN CLAY with trace silt, very dark gray, (10YR 3/1), medium stiffness, medium plasticity.										
			13		CL									
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:

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-304 Page 2 of 2

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			16	SANDY SILT, fine sand, brown, (10YR 4/3), soft.	ML									
				SILT, brown, (7.5YR 4/3), soft, low plasticity.										
S3	48		17											
			18							W				Depth to water at ~16 feet.
			19											
			20		ML									
			21											
S4	12		22							W				
			23	POORLY GRADED SAND, fine to coarse, dark grayish/brown, (10YR 4/2).										
			24		SP									
			25	End of Boring at 25.0 feet.										

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
IPL - Alliant M.L. Kapp SCS#: 25216127.00		MW-305

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Patrick Goetz Direct Push Analytical	2/7/2018	2/7/2018	HSA

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-305	Feet	589.4 Feet	8.3 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 676,126 N, 2,528,763 E S/C/N
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			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	LEAN CLAY, very dark brown, (7.5YR 2.5/2), soft, low plasticity.	CL									
			9	Same as above but with trace silt (10-11') and dark brown (7.5YR 3/3).										
S1	48		10							M				
			11											
			12											
			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:

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION SUPPLEMENT
Form 4400-122A

Boring Number MW-305 Page 2 of 2

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			16		CL									
			17	SANDY SILT with gravel, fine to medium sand, fine to coarse gravel, dark yellowish-brown, (10YR 4/6), sub-rounded gravel.	ML									
S3	42		18	POORLY GRADED SAND AND GRAVEL, fine to medium sand, fine to coarse gravel, dark yellowish-brown, (10YR 4/4), subrounded grains.	SP					W					Depth to water at 16 feet.
			19											
			20	POORLY GRADED SAND, fine, very pale brown, (10YR 3/3), (sandstone bedrock).										
			21											
S4	24		22		SP					W				
			23											
			24											
				End of Boring at 24.5 feet.										

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SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
IPL - Alliant M.L. Kapp SCS#: 25216127.00		MW-306

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Patrick Goetz Direct Push Analytical	2/7/2018	2/7/2018	HSA

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-306	Feet	588.1 Feet	8.3 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 675,687 N, 2,527,883 E S/C/N
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			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	SILTY SAND, brownish yellow, (10YR 6/6).	SM									
			9											
S1	24		10	(Weathered Limestone Bedrock).						M				Hit refusal with geoprobe at 10 feet, switched to HSA.
			11											
			12		LIMESTONE									
			13											
			14											
			15											

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

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

Boring Number MW-306 Page 2 of 2

Sample									Soil Properties					
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	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			16	(Weathered Limestone Bedrock). *(continued)*										
			17											Depth to water at ~17 feet.
			18											
			19											
			20	LIMESTONE										
			21											
			22											
			23											
			24											
			25	End of Boring at 25 feet.										

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
ML-Kapp SCS#: 25220117.00		MW-307

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Scott Zeien Terracon	4/15/2020	4/15/2020	4.25' hollow stem auger

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			6.63 Feet	601.69 Feet	8.5" in.

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 680017.03 N, 2524149.7 E S/C/N
NE 1/4 of SW 1/4 of Section 15, T 81 N, R 6 E
Lat ___° ___' ___"
Long ___° ___' ___"
Local Grid Location
Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Clinton		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	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			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					M				Collected 2 samples from the sidewall of the hydrovac borhole between 0 and 8 feet bgs.
			2											
			3	SILTY SAND, fine grained, dark yellowish brown (10YR, 3/4), trace gravel, cohesive, loose.	SM									
			4											
			5											
			6							W				No recovery from 4-8 feet bgs
			7											
			8	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									
1	23	0 0 3 4	9							W				
			10											
2	24	0 2 2 3	11							W				
			12											
3	24	0 2 3 4	13	Same, with more sand, oxidized color.	CL					W				
			14	SANDY LEAN CLAY, yellowish brown to grayish brown, slight green hue (10YR, 5/4 to 10YR, 5/2),	CL									
			15											

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

Signature	Meghan Blodgett for Matthew Cahalan	Firm SCS Engineers	Tel: Fax:

Boring Number MW-307 to 4400-122.

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
4	16	0 0 2 3	16	cohesive, very soft to soft.						W				
5	24	0 0 0 0	17 18		CL					W				
6	21	0 0 0 3	19							W				
			20	CLAYEY SAND, dark grayish brown, (10YR, 4/2), fine to medium grained, cohesive, very soft to soft.	SC-SM									
7	19	0 0 2 3	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									
				End of boring at 22' bgs.										

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SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
IPL-Alliant M.L. Kapp SCS#: 25220117.00		MW-304A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Randy Radke Cascade Drilling	1/8/2021	1/9/2021	rotary (air or mud)

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			17.8 Feet	Feet	6.0 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane N, E S/C/N
SE 1/4 of NE 1/4 of Section 22, T 81 N, R 6 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Hydrovaced to ~8' below ground surface										
			2											
			3											
			4											
			5											
			6											
			7											
			8											
			9											
			10	LEAN CLAY, dark gray to black with trace sand.										
			11											
			12											
S1	60		13		CL					M				Driller noted starting Depth was ~9 -10 feet bgs.
			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-304A

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			16	LEAN CLAY, dark gray to black with trace sand. *(continued)*	CL									
			16	SANDY SILT, fine grain, gray to brown with trace gravel.										
S2	60		17–20		ML					M				Switched to water @ 15' bgs.
			21	POORLY GRADED SAND, fine to coarse grain, grayish brown with gravel and cobbles.										
S3	60		22–23		SP					W				
			24	SILTY SAND, fine grain, light brown to brwon with trace gravel and cobbles.										
			25–27											
S4	60		26	Same as above but less silt.	SM					W/M				From 22 to 26' bgs, soil was wet, from 26 to 30'
			28–29											
			30	Same as above but dense.										
			31–32											
S5	60		33	POORLY GRADED SAND, fine grain, light brown to brown with lenses of silt and less dense than above.						W				
			34–35	Same as above.										
			36	POORLY GRADED SAND, fine to coarse grain, brown with gravel (36 to 39' bgs).	SP									
S6	60		37–38							W				Slight petroleum odor at 35 to 40' bgs.
			39	Same as above but fine grain with cobbles (39 TO 40' bgs).										
			40											

Boring Number MW-304A

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			41	POORLY GRADED SAND, fine grain, light brown to brown with lenses of silt and less dense than above. *(continued)* Same as above but fine to coarse grain, brown with lots gravel and cobbles.										
S7	60		42		SP					W				Stronger petroleum odor from 40 to 44' bgs.
			43											
			44	SANDY SILT, fine grain, brown with gravel and cobbles.	ML									
			45	LEAN CLAY, dark brown with trace gravel and sticks, very dense.										
			46											
S8	60		47		CL					W				
			48											
			49											
			50	POORLY GRADED SAND, fine to medium grain, orangish brown, very trace gravel.	SP									
			51											
			52	SANDY LEAN CLAY, dark brownish gray, very dense with gravel.										
S9	72		53							W				
			54											
			55		CL									
			56	Same as above but dark gray										
			57											
S10	48		58							W				Soil from 59 to 60' bgs reacts with HCL.
			59	SILTY SAND, fine grain, light gray to tannish orange, with gravel (possibly weathered limestone bedrock).	SM									
			60	SILT, reddish orange.										
			61											
			62											
S11	60		63		ML					W				
			64											
			65											

Boring Number MW-304A

Sample									Soil Properties					
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	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			66	SILT, reddish orange. *(continued)*										
			67	SILT, reddish orange.										
S12	60		68		ML					W				
			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.										

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SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
M.L. Kapp SCS#: 25220117.00		MW-308

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Mike Mueller Cascade Drilling	4/26/2021	4/27/2021	rotosonic

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-308	579.1 Feet MSL	586.1 Feet MSL	6.0 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 676,224 N, 2,530,071 E (S) C/N
1/4 of 1/4 of Section , T N, R
Lat 41° 48' 36.7" Long -90° 14' 9.5"
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	Civil Town/City/ or Village
	Clinton	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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	Hydrovaced to 8' bgs.										Hydrovac hole caved, bottom of hole is at 5 feet
			2											
			3											
			4											
			5	POORLY GRADED SAND, fine to coarse grained, brown, with trace gravel.	SP									
			6											
S1	48		7						2.25	W				Depth to water at ~7'
			8	LEAN CLAY, dark grayish brown, (2.5Y 4/1), dense, with trace sand, gravel, and roots.	CL									
			9											
			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).										
			11											
S2	56		12		SP					W				
			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 Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
S3	34		16 17 18	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				
				End of Boring at 18' below ground surface. Welll set at 17' below ground surface, screened to 7'										

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SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
M.L. Kapp SCS#: 25220117.00		MW-309

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Mike Mueller Cascade Drilling	4/27/2021	4/27/2021	rotosonic

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-309	575.5 Feet MSL	589.0 Feet MSL	6.0 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 674,909 N, 2,530,939 E (S) C/N
1/4 of 1/4 of Section , T N, R
Lat 41° 48' 23.4" Long -90° 13' 58.7"
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			0	POORLY GRADED SAND AND GRAVEL, fine to coarse grained, brown.	SP									
			1	SILTY SAND, fine grained, yellowish brown, (10YR 5/4).										
S1	50		2							M				
			3											
			4											
			5	Same as above but with more sand.	ML									
			6											
			7											
S2	60		8						2.25	W				Depth to water at ~ 6.5' bgs. Sampled at 5 - 8.5' and 8.5 - 10' bgs.
			9	SANDY LEAN CLAY, black, (2.5Y 2.5/1), trace gravel/rock.										
			10	Same as above but with more sand and gravel/rock.	CL									
			11											
			12	CLAYEY SAND, fine to coarse grained, black, (2.5Y 2.5/1), with trace gravel/rock.										
S3	60		13		SC				2.5	W				Sampled 10 - 12' bgs and 12 - 15' bgs
			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-309 Page 2 of 2

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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			16	CLAYEY SAND, fine to coarse grained, black, (2.5Y 2.5/1), with trace gravel/rock. *(continued)*										
			17											
S4	60		18							W				Switched to drilling with water at 15' bgs
			19		SC									
			20											
			21											
			22											
S5	60		23						1.5	W				
				LEAN CLAY, black, (2.5Y 2.5/1), with trace sand and gravel.	CL									
			24	POORLY GRADED SAND, fine to coarse grained, black, (2.5Y 2.5/1), with trace gravel and clay.	SP									
			25	End of boring at 25' below ground surface.										
				Set well at 22' Below ground surface and screened to 12'.										

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SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
M.L. Kapp SCS#: 25220117.00		MW-310

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Todd Schmalfeldt Cascade Drilling	9/27/2021	9/27/2021	rotosonic

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-310	589.08 Feet MSL	595.1 Feet MSL	6.0 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 682,681 N, 2,538,494 E S / C / N
NW 1/4 of NE 1/4 of Section 13, T 81 N, R 06E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	Civil Town/City/ or Village
	Clinton	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	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	Hydrovaced hole to 8 feet below ground surface (bgs) in unconsolidated sediment.										
S1	0		2.5							M				
			5.0											
			7.5	SILT, light brown, trace gravel.										
S2	24		10.0	Same as above but dark brown with some gray, and with trace fine sand and roots.						W				Depth to water at 8'
S3	60		12.5		ML					W				
			15.0											
S4	60		17.5							W				
			20.0	POORLY GRADED SAND, fine to coarse grained, dark brown.	SP									
				Limestone bedrock, tan with red and gray mottling, weathered.										
S5	60		22.5							W				
			25.0	Same as above but consolidated with fractures.										
S7	22		27.5							W				
			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	Tel:
	SCS Engineers	Fax:

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Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
M.L. Kapp SCS#: 25220117.00		MW-311

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Eric Wetzel Roberts Environmental Services	12/7/2021	12/7/2021	Air Rotary

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			572.33 Feet	585.29 Feet	6" in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 675512.71 N, 2,528,391.23 E Ⓢ/C/N
NW 1/4 of SE 1/4 of Section 22, T 81 N, R 6 E

Lat 41° 48' 30.2571"
Long -90° 14' 32.0117"

Local Grid Location
☐ N ☐ E
Feet ☐ S Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1–15	SILT, dark brown (10YR 2/2) with very fine grain sand, some sand is micaceous.	ML					M				Hydrovaced to 8' below ground surface.
			8–15	LIMESTONE, yellow/gold (10YR 7/6) with pores and thin bedding (less than 1mm) of yellow and rust colored layers. Many dissolution pores.						W				

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

Signature	Firm	Tel:
Zach Watson	SCS Engineers 3900 Kilroy Airport Way Long Beach, CA 90806	Fax:

Boring Number MW-311 Page 2 of 2

Sample									Soil Properties					
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	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			16	Same as above.										
			17											
			18											
			19											
			20											
			21											
			22											
			23							W				
			24											
			25											
			26											
			27											
			28											
			29											
			30											
			31	End of boring at 31' below ground surface.										

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
M.L. Kapp SCS#: 25220117.00		MW-311A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Eric Wetzel Roberts Environmental Services	12/7/2021	12/8/2021	Air Rotary

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			572.54 Feet	585.29 Feet	6" in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane 675510.55 N, 2528400.63 E Ⓢ/C/N
NW 1/4 of SE 1/4 of Section 22, T 81 N, R 6 E

Lat 41° 48' 30.2323"
Long -90° 14' 31.8888"

Local Grid Location
☐ N Feet ☐ S ☐ E Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1–15	SILT, dark brown (10YR 2/2) with flaky fine grain sand.	ML					M				Hydrovaced to 8' below ground surface.
			8–15	LIMESTONE, yellow/gold (10YR 7/6) with pores and thin bedding (less than 1mm) of yellow and rust colored layers. Many dissolution pores.						W				

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

Signature	Firm	Tel:
Zach Watson	SCS Engineers 3900 Kilroy Airport Way Long Beach, CA 90806	Fax:

Boring Number MW-311A

Sample									Soil Properties					
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	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			16	Same as above.										
			17											
			18											
			19											
			20											
			21											
			22											
			23											
			24											
			25											
			26											
			27											
			28							W				
			29											
			30											
			31											
			32	Same as above.										
			33											
			34											
			35											
			36											
			37											
			38											
			39											
			40											

Boring Number MW-311A

Sample									Soil Properties					
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	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			40	Same as above.										
			41											
			42											
			43											
			44											
			45											
			46											
			47											
			48											
			49											
			50											
			51											
			52											
			53							W				Boring produced a lot of water.
			54											
			55											
			56											
			57											
			58	Same as above.										
			59											
			60											
			61											
			62											
			63											
			64											
			65											

Boring Number MW-311A

Sample										Soil Properties					
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	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				Same as above.						W				
			66	End of boring at 66' below ground surface.										

Print Form

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

A. SURVEYED LOCATIONS AND ELEVATIONS

Locations (± 0.5 ft): 677257.43 N, 2528287.27 E

Specify corner of site: NW of parcel 8071940000

Distance & direction along boundary: 146' S

Distance & direction from boundary to wall: 22' E

Elevations (± 0.01 ft MSL):

Ground Surface: 589.32

Top of protective casing: 592.36

Top of well casing: 592.13

Benchmark elevation: 590.75

Benchmark description: BM-1

B. SOIL BORING INFORMATION

Name & Address of Construction Company:
Direct Push Analytical
4N969 Old LaFox Road, Unit E
St. Charles, IL 60175

Name of Driller: Patrick Goetz

Drilling Method: 4.5" Auger

Drilling Fluid: N/A

Bore Hole Diameter: 8.25"

Soil Sampling Method: Geoprobe

Depth of Boring: 24.0'

C. MONITORING WELL INSTALLATION

Casing material: PVC

Length of casing: 15.19

Outside casing diameter: 2.38"

Inside casing diameter: 2"

Casing joint type: Flush Threaded

Casing/screen joint type: Flush Threaded

Screen material: PVC

Screen opening size: 0.010"

Screen length: 10'

Depth of well: 22.39

Filter Pack: 10.39' -23.39' bgs

Material: R.W. Sidley

Grain size: #5

Volume: 4.2 cu/ft

Seal (minimum 3 ft length above filter pack): 2'- 10.39' bgs

Material: 3/8 inch bentonite chips

Placement method: Gravity

Volume: 1.75 ft3

Backfill (if different from seal): N/A

Material: N/A

Placement method: N/A

Volume: N/A

Surface seal design: 0'-2' bgs

Material of protective casing: Steel, 4" diameter

Material of grout between protective casing and well casing: sand

Protective cap: 6 inch diameter

Material: Steel

Vented: ☐ Yes ☐ No Locking: ☑ Yes ☐ No

Well Cap: 2 inch diameter

Material: plastic with rubber gasket

Vented: ☐ Yes ☑ No

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

Water level: 14.08 Stabilization Time: 48 days

Well development method: N/A

Average depth of frostline: 4 feet

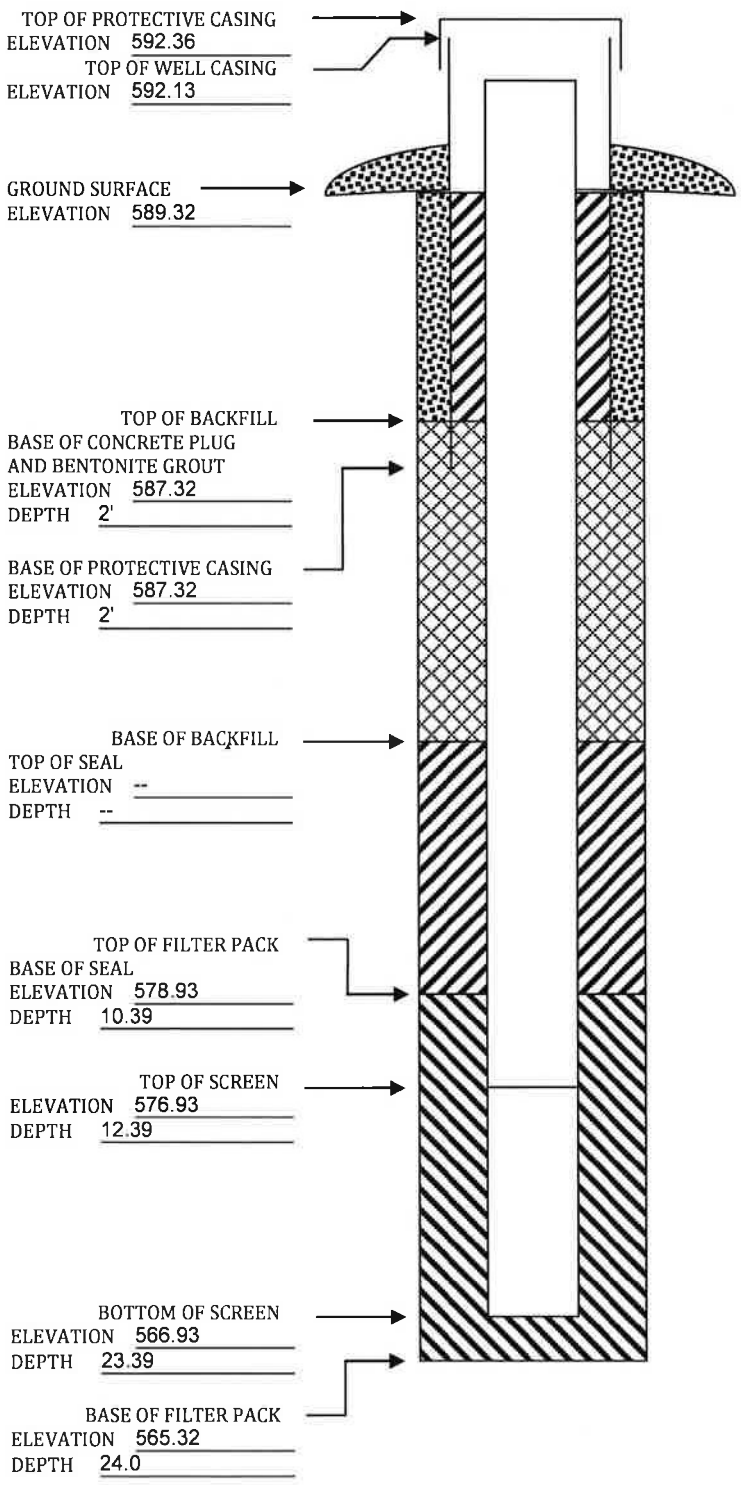
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½x11 inch map showing locations of all monitoring wells and piezometers.

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.)



Print Form

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

Locations (± 0.5 ft): 676976.06 N, 2529320.21 E

Specify corner of site: NW of parcel 8071930000

Distance & direction along boundary: 700' E

Distance & direction from boundary to wall: 329' S

Elevations (± 0.01 ft MSL):

Ground Surface: 588.58

Top of protective casing: 591.81

Top of well casing: 591.54

Benchmark elevation: 590.75

Benchmark description: BM-1

B. SOIL BORING INFORMATION

Name & Address of Construction Company:
Direct Push Analytical
4N969 Old LaFox Road, Unit E
St. Charles, IL 60175

Name of Driller: Patrick Goetz

Drilling Method: 4.5" Auger

Drilling Fluid: N/A

Bore Hole Diameter: 8.25"

Soil Sampling Method: Geoprobe

Depth of Boring: 24.0'

C. MONITORING WELL INSTALLATION

Casing material: PVC

Length of casing: 15.83

Outside casing diameter: 2.38"

Inside casing diameter: 2"

Casing joint type: Flush Threaded

Casing/screen joint type: Flush Threaded

Screen material: PVC

Screen opening size: 0.010"

Screen length: 10'

Depth of well: 23.14

Filter Pack: 11.14' -23.14' bgs

Material: R.W. Sidley

Grain size: #5

Volume: 4.2 cu/ft

Seal (minimum 3 ft length above filter pack): 2'-11.14' bgs

Material: 3/8 inch bentonite chips

Placement method: Gravity

Volume: 1.86 ft3

Backfill (if different from seal): N/A

Material: N/A

Placement method: N/A

Volume: N/A

Surface seal design: 0'-2' bgs

Material of protective casing: Steel, 4" diameter

Material of grout between protective casing and well casing: sand

Protective cap: 6 inch diameter

Material: Steel

Vented: ☐ Yes ☐ No Locking: ☑ Yes ☐ No

Well Cap: 2 inch diameter

Material: plastic with rubber gasket

Vented: ☐ Yes ☑ No

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

Water level: 16.00

Stabilization Time: 48 days

Well development method: N/A

Average depth of frostline: 4 feet

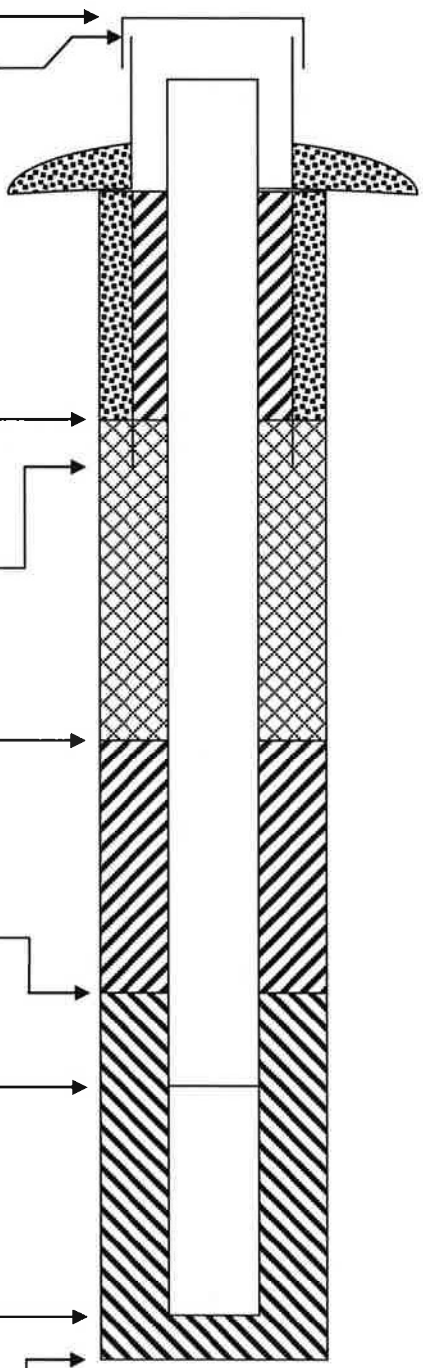
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½x11 inch map showing locations of all monitoring wells and piezometers.

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.)



TOP OF PROTECTIVE CASING
ELEVATION 591.81
TOP OF WELL CASING
ELEVATION 591.54

GROUND SURFACE
ELEVATION 588.58

TOP OF BACKFILL
BASE OF CONCRETE PLUG
AND BENTONITE GROUT
ELEVATION 588.58
DEPTH 2'

BASE OF PROTECTIVE CASING
ELEVATION 588.58
DEPTH 2'

BASE OF BACKFILL
TOP OF SEAL
ELEVATION --
DEPTH --

TOP OF FILTER PACK
BASE OF SEAL
ELEVATION 577.44
DEPTH 11.14

TOP OF SCREEN
ELEVATION 575.44
DEPTH 13.14

BOTTOM OF SCREEN
ELEVATION 565.44
DEPTH 23.14

BASE OF FILTER PACK
ELEVATION 564.58
DEPTH 24.0

Print Form

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

Locations (± 0.5 ft): 676590.31 N, 2529388.67 E

Specify corner of site: NW of parcel 8071930000

Distance & direction along boundary: 687' E

Distance & direction from boundary to wall: 730' S

Elevations (± 0.01 ft MSL):

Ground Surface: 589.73

Top of protective casing: 592.69

Top of well casing: 592.40

Benchmark elevation: 590.75

Benchmark description: BM-1

B. SOIL BORING INFORMATION

Name & Address of Construction Company:
Direct Push Analytical
4N969 Old LaFox Road, Unit E
St. Charles, IL 60175

Name of Driller: Patrick Goetz

Drilling Method: 4.5" Auger

Drilling Fluid: N/A

Bore Hole Diameter: 8.25"

Soil Sampling Method: Geoprobe

Depth of Boring: 25.5'

C. MONITORING WELL INSTALLATION

Casing material: PVC

Length of casing: 15.11'

Outside casing diameter: 2.38"

Inside casing diameter: 2"

Casing joint type: Flush Threaded

Casing/screen joint type: Flush Threaded

Screen material: PVC

Screen opening size: 0.010"

Screen length: 10'

Depth of well: 25.11'

Filter Pack: 13.11'-25.11' bgs

Material: R.W. Sidley

Grain size: #5

Volume: 4.2 cu/ft

Seal (minimum 3 ft length above filter pack): 2'-13.11' bgs

Material: 3/8 inch bentonite chips

Placement method: Gravity

Volume: 2.43 cubic feet

Backfill (if different from seal): N/A

Material: N/A

Placement method: N/A

Volume: N/A

Surface seal design: 0'-2' bgs

Material of protective casing: Steel, 4" diameter

Material of grout between protective casing and well casing: sand

Protective cap: 6 inch diameter

Material: Plastic

Vented: ☐ Yes ☐ No Locking: ☑ Yes ☐ No

Well Cap: 2 inch diameter

Material: plastic with rubber gasket

Vented: ☐ Yes ☑ No

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

Water level: 15.47 Stabilization Time: 47 days

Well development method: N/A

Average depth of frostline: 4 feet

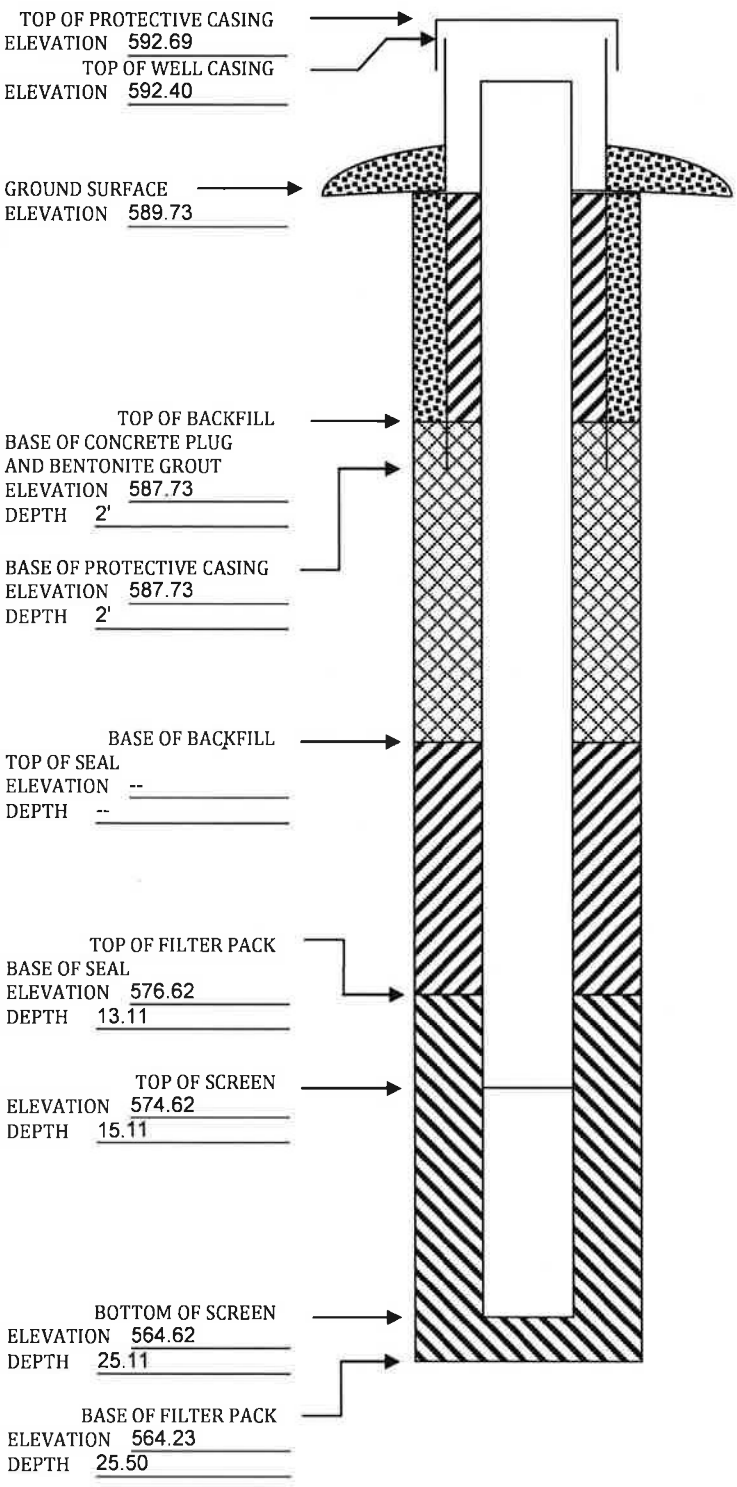
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½x11 inch map showing locations of all monitoring wells and piezometers.

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.)



Print Form

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

Locations (± 0.5 ft): 676305.68 N, 2529103.87 E

Specify corner of site: SW of parcel 8071930000

Distance & direction along boundary: 152' N

Distance & direction from boundary to wall: 1,487' E

Elevations (± 0.01 ft MSL):

Ground Surface: 589.42

Top of protective casing: 592.35

Top of well casing: 592.12

Benchmark elevation: 590.75

Benchmark description: BM-1

B. SOIL BORING INFORMATION

Name & Address of Construction Company:
Direct Push Analytical
4N969 Old LaFox Road, Unit E
St. Charles, IL 60175

Name of Driller: Patrick Goetz

Drilling Method: 4.5" Auger

Drilling Fluid: N/A

Bore Hole Diameter: 8.5"

Soil Sampling Method: Geoprobe

Depth of Boring: 25.0'

C. MONITORING WELL INSTALLATION

Casing material: PVC

Length of casing: 14.54'

Outside casing diameter: 2.38"

Inside casing diameter: 2"

Casing joint type: Flush Threaded

Casing/screen joint type: Flush Threaded

Screen material: PVC

Screen opening size: 0.010"

Screen length: 10'

Depth of well: 24.0'

Filter Pack: 12.54'-24.54' bgs

Material: R.W. Sidley

Grain size: #5

Volume: 4.2 cu/ft

Seal (minimum 3 ft length above filter pack): 2'-12.54' bgs

Material: 3/8 inch bentonite chips

Placement method: Gravity

Volume: 2.0 ft3

Backfill (if different from seal): N/A

Material: N/A

Placement method: N/A

Volume: N/A

Surface seal design: 0'-2' bgs

Material of protective casing: Steel, 4" diameter

Material of grout between protective casing and well casing: sand

Protective cap: 6 inch diameter

Material: Plastic

Vented: ☐ Yes ☐ No Locking: ☑ Yes ☐ No

Well Cap: 2 inch diameter

Material: plastic with rubber gasket

Vented: ☐ Yes ☑ No

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

Water level: 15.35

Stabilization Time: 48 days

Well development method: N/A

Average depth of frostline: 4 feet

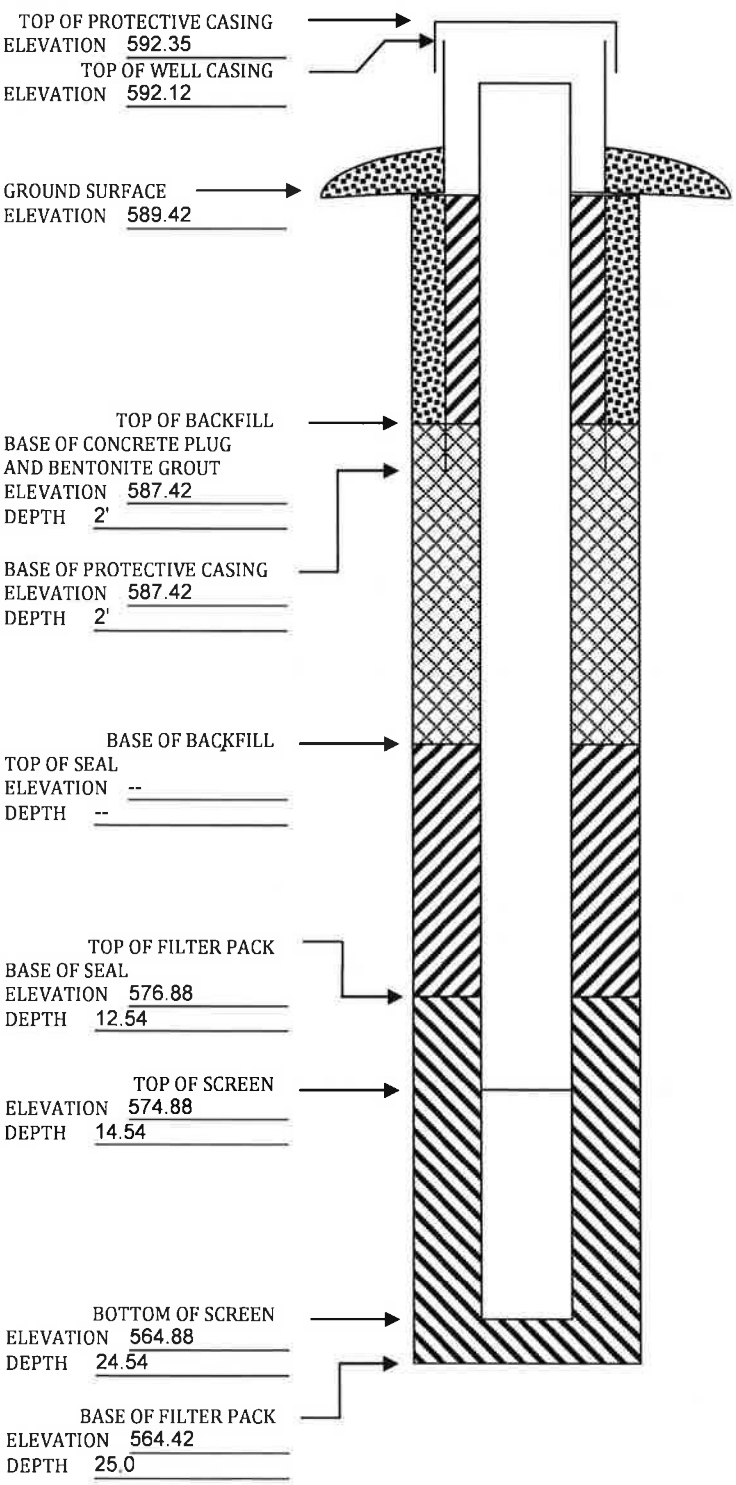
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½x11 inch map showing locations of all monitoring wells and piezometers.

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.)



Print Form

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

Locations (± 0.5 ft): 676125.82 N,2528762.6 E

Specify corner of site: SW of parcel 8071930000

Distance & direction along boundary: 137' N

Distance & direction from boundary to wall: 1,084' E

Elevations (± 0.01 ft MSL):

Ground Surface: 589.39

Top of protective casing: 592.86

Top of well casing: 592.60

Benchmark elevation: 590.75

Benchmark description: BM-1

B. SOIL BORING INFORMATION

Name & Address of Construction Company:
Direct Push Analytical
4N969 Old LaFox Road, Unit E
St. Charles, IL 60175

Name of Driller: Patrick Goetz

Drilling Method: 4.5" Auger

Drilling Fluid: N/A

Bore Hole Diameter: 8.25"

Soil Sampling Method: Geoprobe

Depth of Boring: 24.5'

C. MONITORING WELL INSTALLATION

Casing material: PVC

Length of casing: 17.30

Outside casing diameter: 2.38"

Inside casing diameter: 2"

Casing joint type: Flush Threaded

Casing/screen joint type: Flush Threaded

Screen material: PVC

Screen opening size: 0.010"

Screen length: 10'

Depth of well: 24.09

Filter Pack: 12.09' -24.09' bgs

Material: R.W. Sidley

Grain size: #5

Volume: 4.2 cu/ft

Seal (minimum 3 ft length above filter pack): 2'-12.09' bgs

Material: 3/8 inch bentonite chips

Placement method: Gravity

Volume: 2.21 ft 3

Backfill (if different from seal): N/A

Material: N/A

Placement method: N/A

Volume: N/A

Surface seal design: 0'-2' bgs

Material of protective casing: Steel, 4" diameter

Material of grout between protective casing and well casing: sand

Protective cap: 6 inch diameter

Material: Steel

Vented: ☐ Yes ☐ No Locking: ☑ Yes ☐ No

Well Cap: 2 inch diameter

Material: plastic with rubber gasket

Vented: ☐ Yes ☑ No

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

Water level: 16.24

Stabilization Time: 48 days

Well development method: N/A

Average depth of frostline: 4 feet

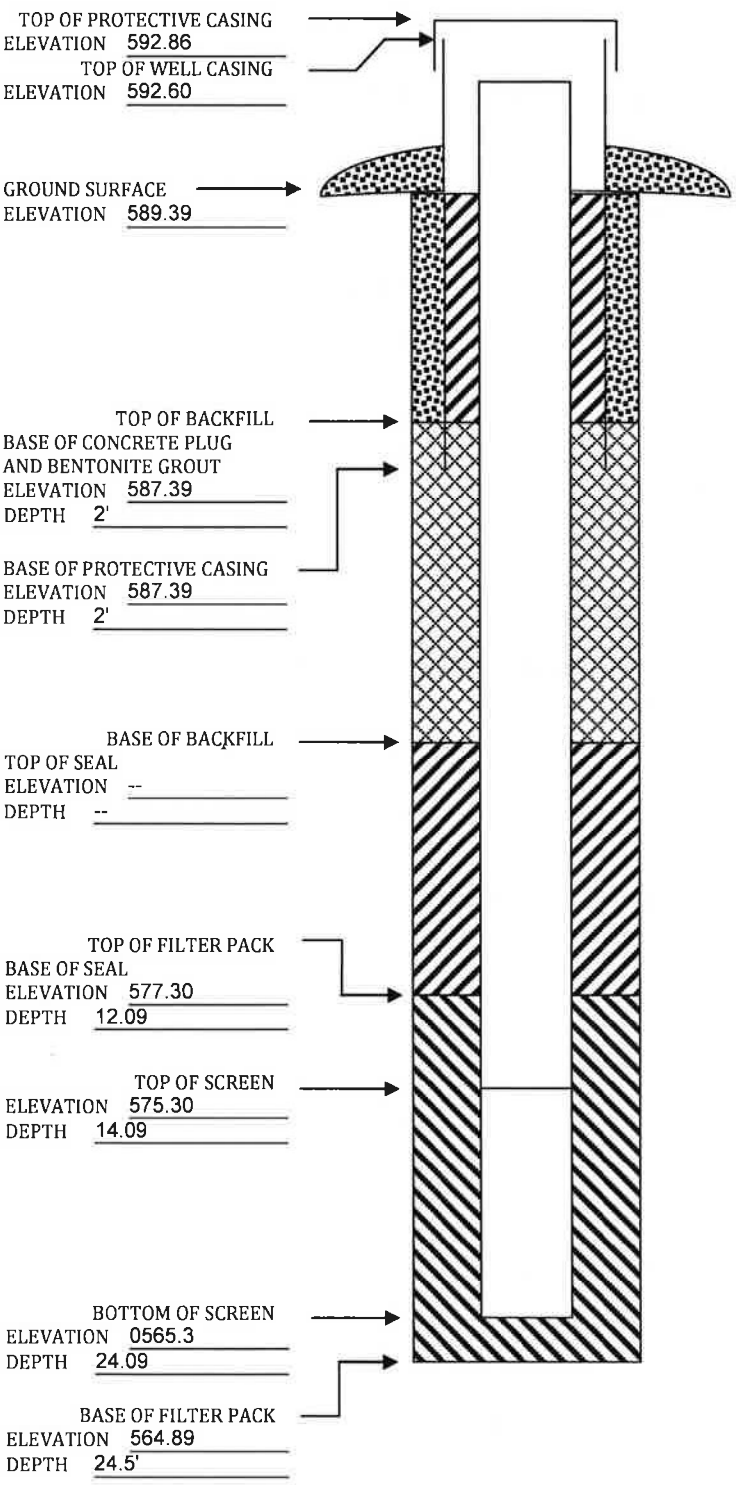
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½x11 inch map showing locations of all monitoring wells and piezometers.

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.)



Print Form

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

Locations (± 0.5 ft): 675686.88 N, 2527883.15 E

Specify corner of site: SW of Parcel 8071930000

Distance & direction along boundary: 130' N

Distance & direction from boundary to wall: 81' E

Elevations (± 0.01 ft MSL):

Ground Surface: 588.14

Top of protective casing: 591.09

Top of well casing: 590.83

Benchmark elevation: 590.75

Benchmark description: BM-1

B. SOIL BORING INFORMATION

Name & Address of Construction Company:
Direct Push Analytical
4N969 Old LaFox Road, Unit E
St. Charles, IL 60175

Name of Driller: Patrick Goetz

Drilling Method: 4.5" Auger

Drilling Fluid: N/A

Bore Hole Diameter: 8.25"

Soil Sampling Method: Geoprobe

Depth of Boring: 25.0'

C. MONITORING WELL INSTALLATION

Casing material: PVC

Length of casing: 17.20

Outside casing diameter: 2.38"

Inside casing diameter: 2"

Casing joint type: Flush Threaded

Casing/screen joint type: Flush Threaded

Screen material: PVC

Screen opening size: 0.010"

Screen length: 10'

Depth of well: 24.51'

Filter Pack: 12.51'-24.51' bgs

Material: Native (slough)

Grain size: R.W. Sidley #5

Volume: 4.2 cu/ft

Seal (minimum 3 ft length above filter pack): 2'-12.51' bgs

Material: 3/8 inch bentonite chips

Placement method: Gravity

Volume: 2.30 ft3

Backfill (if different from seal): N/A

Material: N/A

Placement method: N/A

Volume: N/A

Surface seal design: 0'-2'

Material of protective casing: Steel, 4" diameter

Material of grout between protective casing and well casing: sand

Protective cap: 6 inch diameter

Material: Steel

Vented: ☐ Yes ☐ No Locking: ☑ Yes ☐ No

Well Cap: 2 inch diameter

Material: plastic with rubber gasket

Vented: ☐ Yes ☑ No

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

Water level: 13.26 Stabilization Time: 48 days

Well development method: N/A

Average depth of frostline: 4 feet

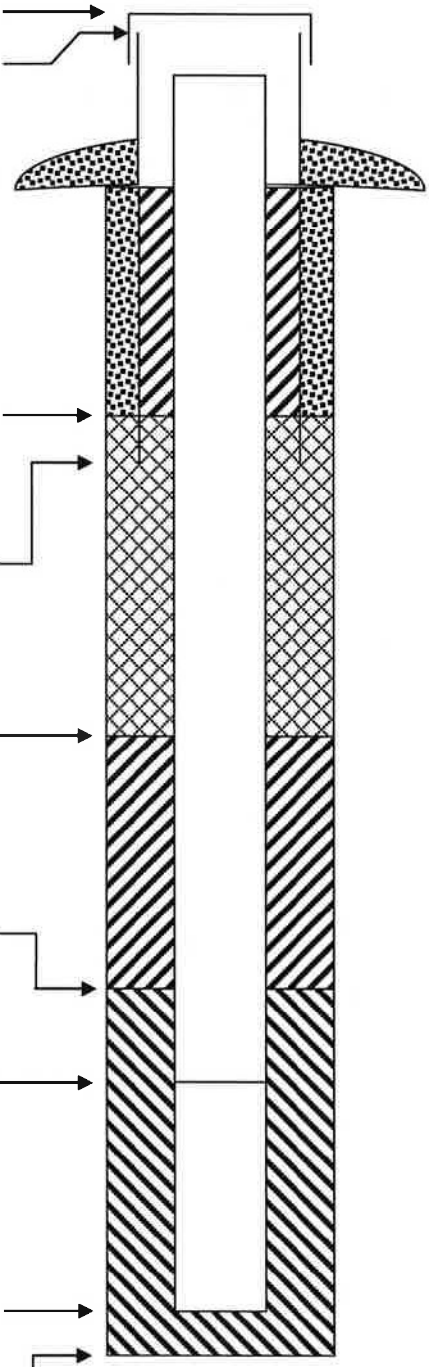
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½x11 inch map showing locations of all monitoring wells and piezometers.

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.)



TOP OF PROTECTIVE CASING
ELEVATION 591.09
TOP OF WELL CASING
ELEVATION 590.83

GROUND SURFACE
ELEVATION 588.14

TOP OF BACKFILL
BASE OF CONCRETE PLUG
AND BENTONITE GROUT
ELEVATION 586.14
DEPTH 2.0

BASE OF PROTECTIVE CASING
ELEVATION 586.14
DEPTH 2.0

BASE OF BACKFILL
TOP OF SEAL
ELEVATION --
DEPTH --

TOP OF FILTER PACK
BASE OF SEAL
ELEVATION 575.63
DEPTH 12.51

TOP OF SCREEN
ELEVATION 573.63
DEPTH 14.51

BOTTOM OF SCREEN
ELEVATION 563.63
DEPTH 24.51

BASE OF FILTER PACK
ELEVATION 563.14
DEPTH 25.0

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: Sch. 40 PVC

Length of casing: 9.46'

Outside casing diameter: 2.4

Inside casing diameter: 2

Casing joint type: Threaded

Casing/screen joint type: Threaded

Screen material: Sch. 40 PVC

Screen opening size: 0.01"

Screen length: 10'

Depth of Well: 17.76' below ground surface

Filter Pack:

Material: sand

Grain Size: coarse

Volume: ~5.23 ft^3

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

Material: 3/8" hydrated bentonite chips

Placement method: Poured

Volume: ~0.6 ft^3

Backfill (if different from seal):

Material:

Placement method:

Volume:

Surface seal design:

Material of protective casing: Steel

Material of grout between protective casing and well casing: Coarse Sand

Protective cap:

Material: Steel

Vented?: ☒ Y ☐ N — Locking?: ☒ Y ☐ N

Well cap:

Material: PVC

Vented?: ☒ Y ☐ 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 ½ 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

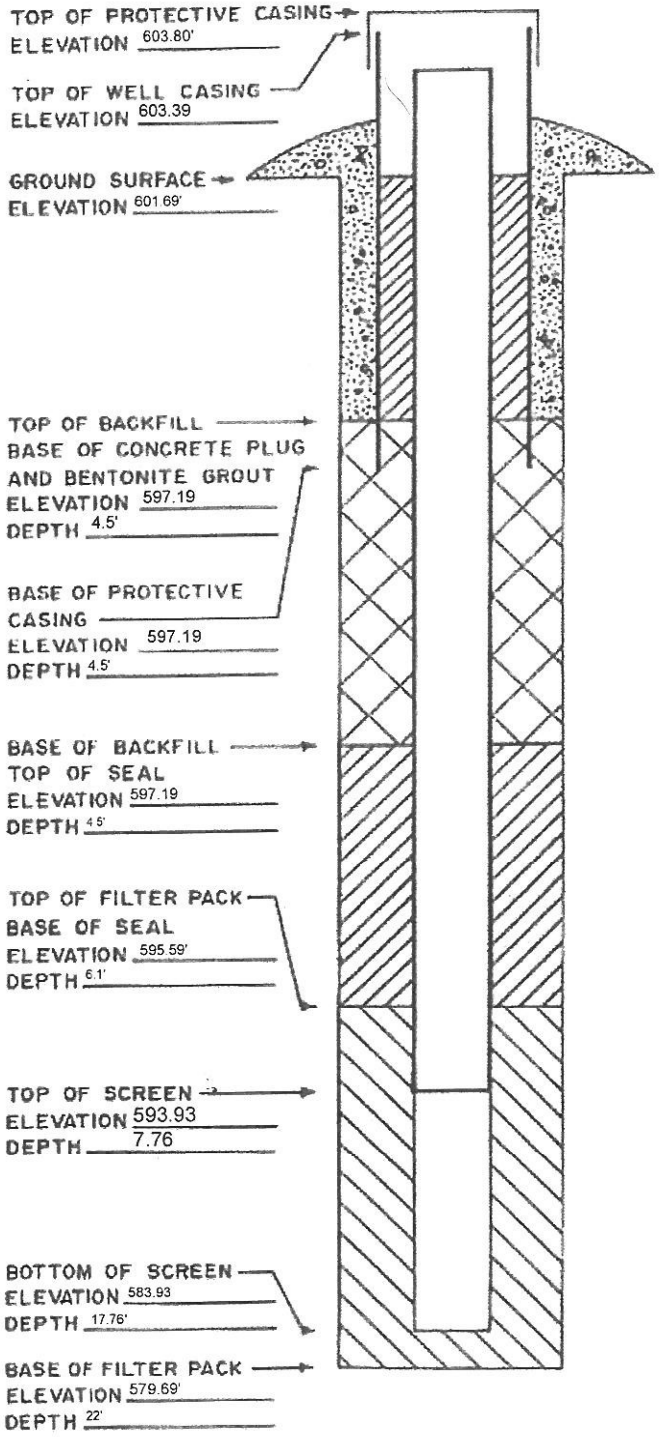
09/2017 cmc

DNR Form 542-1277

ELEVATIONS: ± 0.01 FT. MSL

DEPTHS: ± 0.1 FT. FROM GROUND SERFACE

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

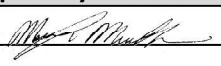
Casing material: Sch. 40 PVC | Placement method: Poured
Length of casing: 52.61' | Volume: 0.67 cu. ft
Outside casing diameter: 2.4" | Backfill (if different from seal):
Inside casing diameter: 2" | Material: Bentonite grout & Bentonite chips
Casing joint type: Threaded | Placement method: Pumped & Poured
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'
Depth of Well: 55' | Protective cap:
Filter Pack: | Material: Aluminum
Material: Red Flint Sand | Vented?: ☒ Y ☐ N | Locking?: ☒ Y ☐ N
Grain Size: # 40 | Well cap:
Volume: 1.5 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: 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

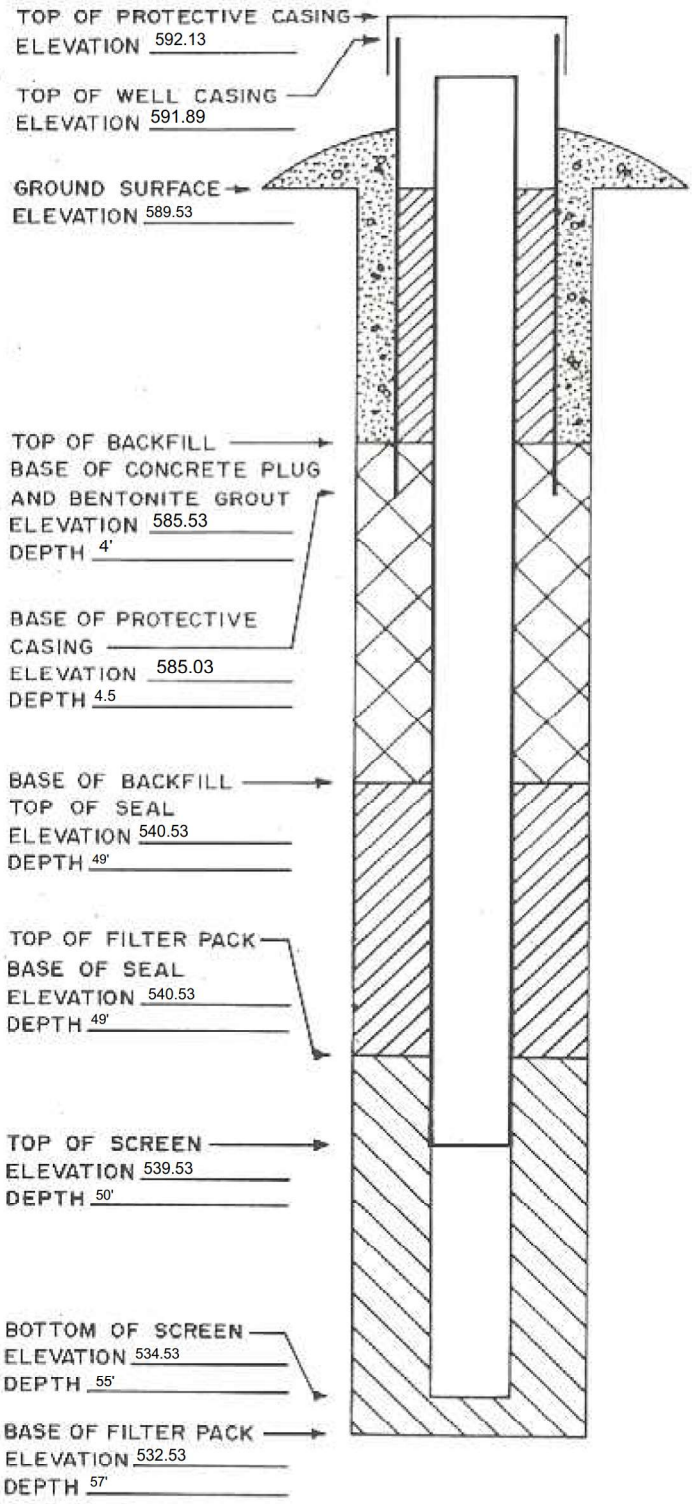
Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½ inch x 11 inch map showing locations of all monitoring wells and piezometers.

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

ELEVATIONS: ± 0.01 FT. MSL

DEPTHS: ± 0.1 FT. FROM GROUND SERFACE

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: 588378 | 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

Material of grout between protective casing and well casing: Bentonite chips and sand

Screen length: 10'

Depth of Well: 17' | Protective cap:

Filter Pack: | Material: Aluminum

Material: Red Flint Filter Sand | Vented?: ☒ Y ☐ N | Locking?: ☒ Y ☐ N

Grain Size: #40 | Well cap:

Volume: 1.5 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)

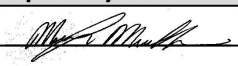
Water level: 9.68 | **Stabilization time**: <5 min

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 ½ inch x 11 inch map showing locations of all monitoring wells and piezometers.

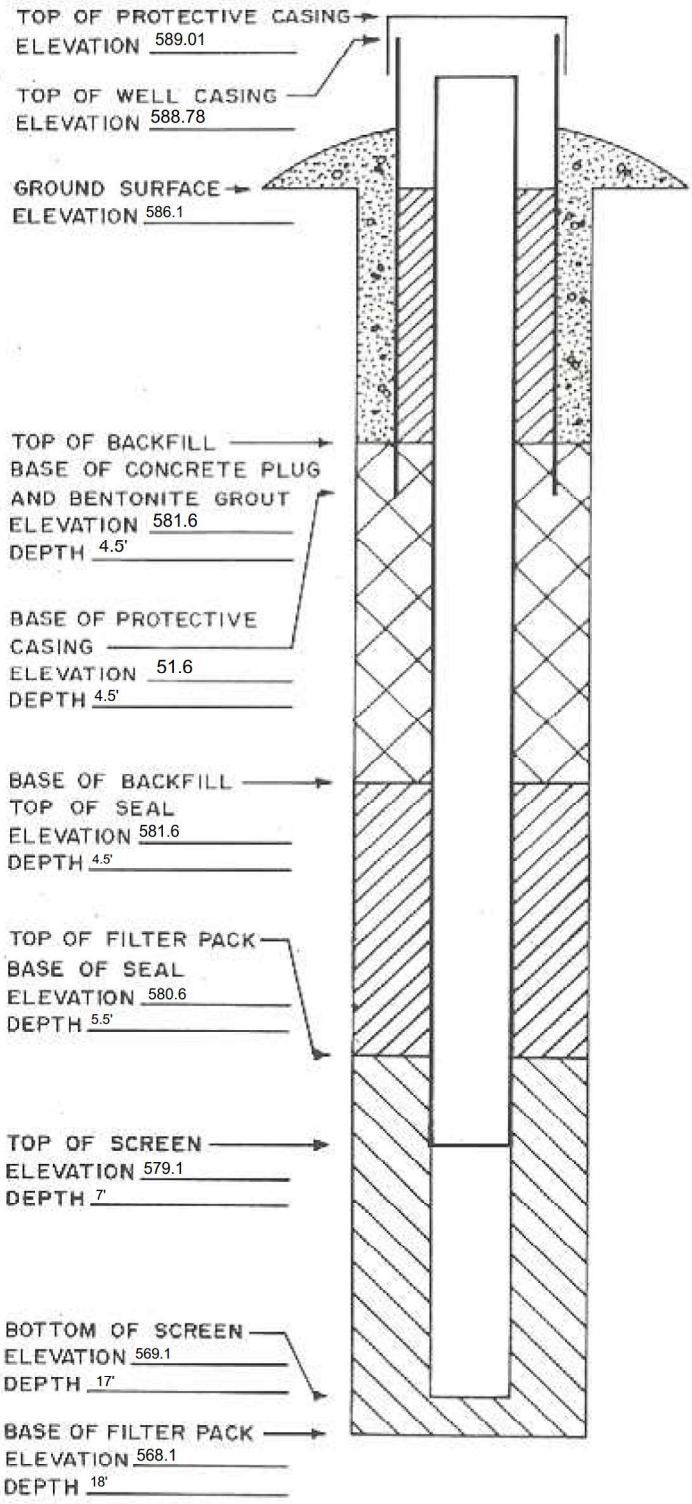
Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

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

ELEVATIONS: ± 0.01 FT. MSL

DEPTHS: ± 0.1 FT. FROM GROUND SERFACE

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

Material of grout between protective casing and well casing: Bentonite chips and sand

Screen length: 10'

Depth of Well: 22' | 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)

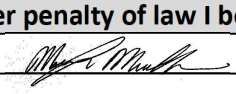
Water level: 15.75 | **Stabilization time**: < 5 min

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 ½ inch x 11 inch map showing locations of all monitoring wells and piezometers.

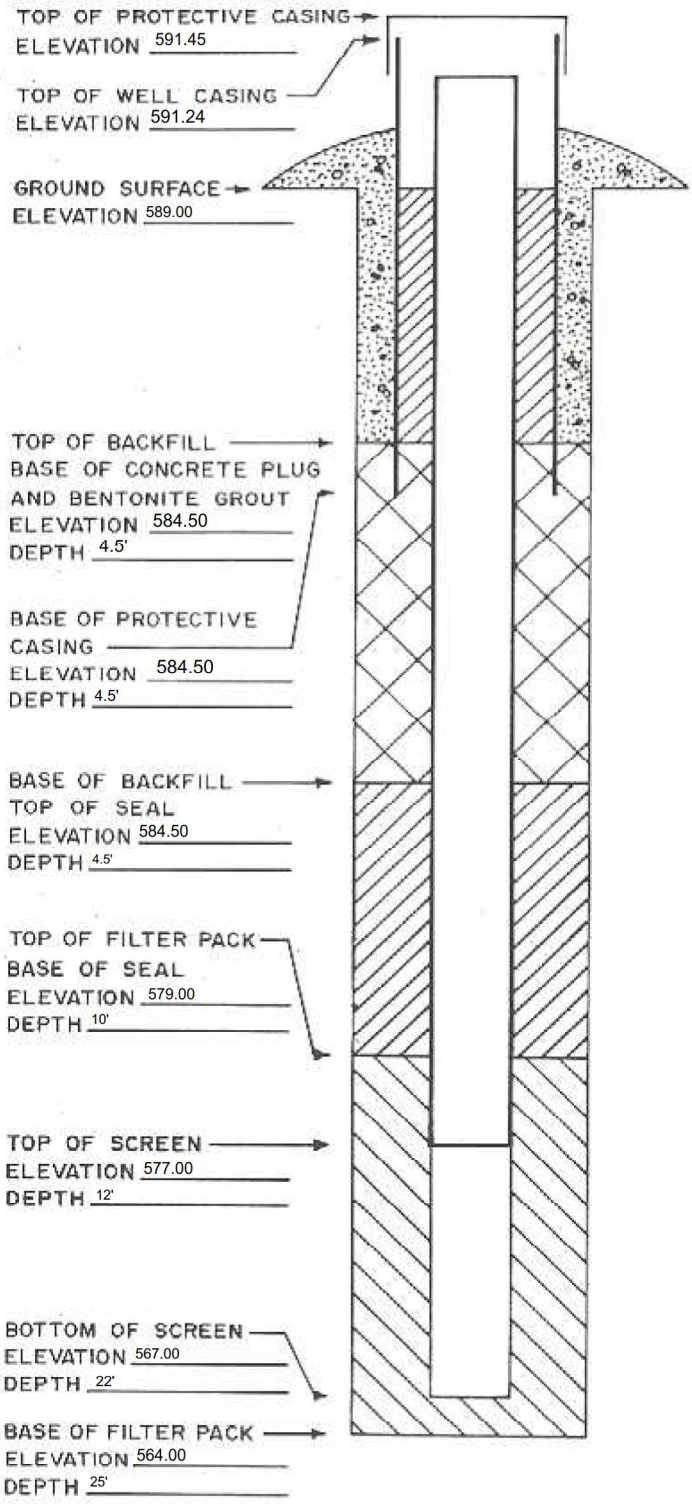
Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

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

ELEVATIONS: ± 0.01 FT. MSL

DEPTHS: ± 0.1 FT. FROM GROUND SERFACE

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: PVC | Placement method: Gravity

Length of casing: 27' | Volume: 7 bags

Outside casing diameter: 2.38" | Backfill (if different from seal): Same as seal

Inside casing diameter: 2.01" | Material:

Casing joint type: Flush threaded | Placement method:

Casing/screen joint type: Flush threaded | Volume:

Screen material: PVC | Surface seal design:

Screen opening size: 0.010" Factory slotted | Material of protective casing: Steel

Material of grout between protective casing and well casing: Concrete

Screen length: 5'

Depth of Well: 30' | Protective cap:

Filter Pack: | Material: Steel

Material: Sand | Vented?: ☐ Y ☒ N | Locking?: ☒ Y ☐ N

Grain Size: #40 | Well cap: Plastic with expandable rubber gasket

Volume: 3 bags (1.5 cubic feet) | Material:

Seal (minimum 3 ft. length above filter pack): | Vented?: ☐ Y ☒ N

Material: 3/8" bentonite chips

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 ½ inch x 11 inch map showing locations of all monitoring wells and piezometers.

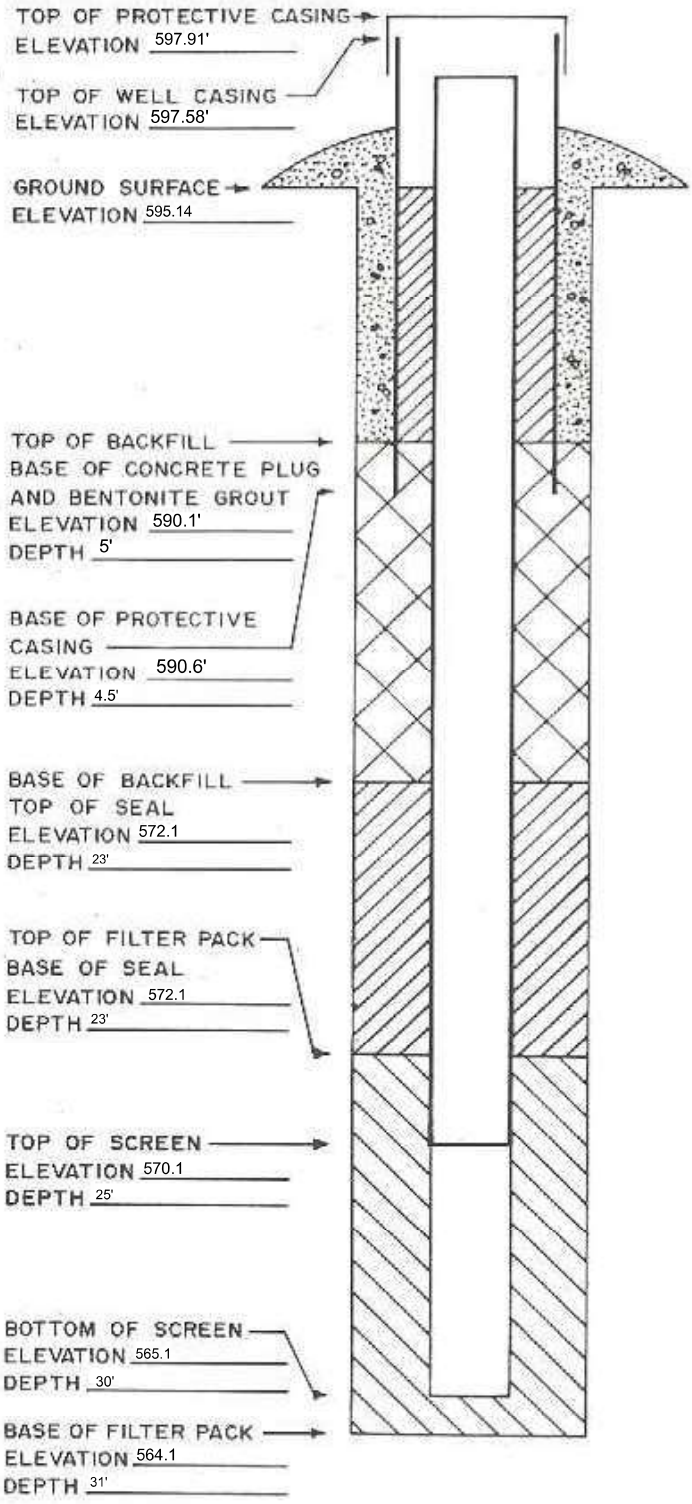
Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

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

ELEVATIONS: ± 0.01 FT. MSL

DEPTHS: ± 0.1 FT. FROM GROUND SERFACE

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: Sch 40 PVC | Placement method: Poured

Length of casing: 27.8' | Volume: 0.8 cu. ft.

Outside casing diameter: 2.4" | Backfill (if different from seal): Bentonite Chips

Inside casing diameter: 2.05" | Material: Bentonite Chips

Casing joint type: Threaded | Placement method: Poured

Casing/screen joint type: Threaded | Volume: 0.2 cu. ft.

Screen material: Sch. 40 PVC | Surface seal design: Cement

Screen opening size: 0.01" | Material of protective casing: Steel

Material of grout between protective casing and well casing: Bentonite chips and sand

Screen length: 15'

Depth of Well: 25' | Protective cap:

Filter Pack: | Material: Steel

Material: Filter Sand | Vented?: ☒ Y ☐ N | Locking?: ☒ Y ☐ N

Grain Size: #40 | Well cap:

Volume: 3.6 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: 15.68' | **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 [signature] **Certification #**: 11509 **Date**: 2.7.22

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½ inch x 11 inch map showing locations of all monitoring wells and piezometers.

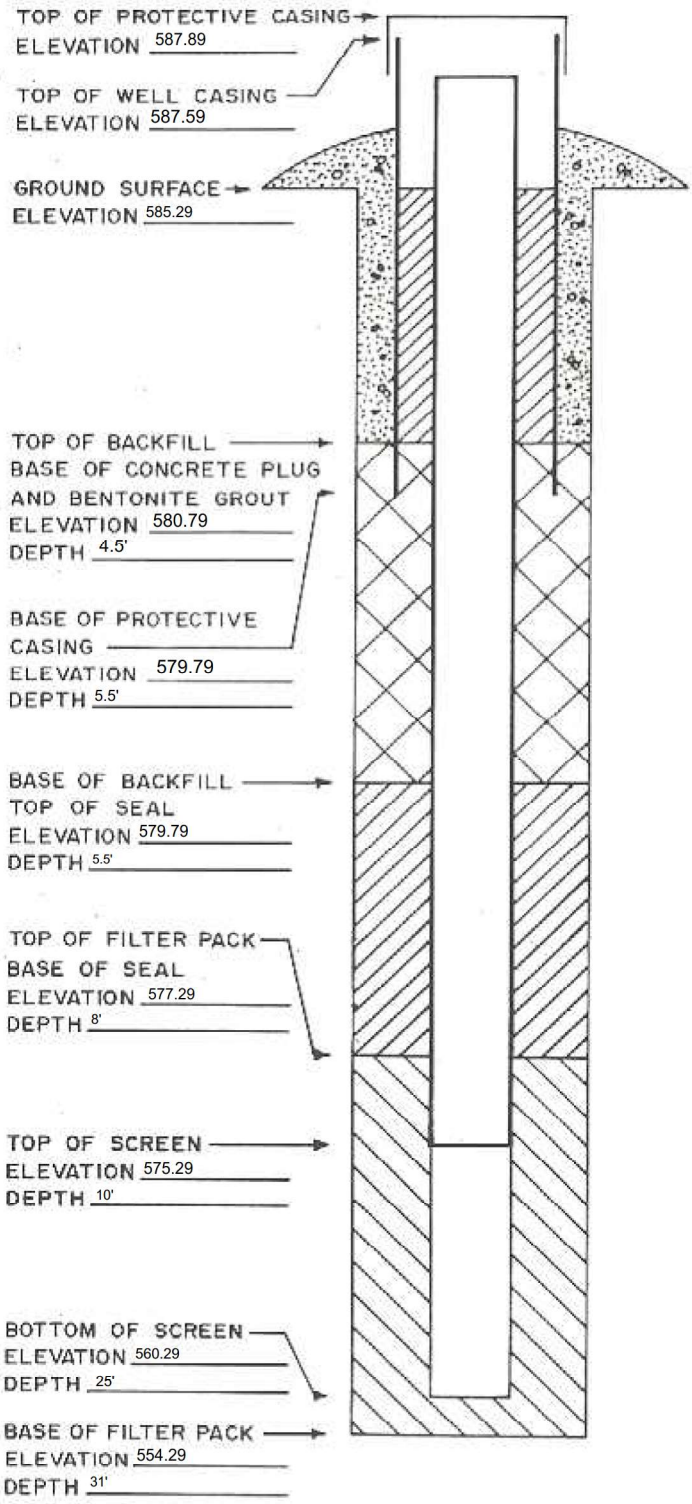
Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

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

ELEVATIONS: ± 0.01 FT. MSL

DEPTHS: ± 0.1 FT. FROM GROUND SERFACE

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: Sch 40 PVC | Placement method: Tremie Pumped

Length of casing: 67.65' | Volume: 9.0 cu. ft.

Outside casing diameter: 2.4" | Backfill (if different from seal): Filter Sand

Inside casing diameter: 2.05" | Material: Filter Sand

Casing joint type: Threaded | Placement method: Poured

Casing/screen joint type: Threaded | Volume: 0.2 cu. ft.

Screen material: Sch. 40 PVC | Surface seal design: Concrete

Screen opening size: 0.01" | Material of protective casing: Steel

Material of grout between protective casing and well casing: Bentonite chips and sand

Screen length: 5'

Depth of Well: 65' | Protective cap:

Filter Pack: | Material: Steel

Material: Filter Sand | Vented?: ☒ Y ☐ N | Locking?: ☒ Y ☐ N

Grain Size: #40 | Well cap:

Volume: 1.3 cu. ft. | Material: Plastic

Seal (minimum 3 ft. length above filter pack): | Vented?: ☒ Y ☐ N

Material: Bentonite grout

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: [signature] | **Certification #:** 11509 | **Date:** 2.7.22

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½ inch x 11 inch map showing locations of all monitoring wells and piezometers.

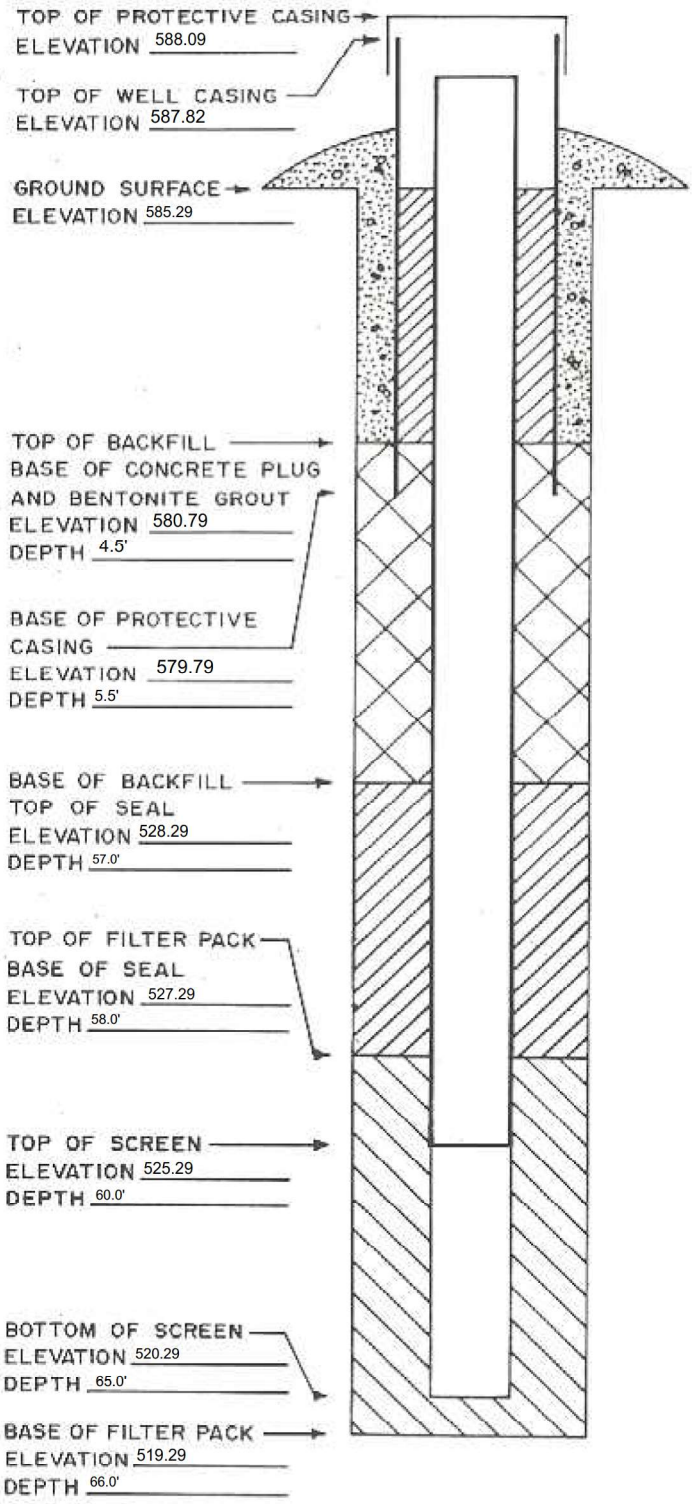
Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

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

ELEVATIONS: ± 0.01 FT. MSL

DEPTHS: ± 0.1 FT. FROM GROUND SERFACE

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



SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
M.L Kapp Generating Station SCS#: 25222249		MW-312

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Adam Jochimsen Cascade Drilling	2/13/2023	2/16/2023	Rotosonic

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-312	Feet	Feet	6.0 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane 674761.12 N, 2525740.79 E S / C / N
NW 1/4 of SE 1/4 of Section 22, T 81 N, R 6 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			0	ORGANIC SILT, fine, dark brown, with roots and grass, (topsoil).	FILL									
			1	SILT, tan, trace gravel (limestone), (fill).	FILL									
S1	60		2							M				
			3											
			4	SILTY SAND, trace gravel (limestone), dark brown	SM									
			5											
			6											
S2	60		7							M				
			8											
			9											
			10	POORLY GRADED SAND, fine to course grained, black, trace amounts of gravel.	SP									
			11											
			12	LEAN CLAY, medium brown.	CL									
S3	60		13							M				
			14	POORLY GRADED SAND, fine to course, medium brown.	SP									
			15											

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

Signature

Firm SCS Engineers
3900 Kilroy Airport Way Long Beach, CA 90806
Tel:
Fax:

Boring Number MW-312

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			16	POORLY GRADED SAND, fine to course, medium brown.	SP									
			17											
S4	60		18	LIMESTONE BEDROCK (highly weathered), tan to light brown.						M				
			19											
			20											
			21											
			22											
S5	48		23							M				
			24											
			25											
			26	LIMESTONE BEDROCK, tan to light brown.										
S6	60		27							M				
			28											
			29											
			30											
			31											
S7	60		32							M				
			33											
			34											
			35											
			36											
S8	60		37							M				
			38											
			39											
S9	60		40											

Boring Number MW-312 Page 3 of 4

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			40	LIMESTONE BEDROCK, tan to light brown.										
S9	60		41							M				
			42											
			43											
			44											
			45											
			46											
S10	60		47							M				
			48											
			49											
			50											
			51											Depth to water at 51' bgs.
S11	60		52							W				
			53											
			54											
			55											
			56											
S12	60		57							W				
			58											
			59											
			60											
			61											
			62											
S13	74		63							W				
			64											
			65											Sample was dry below 65'.

Boring Number MW-312 Page 4 of 4

Sample										Soil Properties					
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	Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
S13	74			LIMESTONE BEDROCK, tan to light brown.										
			66	End of Boring at 66 feet below ground surface.										

SCS ENGINEERS
Environmental Consultants and Contractors

SOIL BORING LOG INFORMATION

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
M.L Kapp Generating Station SCS#: 25222249		MW-313

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Adam Jochimsen Cascade Drilling	2/20/2023	2/20/2023	Rotosonic

Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-313	Feet	Feet	6.0 in

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane 674329.75 N, 2527464.68 E S / C / N
NE 1/4 of SW 1/4 of Section 22, T 81 N, R 6 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

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

Sample Number and Type	Sample 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: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			1	TOPSOIL, dark brown.	OL									
S1	24		2–5	SILTY SAND, fine to medium grained, dark brown.	SM					M				
S2	30		7–10	LIMESTONE BEDROCK (highly weathered), tan to light brown.						M				
S3	48		12–13	SILTY SAND, fine to medium grained, dark brown.	SM					M				
			13–15	LIMESTONE BEDROCK, tan to light brown.										Depth to water at 15' bgs.

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

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

Boring Number MW-313 Page 2 of 2

Sample Number and Type	Sample 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: Standard Penetration	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			16	LIMESTONE BEDROCK, tan to light brown.										
			17											
S4	72		18							W				
			19											
			20											
			21											
S5	12		22							W				
			23											
			24											
S6	60		25							W				
			26											
			27	End of Boring at 27 feet below ground surface.										

MONITORING WELL / PIEZOMETER CONSTRUCTION DOCUMENTATION FORM

Disposal Site Name: M.L. Kapp Generating Station | Permit No.: 60483

Well or Piezometer No.: MW-313 | Dates Started: 2/20/2023 | Date Completed: 2/20/2023

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

Specify corner of site: Inside ROW NW SE 22-81-06 | Distance and direction along boundary: 236' north NW 1/4 SE 1/4

Distance and direction from boundary to surface monitoring well: 593' east NW 1/4 SE 1/4

Elevation (+0.01 ft. MSL): 588.65

Ground Surface: 588.65 | Top of protective casing: 588.73

Top of well casing: 588.24 | Benchmark elevation:

Benchmark description:

B. SOIL BORING INFORMATION

Construction Company Name: Cascade Environmental

Address: 301 Alderson St. | City, State, Zip Code: Schofield, WI 54476

Name of driller: Adam Jochimsen

Drilling method: Sonic | Drilling fluid: Water | Bore Hole diameter: 6"

Soil sampling method: Grab/Bagged | Depth of boring: 27'

C. MONITORING WELL INSTALLATION

Casing material: PVC | Placement method: Gravity

Length of casing: 16' | Volume: 2 cu ft

Outside casing diameter: 2.37 | Backfill (if different from seal): N/A

Inside casing diameter: 2.01 | Material:

Casing joint type: Threaded | Placement method:

Casing/screen joint type: Threaded | Volume:

Screen material: PVC | Surface seal design:

Screen opening size: 0.010" | Material of protective casing: Steel

Material of grout between protective casing and well casing: Filter Sand

Screen length: 10'

Depth of Well: 26' | Protective cap: Yes

Filter Pack: | Material: Steel

Material: Sand | Vented?: ☐ Y ☒ N | Locking?: ☒ Y ☐ N

Grain Size: Red Flint #40 | Well cap: Yes

Volume: 2.5 cu ft | Material: Plastic

Seal (minimum 3 ft. length above filter pack): | Vented?: ☐ Y ☒ N

Material: 3/8" Bentonite Chips

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

Water level: 14.70 | **Stabilization time**:

Well development method: Surge and Purge with Pump

Average depth of frost line:

DRILLER'S CERTIFICATION

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

Signature: [signature] | **Certification #**: 9361 | **Date**: 2-20-2023

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½ inch x 11 inch map showing locations of all monitoring wells and piezometers.

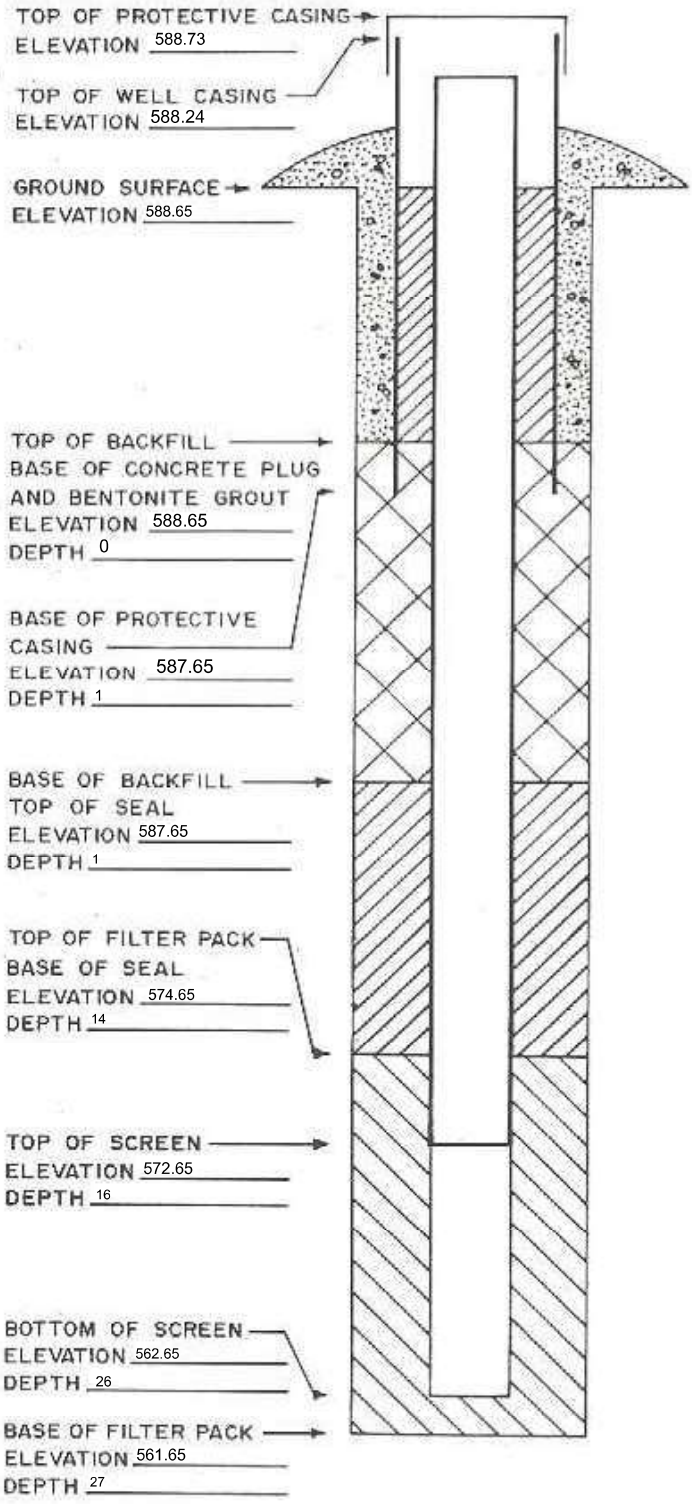
Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

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

ELEVATIONS: ± 0.01 FT. MSL

DEPTHS: ± 0.1 FT. FROM GROUND SERFACE

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 Generating Station | Permit No.: 60483

Well or Piezometer No.: MW-312 | Dates Started: 2/13/2023 | Date Completed: 2/20/2023

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

Specify corner of site: East parcel 8071850000 | Distance and direction along boundary: 546' south

Distance and direction from boundary to surface monitoring well: 1136' west

Elevation (+0.01 ft. MSL): 591.66

Ground Surface: 591.66 | Top of protective casing: 594.42

Top of well casing: 594.28 | Benchmark elevation:

Benchmark description:

B. SOIL BORING INFORMATION

Construction Company Name: Cascade Environmental

Address: 301 Alderson St. | City, State, Zip Code: Schofield, WI 54476

Name of driller: Adam Jochimsen

Drilling method: Sonic | Drilling fluid: Water | Bore Hole diameter: 6"

Soil sampling method: Grab/Bagged | Depth of boring: 66'

C. MONITORING WELL INSTALLATION

Casing material: PVC | Placement method: Gravity

Length of casing: 58' | Volume: 0.5 cu ft

Outside casing diameter: 2.37 | Backfill (if different from seal):

Inside casing diameter: 2.01 | Material: Grout

Casing joint type: Threaded | Placement method: Tremie

Casing/screen joint type: Threaded | Volume: 50 gallons

Screen material: PVC | Surface seal design:

Screen opening size: 0.010" | Material of protective casing: Steel

Material of grout between protective casing and well casing: Filter Sand

Screen length: 5'

Depth of Well: 63' | Protective cap: Yes

Filter Pack: | Material: Aluminum

Material: Sand | Vented?: ☐ Y ☒ N | Locking?: ☒ Y ☐ N

Grain Size: Red Flint #40 | Well cap: Yes

Volume: 2 cu ft | Material: Plastic

Seal (minimum 3 ft. length above filter pack): | Vented?: ☐ Y ☒ N

Material: 3/8" Bentonite Chips

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

Water level: 21.75 | **Stabilization time**:

Well development method: Surge and Purge with Pump

Average depth of frost line:

DRILLER'S CERTIFICATION

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

Signature _____ **Certification #** 9361 **Date** 2-20-2023

Attachments: Driller's log. Pipe schedules and grouting schedules. 8 ½ inch x 11 inch map showing locations of all monitoring wells and piezometers.

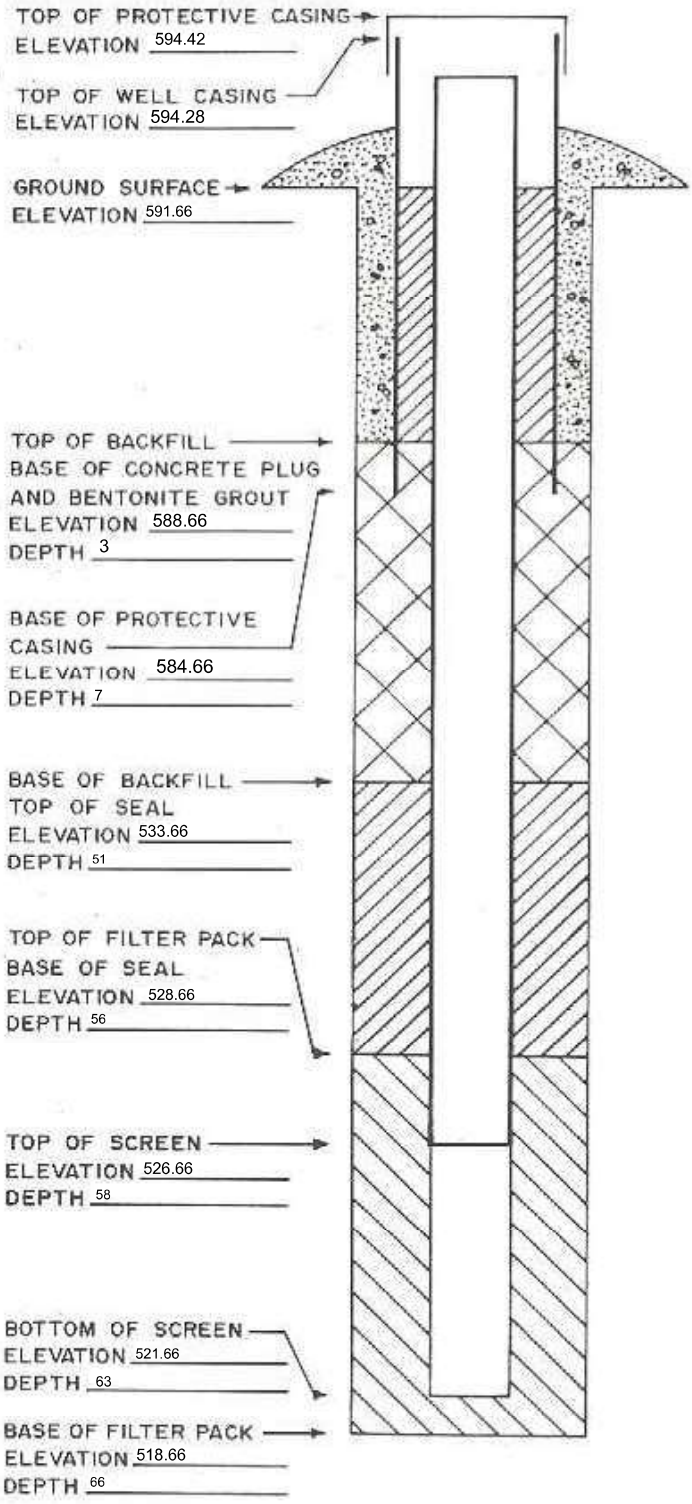
Please mail completed form to: Iowa Department of Natural Resources, Land Quality Bureau, 502 E. 9th St, Des Moines, IA 50319.

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

ELEVATIONS: ± 0.01 FT. MSL

DEPTHS: ± 0.1 FT. FROM GROUND SERFACE

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



Appendix C

Laboratory Reports

C1 May 2023 Assessment Monitoring

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Generated 6/28/2023 8:06:35 AM Revision 1

JOB DESCRIPTION

ML Kapp 25223077

JOB NUMBER

310-255223-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

Job Notes

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

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

Authorization

Generated
6/28/2023 8:06:35 AM
Revision 1

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

Table of Contents

Job ID: 310-255223-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-255223-1

Comments
No additional comments.

Revision
The report being provided is a revision of the original report sent on 6/12/2023. The report (revision 1) is being revised due to: Client requested reanalysis at a lower dilution. Samples 1,2,4,6.

Receipt
The samples were received on 5/5/2023 4:40 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 1.0º C, 1.3º C, 1.4º C and 2.5º C.

HPLC/IC
Methods 300.0, 9056A: The following samples were diluted due to the nature of the sample matrix: MW-302 (310-255223-2), MW-303 (310-255223-3), MW-304 (310-255223-4), MW-305 (310-255223-6), MW-306 (310-255223-7), MW-307 (310-255223-8) and MW-310 (310-255223-11). Elevated reporting limits (RLs) are provided.

Method 9056A: The following sample was diluted due to the nature of the sample matrix: MW-312 (310-255223-14). 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.

RAD
Method 903.0: Radium-226 batch 611873
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-301 (310-255223-1), MW-302 (310-255223-2), MW-303 (310-255223-3), MW-304 (310-255223-4), MW-305 (310-255223-6), MW-306 (310-255223-7), MW-307 (310-255223-8), MW-310 (310-255223-11), MW-312 (310-255223-14), Field Blank (310-255223-16), (LCS 160-611873/2-A), (MB 160-611873/1-A), (500-233494-G-3-A) and (500-233494-H-3-A DU)

Method 904.0: Radium-228 batch 611897
The LCS recovered at (130%). The limits in our LIMS system at 75-125 reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (62-148%) per method requirements. The LCS passes, no further action is required (LCS 160-611897/2-A)

Method 904.0: Radium-228 batch 611897
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-301 (310-255223-1), MW-302 (310-255223-2), MW-303 (310-255223-3), MW-304 (310-255223-4), MW-305 (310-255223-6), MW-306 (310-255223-7), MW-307 (310-255223-8), MW-310 (310-255223-11), MW-312 (310-255223-14), Field Blank (310-255223-16), (LCS 160-611897/2-A), (MB 160-611897/1-A), (500-233494-G-3-B) and (500-233494-H-3-B DU)

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 25223077

Job ID: 310-255223-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-255223-1	MW-301	Water	05/02/23 14:40	05/05/23 16:40
310-255223-2	MW-302	Water	05/01/23 15:35	05/05/23 16:40
310-255223-3	MW-303	Water	05/02/23 10:10	05/05/23 16:40
310-255223-4	MW-304	Water	05/02/23 11:00	05/05/23 16:40
310-255223-5	MW-304A	Water	05/02/23 11:45	05/05/23 16:40
310-255223-6	MW-305	Water	05/02/23 12:30	05/05/23 16:40
310-255223-7	MW-306	Water	05/02/23 13:25	05/05/23 16:40
310-255223-8	MW-307	Water	05/02/23 15:55	05/05/23 16:40
310-255223-9	MW-308	Water	05/03/23 10:05	05/05/23 16:40
310-255223-10	MW-309	Water	05/03/23 10:45	05/05/23 16:40
310-255223-11	MW-310	Water	05/04/23 09:35	05/05/23 16:40
310-255223-12	MW-311	Water	05/03/23 11:45	05/05/23 16:40
310-255223-13	MW-311A	Water	05/03/23 12:10	05/05/23 16:40
310-255223-14	MW-312	Water	05/03/23 15:05	05/05/23 16:40
310-255223-15	MW-313	Water	05/03/23 13:40	05/05/23 16:40
310-255223-16	Field Blank	Water	05/03/23 13:30	05/05/23 16:40

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-301 — Lab Sample ID: 310-255223-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	63		5.0	2.3	mg/L	5		9056A	Total/NA
Fluoride	0.51	J	1.0	0.38	mg/L	5		9056A	Total/NA
Sulfate	220		5.0	2.1	mg/L	5		9056A	Total/NA
Barium	64		10	3.2	ug/L	5		6020B	Total/NA
Boron	11000		500	380	ug/L	5		6020B	Total/NA
Cadmium	0.22	J	0.40	0.20	ug/L	2		6020B	Total/NA
Calcium	110000		2500	950	ug/L	5		6020B	Total/NA
Cobalt	3.5		1.0	0.34	ug/L	2		6020B	Total/NA
Iron	870		500	180	ug/L	5		6020B	Total/NA
Lithium	8.2	J	20	5.0	ug/L	2		6020B	Total/NA
Molybdenum	480		10	4.6	ug/L	5		6020B	Total/NA
Total Dissolved Solids	610		50	34	mg/L	1		SM 2540C	Total/NA
pH	6.8	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	586.13				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	49.2				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.02				mg/L	1		Field Sampling	Total/NA
Field pH	6.51				SU	1		Field Sampling	Total/NA
Field Conductivity	1006				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	11.3				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	8.10				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-302 — Lab Sample ID: 310-255223-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.1		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	230		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	5.2		4.0	1.1	ug/L	2		6020B	Total/NA
Barium	75		10	3.2	ug/L	5		6020B	Total/NA
Boron	5500		500	380	ug/L	5		6020B	Total/NA
Calcium	140000		2500	950	ug/L	5		6020B	Total/NA
Lithium	46		20	5.0	ug/L	2		6020B	Total/NA
Molybdenum	98		10	4.6	ug/L	5		6020B	Total/NA
Selenium	36		25	7.0	ug/L	5		6020B	Total/NA
Total Dissolved Solids	590		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	586.44				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	193.4				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.61				mg/L	1		Field Sampling	Total/NA
Field pH	7.16				SU	1		Field Sampling	Total/NA
Field Conductivity	883				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	10.3				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	3.73				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-303 — Lab Sample ID: 310-255223-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	680		10	4.2	mg/L	10		9056A	Total/NA
Arsenic	44		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	97		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	2400		100	76	ug/L	1		6020B	Total/NA
Cadmium	0.19	J	0.20	0.10	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample ID: MW-303 (Continued) — Lab Sample ID: 310-255223-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	210000		500	190	ug/L	1		6020B	Total/NA
Chromium	1.2	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	1.8		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	28000		100	36	ug/L	1		6020B	Total/NA
Lithium	30		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	110		2.0	0.91	ug/L	1		6020B	Total/NA
Selenium	5.2		5.0	1.4	ug/L	1		6020B	Total/NA
Total Dissolved Solids	1000		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.0	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	585.50				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	51.7				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.71				mg/L	1		Field Sampling	Total/NA
Field pH	6.73				SU	1		Field Sampling	Total/NA
Field Conductivity	1431				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	11.1				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	81.2				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-304 — Lab Sample ID: 310-255223-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	27		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	260		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	4.1		4.0	1.1	ug/L	2		6020B	Total/NA
Barium	83		10	3.2	ug/L	5		6020B	Total/NA
Boron	8700		500	380	ug/L	5		6020B	Total/NA
Calcium	81000		2500	950	ug/L	5		6020B	Total/NA
Cobalt	0.53	J	1.0	0.34	ug/L	2		6020B	Total/NA
Iron	1700		500	180	ug/L	5		6020B	Total/NA
Molybdenum	740		10	4.6	ug/L	5		6020B	Total/NA
Total Dissolved Solids	520		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	586.17				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	12.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.13				mg/L	1		Field Sampling	Total/NA
Field pH	6.93				SU	1		Field Sampling	Total/NA
Field Conductivity	844				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	11.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	40.0				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-304A — Lab Sample ID: 310-255223-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.4	J	2.0	0.53	ug/L	1		6020B	Total/NA
Iron	470		100	36	ug/L	1		6020B	Total/NA
Molybdenum	3.4		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	586.14				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	1.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.99				mg/L	1		Field Sampling	Total/NA
Field pH	7.04				SU	1		Field Sampling	Total/NA
Field Conductivity	682				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	11.9				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	2.62				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-305 — Lab Sample ID: 310-255223-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	650		10	4.2	mg/L	10		9056A	Total/NA
Barium	87		10	3.2	ug/L	5		6020B	Total/NA
Boron	14000		500	380	ug/L	5		6020B	Total/NA
Cadmium	0.20	J	0.40	0.20	ug/L	2		6020B	Total/NA
Calcium	210000		2500	950	ug/L	5		6020B	Total/NA
Cobalt	0.77	J	1.0	0.34	ug/L	2		6020B	Total/NA
Iron	760		500	180	ug/L	5		6020B	Total/NA
Lithium	15	J	20	5.0	ug/L	2		6020B	Total/NA
Molybdenum	380		10	4.6	ug/L	5		6020B	Total/NA
Selenium	7.8	J	10	2.8	ug/L	2		6020B	Total/NA
Total Dissolved Solids	1200		50	34	mg/L	1		SM 2540C	Total/NA
pH	6.9	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	586.15				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	65.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.02				mg/L	1		Field Sampling	Total/NA
Field pH	6.58				SU	1		Field Sampling	Total/NA
Field Conductivity	1605				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	10.7				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	13.40				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-306 — Lab Sample ID: 310-255223-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	99		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	72		5.0	2.1	mg/L	5		9056A	Total/NA
Barium	45		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	3900		100	76	ug/L	1		6020B	Total/NA
Calcium	120000		500	190	ug/L	1		6020B	Total/NA
Lead	0.48	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	26		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	27		2.0	0.91	ug/L	1		6020B	Total/NA
Selenium	8.5		5.0	1.4	ug/L	1		6020B	Total/NA
Total Dissolved Solids	660		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	586.28				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	135.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	4.92				mg/L	1		Field Sampling	Total/NA
Field pH	6.79				SU	1		Field Sampling	Total/NA
Field Conductivity	1168				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	10.1				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	4.07				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-307 — Lab Sample ID: 310-255223-8

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	26		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	3.1		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	360		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	170		100	76	ug/L	1		6020B	Total/NA
Cadmium	0.33		0.20	0.10	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 25223077

Job ID: 310-255223-1

Client Sample ID: MW-307 (Continued) — Lab Sample ID: 310-255223-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	260000		500	190	ug/L	1		6020B	Total/NA
Cobalt	6.8		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	4200		100	36	ug/L	1		6020B	Total/NA
Lead	0.37	J	0.50	0.24	ug/L	1		6020B	Total/NA
Molybdenum	2.2		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	1000		50	34	mg/L	1		SM 2540C	Total/NA
pH	6.9	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	593.89				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-30.8				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.03				mg/L	1		Field Sampling	Total/NA
Field pH	6.59				SU	1		Field Sampling	Total/NA
Field Conductivity	1938				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	9.8				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	3.12				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-308 — Lab Sample ID: 310-255223-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	400		100	36	ug/L	1		6020B	Total/NA
Molybdenum	1.7	J	2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	585.90				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	165.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	3.34				mg/L	1		Field Sampling	Total/NA
Field pH	6.26				SU	1		Field Sampling	Total/NA
Field Conductivity	653				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	10.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	8.45				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-309 — Lab Sample ID: 310-255223-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.6		2.0	0.53	ug/L	1		6020B	Total/NA
Iron	43000		100	36	ug/L	1		6020B	Total/NA
Lithium	2.6	J	10	2.5	ug/L	1		6020B	Total/NA
Groundwater Elevation	585.33				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-171.5				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.02				mg/L	1		Field Sampling	Total/NA
Field pH	6.62				SU	1		Field Sampling	Total/NA
Field Conductivity	1528				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	10.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	4.49				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-310 — Lab Sample ID: 310-255223-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	74		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	130		5.0	2.1	mg/L	5		9056A	Total/NA
Barium	43		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	1000		100	76	ug/L	1		6020B	Total/NA
Calcium	110000		500	190	ug/L	1		6020B	Total/NA
Cobalt	0.45	J	0.50	0.17	ug/L	1		6020B	Total/NA
Iron	43	J	100	36	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-310 (Continued) — Lab Sample ID: 310-255223-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.40	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	2.9	J	10	2.5	ug/L	1		6020B	Total/NA
Total Dissolved Solids	620		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	589.98				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	44.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.41				mg/L	1		Field Sampling	Total/NA
Field pH	6.69				SU	1		Field Sampling	Total/NA
Field Conductivity	1115				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.9				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	4.80				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-311 — Lab Sample ID: 310-255223-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	75	J	100	36	ug/L	1		6020B	Total/NA
Lithium	5.5	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	18		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	583.83				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	90.3				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	7.12				mg/L	1		Field Sampling	Total/NA
Field pH	6.58				SU	1		Field Sampling	Total/NA
Field Conductivity	903				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	10.6				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	44.9				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-311A — Lab Sample ID: 310-255223-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	9.2	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	210		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	583.44				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	68.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.08				mg/L	1		Field Sampling	Total/NA
Field pH	7.58				SU	1		Field Sampling	Total/NA
Field Conductivity	838				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.3				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	2.78				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-312 — Lab Sample ID: 310-255223-14

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	33		5.0	2.1	mg/L	5		9056A	Total/NA
Barium	63		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	370		100	76	ug/L	1		6020B	Total/NA
Calcium	78000		500	190	ug/L	1		6020B	Total/NA
Magnesium	36000		500	150	ug/L	1		6020B	Total/NA
Manganese	98		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	1.4	J	2.0	0.91	ug/L	1		6020B	Total/NA
Potassium	890		500	150	ug/L	1		6020B	Total/NA
Sodium	6300		1000	460	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-312 (Continued) — Lab Sample ID: 310-255223-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bicarbonate Alkalinity as CaCO3	260	B	5.0	2.5	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	260	B	5.0	2.5	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	290		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.6	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	577.84				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	40.1				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.10				mg/L	1		Field Sampling	Total/NA
Field pH	7.00				SU	1		Field Sampling	Total/NA
Field Conductivity	598				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.7				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	4.96				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-313 — Lab Sample ID: 310-255223-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	87		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	4.3	J	5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	2.4		2.0	0.53	ug/L	1		6020B	Total/NA
Calcium	54000		500	190	ug/L	1		6020B	Total/NA
Iron	250		100	36	ug/L	1		6020B	Total/NA
Lithium	4.0	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	25000		500	150	ug/L	1		6020B	Total/NA
Manganese	550		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	5.6		2.0	0.91	ug/L	1		6020B	Total/NA
Potassium	2800		500	150	ug/L	1		6020B	Total/NA
Sodium	88000		1000	460	ug/L	1		6020B	Total/NA
Bicarbonate Alkalinity as CaCO3	280	B	5.0	2.5	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	280	B	5.0	2.5	mg/L	1		SM 2320B	Total/NA
Groundwater Elevation	577.93				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-83.4				millivolts	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.69				mg/L	1		Field Sampling	Total/NA
Field pH	7.10				SU	1		Field Sampling	Total/NA
Field Conductivity	790				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	11.3				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	11.3				NTU	1		Field Sampling	Total/NA

Client Sample ID: Field Blank — Lab Sample ID: 310-255223-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH	6.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-301
Date Collected: 05/02/23 14:40
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-1
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63**		5.0	2.3	mg/L			05/25/23 04:05	5
Fluoride	**0.51**	**J**	1.0	0.38	mg/L			05/25/23 04:05	5
Sulfate	**220**		5.0	2.1	mg/L			05/25/23 04:05	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.0		4.0	2.0	ug/L		05/09/23 09:05	06/22/23 14:07	2
Arsenic	<1.1		4.0	1.1	ug/L		05/09/23 09:05	06/16/23 16:08	2
Barium	**64**		10	3.2	ug/L		05/09/23 09:05	05/25/23 14:33	5
Beryllium	<0.66		2.0	0.66	ug/L		05/09/23 09:05	06/22/23 14:07	2
Boron	**11000**		500	380	ug/L		05/09/23 09:05	05/25/23 14:33	5
Cadmium	**0.22**	**J**	0.40	0.20	ug/L		05/09/23 09:05	06/16/23 16:08	2
Calcium	**110000**		2500	950	ug/L		05/09/23 09:05	05/25/23 14:33	5
Chromium	<2.2		10	2.2	ug/L		05/09/23 09:05	06/16/23 16:08	2
Cobalt	**3.5**		1.0	0.34	ug/L		05/09/23 09:05	06/22/23 14:07	2
Iron	**870**		500	180	ug/L		05/09/23 09:05	05/25/23 14:33	5
Lead	<0.48		1.0	0.48	ug/L		05/09/23 09:05	06/16/23 16:08	2
Lithium	**8.2**	**J**	20	5.0	ug/L		05/09/23 09:05	06/22/23 14:07	2
Molybdenum	**480**		10	4.6	ug/L		05/09/23 09:05	05/25/23 14:33	5
Selenium	<2.8		10	2.8	ug/L		05/09/23 09:05	06/16/23 16:08	2
Thallium	<0.52		2.0	0.52	ug/L		05/09/23 09:05	06/16/23 16:08	2

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:10	05/18/23 15:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**610**		50	34	mg/L			05/08/23 10:01	1
pH (SM 4500 H+ B)	**6.8**	**HF**	0.1	0.1	SU			05/05/23 17:09	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	**0.228**		0.147	0.148	1.00	0.186	pCi/L	05/17/23 09:41	06/11/23 19:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*84.0*		*30 - 110*	*05/17/23 09:41*	*06/11/23 19:30*	*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	**0.579**		0.375	0.378	1.00	0.551	pCi/L	05/17/23 11:24	06/09/23 10:35	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*84.0*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:35*	*1*
Y Carrier	*84.0*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:35*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-301

Date Collected: 05/02/23 14:40
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-1

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.807		0.403	0.406	5.00	0.551	pCi/L		06/12/23 16:04	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	586.13				ft			05/02/23 14:40	1
Oxidation Reduction Potential	49.2				millivolts			05/02/23 14:40	1
Oxygen, Dissolved	0.02				mg/L			05/02/23 14:40	1
Field pH	6.51				SU			05/02/23 14:40	1
Field Conductivity	1006				umhos/cm			05/02/23 14:40	1
Field Temperature	11.3				Degrees C			05/02/23 14:40	1
Field Turbidity	8.10				NTU			05/02/23 14:40	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-302
Date Collected: 05/01/23 15:35
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-2
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**8.1**		5.0	2.3	mg/L			05/25/23 04:21	5
Fluoride	<0.38		1.0	0.38	mg/L			05/25/23 04:21	5
Sulfate	**230**		5.0	2.1	mg/L			05/25/23 04:21	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.0		4.0	2.0	ug/L		05/09/23 09:05	06/22/23 14:09	2
Arsenic	**5.2**		4.0	1.1	ug/L		05/09/23 09:05	06/16/23 16:16	2
Barium	**75**		10	3.2	ug/L		05/09/23 09:05	05/25/23 14:36	5
Beryllium	<0.66		2.0	0.66	ug/L		05/09/23 09:05	06/22/23 14:09	2
Boron	**5500**		500	380	ug/L		05/09/23 09:05	05/25/23 14:36	5
Cadmium	<0.20		0.40	0.20	ug/L		05/09/23 09:05	06/16/23 16:16	2
Calcium	**140000**		2500	950	ug/L		05/09/23 09:05	05/25/23 14:36	5
Chromium	<2.2		10	2.2	ug/L		05/09/23 09:05	06/16/23 16:16	2
Cobalt	<0.34		1.0	0.34	ug/L		05/09/23 09:05	06/16/23 16:16	2
Iron	<72		200	72	ug/L		05/09/23 09:05	06/16/23 16:16	2
Lead	<0.48		1.0	0.48	ug/L		05/09/23 09:05	06/16/23 16:16	2
Lithium	**46**		20	5.0	ug/L		05/09/23 09:05	06/22/23 14:09	2
Molybdenum	**98**		10	4.6	ug/L		05/09/23 09:05	05/25/23 14:36	5
Selenium	**36**		25	7.0	ug/L		05/09/23 09:05	05/25/23 14:36	5
Thallium	<0.52		2.0	0.52	ug/L		05/09/23 09:05	06/16/23 16:16	2

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:10	05/18/23 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**590**		50	34	mg/L			05/08/23 10:01	1
pH (SM 4500 H+ B)	**7.2**	**HF**	0.1	0.1	SU			05/05/23 17:08	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0574	U	0.0950	0.0951	1.00	0.167	pCi/L	05/17/23 09:41	06/11/23 19:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*87.8*		*30 - 110*	*05/17/23 09:41*	*06/11/23 19:30*	*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	0.281	U	0.309	0.310	1.00	0.503	pCi/L	05/17/23 11:24	06/09/23 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*87.8*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*
Y Carrier	*84.3*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-302
Date Collected: 05/01/23 15:35
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-2
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.338	U	0.323	0.324	5.00	0.503	pCi/L		06/12/23 16:04	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	586.44				ft			05/01/23 15:35	1
Oxidation Reduction Potential	193.4				millivolts			05/01/23 15:35	1
Oxygen, Dissolved	1.61				mg/L			05/01/23 15:35	1
Field pH	7.16				SU			05/01/23 15:35	1
Field Conductivity	883				umhos/cm			05/01/23 15:35	1
Field Temperature	10.3				Degrees C			05/01/23 15:35	1
Field Turbidity	3.73				NTU			05/01/23 15:35	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-303

Date Collected: 05/02/23 10:10
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		5.0	2.3	mg/L			05/25/23 04:36	5
Fluoride	<0.38		1.0	0.38	mg/L			05/25/23 04:36	5
Sulfate	680		10	4.2	mg/L			05/25/23 09:23	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		05/09/23 09:05	05/25/23 15:18	1
Arsenic	44		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 15:18	1
Barium	97		2.0	0.64	ug/L		05/09/23 09:05	05/25/23 15:18	1
Beryllium	<0.33		1.0	0.33	ug/L		05/09/23 09:05	05/25/23 15:18	1
Boron	2400		100	76	ug/L		05/09/23 09:05	05/25/23 15:18	1
Cadmium	0.19	J	0.20	0.10	ug/L		05/09/23 09:05	05/25/23 15:18	1
Calcium	210000		500	190	ug/L		05/09/23 09:05	05/25/23 15:18	1
Chromium	1.2	J	5.0	1.1	ug/L		05/09/23 09:05	05/25/23 15:18	1
Cobalt	1.8		0.50	0.17	ug/L		05/09/23 09:05	05/25/23 15:18	1
Iron	28000		100	36	ug/L		05/09/23 09:05	05/25/23 15:18	1
Lead	<0.24		0.50	0.24	ug/L		05/09/23 09:05	05/25/23 15:18	1
Lithium	30		10	2.5	ug/L		05/09/23 09:05	05/25/23 15:18	1
Molybdenum	110		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 15:18	1
Selenium	5.2		5.0	1.4	ug/L		05/09/23 09:05	05/25/23 15:18	1
Thallium	<0.26		1.0	0.26	ug/L		05/09/23 09:05	05/25/23 15:18	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:10	05/18/23 15:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1000		50	34	mg/L			05/08/23 10:01	1
pH (SM 4500 H+ B)	7.0	HF	0.1	0.1	SU			05/05/23 17:05	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.268		0.184	0.186	1.00	0.257	pCi/L	05/17/23 09:41	06/11/23 19:31	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*88.3*		*30 - 110*	*05/17/23 09:41*	*06/11/23 19:31*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.880		0.484	0.491	1.00	0.680	pCi/L	05/17/23 11:24	06/09/23 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*88.3*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*
Y Carrier	*85.4*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-303

Date Collected: 05/02/23 10:10
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-3

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.15		0.518	0.525	5.00	0.680	pCi/L		06/12/23 16:04	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	585.50				ft			05/02/23 10:10	1
Oxidation Reduction Potential	51.7				millivolts			05/02/23 10:10	1
Oxygen, Dissolved	0.71				mg/L			05/02/23 10:10	1
Field pH	6.73				SU			05/02/23 10:10	1
Field Conductivity	1431				umhos/cm			05/02/23 10:10	1
Field Temperature	11.1				Degrees C			05/02/23 10:10	1
Field Turbidity	81.2				NTU			05/02/23 10:10	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-304

Date Collected: 05/02/23 11:00
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-4

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**27**		5.0	2.3	mg/L			05/25/23 04:52	5
Fluoride	<0.38		1.0	0.38	mg/L			05/25/23 04:52	5
Sulfate	**260**		5.0	2.1	mg/L			05/25/23 04:52	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.0		4.0	2.0	ug/L		05/09/23 09:05	06/22/23 14:12	2
Arsenic	**4.1**		4.0	1.1	ug/L		05/09/23 09:05	06/16/23 16:23	2
Barium	**83**		10	3.2	ug/L		05/09/23 09:05	05/25/23 15:21	5
Beryllium	<0.66		2.0	0.66	ug/L		05/09/23 09:05	06/22/23 14:12	2
Boron	**8700**		500	380	ug/L		05/09/23 09:05	05/25/23 15:21	5
Cadmium	<0.20		0.40	0.20	ug/L		05/09/23 09:05	06/16/23 16:23	2
Calcium	**81000**		2500	950	ug/L		05/09/23 09:05	05/25/23 15:21	5
Chromium	<2.2		10	2.2	ug/L		05/09/23 09:05	06/16/23 16:23	2
Cobalt	**0.53**	**J**	1.0	0.34	ug/L		05/09/23 09:05	06/16/23 16:23	2
Iron	**1700**		500	180	ug/L		05/09/23 09:05	05/25/23 15:21	5
Lead	<0.48		1.0	0.48	ug/L		05/09/23 09:05	06/16/23 16:23	2
Lithium	<5.0		20	5.0	ug/L		05/09/23 09:05	06/22/23 14:12	2
Molybdenum	**740**		10	4.6	ug/L		05/09/23 09:05	05/25/23 15:21	5
Selenium	<2.8		10	2.8	ug/L		05/09/23 09:05	06/16/23 16:23	2
Thallium	<0.52		2.0	0.52	ug/L		05/09/23 09:05	06/16/23 16:23	2

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:10	05/18/23 15:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**520**		50	34	mg/L			05/08/23 10:01	1
pH (SM 4500 H+ B)	**7.2**	**HF**	0.1	0.1	SU			05/05/23 17:04	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	**0.652**		0.241	0.248	1.00	0.264	pCi/L	05/17/23 09:41	06/11/23 19:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*65.5*		*30 - 110*	*05/17/23 09:41*	*06/11/23 19:32*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	**0.814**		0.504	0.509	1.00	0.737	pCi/L	05/17/23 11:24	06/09/23 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*65.5*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*
Y Carrier	*83.1*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-304

Date Collected: 05/02/23 11:00
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-4

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.47		0.559	0.566	5.00	0.737	pCi/L		06/12/23 16:04	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	586.17				ft			05/02/23 11:00	1
Oxidation Reduction Potential	12.1				millivolts			05/02/23 11:00	1
Oxygen, Dissolved	0.13				mg/L			05/02/23 11:00	1
Field pH	6.93				SU			05/02/23 11:00	1
Field Conductivity	844				umhos/cm			05/02/23 11:00	1
Field Temperature	11.4				Degrees C			05/02/23 11:00	1
Field Turbidity	40.0				NTU			05/02/23 11:00	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-304A

Date Collected: 05/02/23 11:45
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.4	J	2.0	0.53	ug/L		05/09/23 09:05	05/25/23 15:24	1
Iron	470		100	36	ug/L		05/09/23 09:05	05/25/23 15:24	1
Lithium	<2.5		10	2.5	ug/L		05/09/23 09:05	05/25/23 15:24	1
Molybdenum	3.4		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 15:24	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	586.14				ft			05/02/23 11:45	1
Oxidation Reduction Potential	1.8				millivolts			05/02/23 11:45	1
Oxygen, Dissolved	1.99				mg/L			05/02/23 11:45	1
Field pH	7.04				SU			05/02/23 11:45	1
Field Conductivity	682				umhos/cm			05/02/23 11:45	1
Field Temperature	11.9				Degrees C			05/02/23 11:45	1
Field Turbidity	2.62				NTU			05/02/23 11:45	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-305
Date Collected: 05/02/23 12:30
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-6
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		5.0	2.3	mg/L			05/25/23 05:07	5
Fluoride	<0.38		1.0	0.38	mg/L			05/25/23 05:07	5
Sulfate	650		10	4.2	mg/L			05/25/23 09:38	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<2.0		4.0	2.0	ug/L		05/09/23 09:05	06/22/23 14:14	2
Arsenic	<1.1		4.0	1.1	ug/L		05/09/23 09:05	06/16/23 16:32	2
Barium	87		10	3.2	ug/L		05/09/23 09:05	05/25/23 15:26	5
Beryllium	<0.66		2.0	0.66	ug/L		05/09/23 09:05	06/22/23 14:14	2
Boron	14000		500	380	ug/L		05/09/23 09:05	05/25/23 15:26	5
Cadmium	0.20	J	0.40	0.20	ug/L		05/09/23 09:05	06/16/23 16:32	2
Calcium	210000		2500	950	ug/L		05/09/23 09:05	05/25/23 15:26	5
Chromium	<2.2		10	2.2	ug/L		05/09/23 09:05	06/16/23 16:32	2
Cobalt	0.77	J	1.0	0.34	ug/L		05/09/23 09:05	06/16/23 16:32	2
Iron	760		500	180	ug/L		05/09/23 09:05	05/25/23 15:26	5
Lead	<0.48		1.0	0.48	ug/L		05/09/23 09:05	06/16/23 16:32	2
Lithium	15	J	20	5.0	ug/L		05/09/23 09:05	06/22/23 14:14	2
Molybdenum	380		10	4.6	ug/L		05/09/23 09:05	05/25/23 15:26	5
Selenium	7.8	J	10	2.8	ug/L		05/09/23 09:05	06/16/23 16:32	2
Thallium	<0.52		2.0	0.52	ug/L		05/09/23 09:05	06/16/23 16:32	2

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:10	05/18/23 15:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1200		50	34	mg/L			05/08/23 10:01	1
pH (SM 4500 H+ B)	6.9	HF	0.1	0.1	SU			05/05/23 17:06	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0198	U	0.113	0.113	1.00	0.215	pCi/L	05/17/23 09:41	06/11/23 19:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.0*		*30 - 110*	*05/17/23 09:41*	*06/11/23 19:32*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.0405	U	0.302	0.302	1.00	0.553	pCi/L	05/17/23 11:24	06/09/23 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.0*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*
Y Carrier	*86.0*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-305

Date Collected: 05/02/23 12:30
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-6

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.0603	U	0.322	0.322	5.00	0.553	pCi/L		06/12/23 16:04	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	**586.15**				ft			05/02/23 12:30	1
Oxidation Reduction Potential	**65.8**				millivolts			05/02/23 12:30	1
Oxygen, Dissolved	**0.02**				mg/L			05/02/23 12:30	1
Field pH	**6.58**				SU			05/02/23 12:30	1
Field Conductivity	**1605**				umhos/cm			05/02/23 12:30	1
Field Temperature	**10.7**				Degrees C			05/02/23 12:30	1
Field Turbidity	**13.40**				NTU			05/02/23 12:30	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-306
Date Collected: 05/02/23 13:25
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-7
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**99**		5.0	2.3	mg/L			05/25/23 05:54	5
Fluoride	<0.38		1.0	0.38	mg/L			05/25/23 05:54	5
Sulfate	**72**		5.0	2.1	mg/L			05/25/23 05:54	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		05/09/23 09:05	05/25/23 15:29	1
Arsenic	<0.53		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 15:29	1
Barium	**45**		2.0	0.64	ug/L		05/09/23 09:05	05/25/23 15:29	1
Beryllium	<0.33		1.0	0.33	ug/L		05/09/23 09:05	05/25/23 15:29	1
Boron	**3900**		100	76	ug/L		05/09/23 09:05	05/25/23 15:29	1
Cadmium	<0.10		0.20	0.10	ug/L		05/09/23 09:05	05/25/23 15:29	1
Calcium	**120000**		500	190	ug/L		05/09/23 09:05	05/25/23 15:29	1
Chromium	<1.1		5.0	1.1	ug/L		05/09/23 09:05	05/25/23 15:29	1
Cobalt	<0.17		0.50	0.17	ug/L		05/09/23 09:05	05/25/23 15:29	1
Iron	<36		100	36	ug/L		05/09/23 09:05	05/25/23 15:29	1
Lead	**0.48**	**J**	0.50	0.24	ug/L		05/09/23 09:05	05/25/23 15:29	1
Lithium	**26**		10	2.5	ug/L		05/09/23 09:05	05/25/23 15:29	1
Molybdenum	**27**		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 15:29	1
Selenium	**8.5**		5.0	1.4	ug/L		05/09/23 09:05	05/25/23 15:29	1
Thallium	<0.26		1.0	0.26	ug/L		05/09/23 09:05	05/25/23 15:29	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:10	05/18/23 15:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**660**		50	34	mg/L			05/08/23 10:01	1
pH (SM 4500 H+ B)	**7.1**	**HF**	0.1	0.1	SU			05/08/23 10:24	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	-0.0355	U	0.0892	0.0892	1.00	0.200	pCi/L	05/17/23 09:41	06/11/23 19:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*84.5*		*30 - 110*	*05/17/23 09:41*	*06/11/23 19:32*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.193	U	0.306	0.306	1.00	0.522	pCi/L	05/17/23 11:24	06/09/23 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*84.5*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*
Y Carrier	*84.8*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-306

Date Collected: 05/02/23 13:25
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-7

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.193	U	0.319	0.319	5.00	0.522	pCi/L		06/12/23 16:04	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	**586.28**				ft			05/02/23 13:25	1
Oxidation Reduction Potential	**135.8**				millivolts			05/02/23 13:25	1
Oxygen, Dissolved	**4.92**				mg/L			05/02/23 13:25	1
Field pH	**6.79**				SU			05/02/23 13:25	1
Field Conductivity	**1168**				umhos/cm			05/02/23 13:25	1
Field Temperature	**10.1**				Degrees C			05/02/23 13:25	1
Field Turbidity	**4.07**				NTU			05/02/23 13:25	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-307
Date Collected: 05/02/23 15:55
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-8
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**64**		5.0	2.3	mg/L			05/25/23 06:10	5
Fluoride	<0.38		1.0	0.38	mg/L			05/25/23 06:10	5
Sulfate	**26**		5.0	2.1	mg/L			05/25/23 06:10	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		05/09/23 09:05	05/25/23 15:31	1
Arsenic	**3.1**		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 15:31	1
Barium	**360**		2.0	0.64	ug/L		05/09/23 09:05	05/25/23 15:31	1
Beryllium	<0.33		1.0	0.33	ug/L		05/09/23 09:05	05/25/23 15:31	1
Boron	**170**		100	76	ug/L		05/09/23 09:05	05/25/23 15:31	1
Cadmium	**0.33**		0.20	0.10	ug/L		05/09/23 09:05	05/25/23 15:31	1
Calcium	**260000**		500	190	ug/L		05/09/23 09:05	05/25/23 15:31	1
Chromium	<1.1		5.0	1.1	ug/L		05/09/23 09:05	05/25/23 15:31	1
Cobalt	**6.8**		0.50	0.17	ug/L		05/09/23 09:05	05/25/23 15:31	1
Iron	**4200**		100	36	ug/L		05/09/23 09:05	05/25/23 15:31	1
Lead	**0.37**	**J**	0.50	0.24	ug/L		05/09/23 09:05	05/25/23 15:31	1
Lithium	<2.5		10	2.5	ug/L		05/09/23 09:05	05/25/23 15:31	1
Molybdenum	**2.2**		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 15:31	1
Selenium	<1.4		5.0	1.4	ug/L		05/09/23 09:05	05/25/23 15:31	1
Thallium	<0.26		1.0	0.26	ug/L		05/09/23 09:05	05/25/23 15:31	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:10	05/18/23 15:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1000**		50	34	mg/L			05/08/23 10:01	1
pH (SM 4500 H+ B)	**6.9**	**HF**	0.1	0.1	SU			05/08/23 10:23	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	**0.266**		0.166	0.168	1.00	0.225	pCi/L	05/17/23 09:41	06/11/23 19:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*75.3*		*30 - 110*	*05/17/23 09:41*	*06/11/23 19:32*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.167	U	0.380	0.380	1.00	0.668	pCi/L	05/17/23 11:24	06/09/23 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*75.3*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*
Y Carrier	*82.3*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-307

Date Collected: 05/02/23 15:55
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-8

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.433	U	0.415	0.415	5.00	0.668	pCi/L		06/12/23 16:04	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	593.89				ft			05/02/23 15:55	1
Oxidation Reduction Potential	-30.8				millivolts			05/02/23 15:55	1
Oxygen, Dissolved	0.03				mg/L			05/02/23 15:55	1
Field pH	6.59				SU			05/02/23 15:55	1
Field Conductivity	1938				umhos/cm			05/02/23 15:55	1
Field Temperature	9.8				Degrees C			05/02/23 15:55	1
Field Turbidity	3.12				NTU			05/02/23 15:55	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-308

Date Collected: 05/03/23 10:05
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 15:34	1
Iron	**400**		100	36	ug/L		05/09/23 09:05	05/25/23 15:34	1
Lithium	<2.5		10	2.5	ug/L		05/09/23 09:05	05/25/23 15:34	1
Molybdenum	**1.7**	**J**	2.0	0.91	ug/L		05/09/23 09:05	05/25/23 15:34	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	**585.90**				ft			05/03/23 10:05	1
Oxidation Reduction Potential	**165.1**				millivolts			05/03/23 10:05	1
Oxygen, Dissolved	**3.34**				mg/L			05/03/23 10:05	1
Field pH	**6.26**				SU			05/03/23 10:05	1
Field Conductivity	**653**				umhos/cm			05/03/23 10:05	1
Field Temperature	**10.4**				Degrees C			05/03/23 10:05	1
Field Turbidity	**8.45**				NTU			05/03/23 10:05	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-309

Date Collected: 05/03/23 10:45
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**5.6**		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 15:50	1
Iron	**43000**		100	36	ug/L		05/09/23 09:05	05/25/23 15:50	1
Lithium	**2.6**	**J**	10	2.5	ug/L		05/09/23 09:05	05/25/23 15:50	1
Molybdenum	<0.91		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 15:50	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	**585.33**				ft			05/03/23 10:45	1
Oxidation Reduction Potential	**-171.5**				millivolts			05/03/23 10:45	1
Oxygen, Dissolved	**0.02**				mg/L			05/03/23 10:45	1
Field pH	**6.62**				SU			05/03/23 10:45	1
Field Conductivity	**1528**				umhos/cm			05/03/23 10:45	1
Field Temperature	**10.4**				Degrees C			05/03/23 10:45	1
Field Turbidity	**4.49**				NTU			05/03/23 10:45	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-310
Date Collected: 05/04/23 09:35
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-11
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**74**		5.0	2.3	mg/L			05/25/23 06:26	5
Fluoride	<0.38		1.0	0.38	mg/L			05/25/23 06:26	5
Sulfate	**130**		5.0	2.1	mg/L			05/25/23 06:26	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		05/09/23 09:05	05/25/23 15:52	1
Arsenic	<0.53		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 15:52	1
Barium	**43**		2.0	0.64	ug/L		05/09/23 09:05	05/25/23 15:52	1
Beryllium	<0.33		1.0	0.33	ug/L		05/09/23 09:05	05/25/23 15:52	1
Boron	**1000**		100	76	ug/L		05/09/23 09:05	05/25/23 15:52	1
Cadmium	<0.10		0.20	0.10	ug/L		05/09/23 09:05	05/25/23 15:52	1
Calcium	**110000**		500	190	ug/L		05/09/23 09:05	05/25/23 15:52	1
Chromium	<1.1		5.0	1.1	ug/L		05/09/23 09:05	05/25/23 15:52	1
Cobalt	**0.45**	**J**	0.50	0.17	ug/L		05/09/23 09:05	05/25/23 15:52	1
Iron	**43**	**J**	100	36	ug/L		05/09/23 09:05	05/25/23 15:52	1
Lead	**0.40**	**J**	0.50	0.24	ug/L		05/09/23 09:05	05/25/23 15:52	1
Lithium	**2.9**	**J**	10	2.5	ug/L		05/09/23 09:05	05/25/23 15:52	1
Molybdenum	<0.91		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 15:52	1
Selenium	<1.4		5.0	1.4	ug/L		05/09/23 09:05	05/25/23 15:52	1
Thallium	<0.26		1.0	0.26	ug/L		05/09/23 09:05	05/25/23 15:52	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:10	05/18/23 15:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**620**		50	34	mg/L			05/08/23 15:48	1
pH (SM 4500 H+ B)	**7.2**	**HF**	0.1	0.1	SU			05/08/23 10:22	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.120	U	0.119	0.119	1.00	0.186	pCi/L	05/17/23 09:41	06/11/23 19:32	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*91.5*		*30 - 110*	*05/17/23 09:41*	*06/11/23 19:32*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	-0.119	U	0.354	0.354	1.00	0.675	pCi/L	05/17/23 11:24	06/09/23 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*91.5*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*
Y Carrier	*81.5*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-310
Date Collected: 05/04/23 09:35
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-11
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.120	U	0.373	0.373	5.00	0.675	pCi/L		06/12/23 16:04	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	589.98				ft			05/04/23 09:35	1
Oxidation Reduction Potential	44.1				millivolts			05/04/23 09:35	1
Oxygen, Dissolved	0.41				mg/L			05/04/23 09:35	1
Field pH	6.69				SU			05/04/23 09:35	1
Field Conductivity	1115				umhos/cm			05/04/23 09:35	1
Field Temperature	12.9				Degrees C			05/04/23 09:35	1
Field Turbidity	4.80				NTU			05/04/23 09:35	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-311

Date Collected: 05/03/23 11:45
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-12

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 15:55	1
Iron	**75**	**J**	100	36	ug/L		05/09/23 09:05	05/25/23 15:55	1
Lithium	**5.5**	**J**	10	2.5	ug/L		05/09/23 09:05	05/25/23 15:55	1
Molybdenum	**18**		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 15:55	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	**583.83**				ft			05/03/23 11:45	1
Oxidation Reduction Potential	**90.3**				millivolts			05/03/23 11:45	1
Oxygen, Dissolved	**7.12**				mg/L			05/03/23 11:45	1
Field pH	**6.58**				SU			05/03/23 11:45	1
Field Conductivity	**903**				umhos/cm			05/03/23 11:45	1
Field Temperature	**10.6**				Degrees C			05/03/23 11:45	1
Field Turbidity	**44.9**				NTU			05/03/23 11:45	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-311A

Date Collected: 05/03/23 12:10
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 15:57	1
Iron	<36		100	36	ug/L		05/09/23 09:05	05/25/23 15:57	1
Lithium	**9.2**	**J**	10	2.5	ug/L		05/09/23 09:05	05/25/23 15:57	1
Molybdenum	**210**		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 15:57	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	**583.44**				ft			05/03/23 12:10	1
Oxidation Reduction Potential	**68.1**				millivolts			05/03/23 12:10	1
Oxygen, Dissolved	**0.08**				mg/L			05/03/23 12:10	1
Field pH	**7.58**				SU			05/03/23 12:10	1
Field Conductivity	**838**				umhos/cm			05/03/23 12:10	1
Field Temperature	**12.3**				Degrees C			05/03/23 12:10	1
Field Turbidity	**2.78**				NTU			05/03/23 12:10	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-312

Date Collected: 05/03/23 15:05
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-14

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10**		5.0	2.3	mg/L			05/25/23 16:08	5
Fluoride	<0.38		1.0	0.38	mg/L			05/25/23 16:08	5
Sulfate	**33**		5.0	2.1	mg/L			05/25/23 16:08	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		05/09/23 09:05	05/25/23 16:00	1
Arsenic	<0.53		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 16:00	1
Barium	**63**		2.0	0.64	ug/L		05/09/23 09:05	05/25/23 16:00	1
Beryllium	<0.33		1.0	0.33	ug/L		05/09/23 09:05	05/25/23 16:00	1
Boron	**370**		100	76	ug/L		05/09/23 09:05	05/25/23 16:00	1
Cadmium	<0.10		0.20	0.10	ug/L		05/09/23 09:05	05/25/23 16:00	1
Calcium	**78000**		500	190	ug/L		05/09/23 09:05	05/25/23 16:00	1
Chromium	<1.1		5.0	1.1	ug/L		05/09/23 09:05	05/25/23 16:00	1
Cobalt	<0.17		0.50	0.17	ug/L		05/09/23 09:05	05/25/23 16:00	1
Iron	<36		100	36	ug/L		05/09/23 09:05	05/25/23 16:00	1
Lead	<0.24		0.50	0.24	ug/L		05/09/23 09:05	05/25/23 16:00	1
Lithium	<2.5		10	2.5	ug/L		05/09/23 09:05	05/25/23 16:00	1
Magnesium	**36000**		500	150	ug/L		05/09/23 09:05	05/25/23 16:00	1
Manganese	**98**		10	3.6	ug/L		05/09/23 09:05	05/25/23 16:00	1
Molybdenum	**1.4**	**J**	2.0	0.91	ug/L		05/09/23 09:05	05/25/23 16:00	1
Potassium	**890**		500	150	ug/L		05/09/23 09:05	05/25/23 16:00	1
Selenium	<1.4		5.0	1.4	ug/L		05/09/23 09:05	05/25/23 16:00	1
Sodium	**6300**		1000	460	ug/L		05/09/23 09:05	05/25/23 16:00	1
Thallium	<0.26		1.0	0.26	ug/L		05/09/23 09:05	05/25/23 16:00	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:10	05/18/23 15:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**260**	**B**	5.0	2.5	mg/L			05/08/23 19:30	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<2.5		5.0	2.5	mg/L			05/08/23 19:30	1
Total Alkalinity as CaCO3 (SM 2320B)	**260**	**B**	5.0	2.5	mg/L			05/08/23 19:30	1
Total Dissolved Solids (SM 2540C)	**290**		50	34	mg/L			05/08/23 10:01	1
pH (SM 4500 H+ B)	**7.6**	**HF**	0.1	0.1	SU			05/08/23 10:21	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.132	U	0.131	0.132	1.00	0.206	pCi/L	05/17/23 09:41	06/11/23 21:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*80.8*		*30 - 110*	*05/17/23 09:41*	*06/11/23 21:16*	*1*

Eurofins Cedar Falls

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-312

Date Collected: 05/03/23 15:05
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-14

Matrix: Water

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	-0.00515	U	0.320	0.320	1.00	0.604	pCi/L	05/17/23 11:24	06/09/23 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*80.8*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*1*
Y Carrier	*84.3*		*30 - 110*	*05/17/23 11:24*	*06/09/23 10:36*	*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	0.132	U	0.346	0.346	5.00	0.604	pCi/L		06/12/23 16:04	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	**577.84**				ft			05/03/23 15:05	1
Oxidation Reduction Potential	**40.1**				millivolts			05/03/23 15:05	1
Oxygen, Dissolved	**1.10**				mg/L			05/03/23 15:05	1
Field pH	**7.00**				SU			05/03/23 15:05	1
Field Conductivity	**598**				umhos/cm			05/03/23 15:05	1
Field Temperature	**12.7**				Degrees C			05/03/23 15:05	1
Field Turbidity	**4.96**				NTU			05/03/23 15:05	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-313

Date Collected: 05/03/23 13:40
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-15

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	87		5.0	2.3	mg/L			05/25/23 16:24	5
Sulfate	4.3	J	5.0	2.1	mg/L			05/25/23 16:24	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 16:03	1
Calcium	54000		500	190	ug/L		05/09/23 09:05	05/25/23 16:03	1
Iron	250		100	36	ug/L		05/09/23 09:05	05/25/23 16:03	1
Lithium	4.0	J	10	2.5	ug/L		05/09/23 09:05	05/25/23 16:03	1
Magnesium	25000		500	150	ug/L		05/09/23 09:05	05/25/23 16:03	1
Manganese	550		10	3.6	ug/L		05/09/23 09:05	05/25/23 16:03	1
Molybdenum	5.6		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 16:03	1
Potassium	2800		500	150	ug/L		05/09/23 09:05	05/25/23 16:03	1
Sodium	88000		1000	460	ug/L		05/09/23 09:05	05/25/23 16:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	280	B	5.0	2.5	mg/L			05/08/23 19:40	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<2.5		5.0	2.5	mg/L			05/08/23 19:40	1
Total Alkalinity as CaCO3 (SM 2320B)	280	B	5.0	2.5	mg/L			05/08/23 19:40	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	577.93				ft			05/03/23 13:40	1
Oxidation Reduction Potential	-83.4				millivolts			05/03/23 13:40	1
Oxygen, Dissolved	0.69				mg/L			05/03/23 13:40	1
Field pH	7.10				SU			05/03/23 13:40	1
Field Conductivity	790				umhos/cm			05/03/23 13:40	1
Field Temperature	11.3				Degrees C			05/03/23 13:40	1
Field Turbidity	11.3				NTU			05/03/23 13:40	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: Field Blank

Date Collected: 05/03/23 13:30
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-16

Matrix: Water

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			05/25/23 16:39	1
Fluoride	<0.075		0.20	0.075	mg/L			05/25/23 16:39	1
Sulfate	<0.42		1.0	0.42	mg/L			05/25/23 16:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		05/09/23 09:05	05/25/23 16:09	1
Arsenic	<0.53		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 16:09	1
Barium	<0.64		2.0	0.64	ug/L		05/09/23 09:05	05/25/23 16:09	1
Beryllium	<0.33		1.0	0.33	ug/L		05/09/23 09:05	05/25/23 16:09	1
Boron	<76		100	76	ug/L		05/09/23 09:05	05/25/23 16:09	1
Cadmium	<0.10		0.20	0.10	ug/L		05/09/23 09:05	05/25/23 16:09	1
Calcium	<190		500	190	ug/L		05/09/23 09:05	05/25/23 16:09	1
Chromium	<1.1		5.0	1.1	ug/L		05/09/23 09:05	05/25/23 16:09	1
Cobalt	<0.17		0.50	0.17	ug/L		05/09/23 09:05	05/25/23 16:09	1
Iron	<36		100	36	ug/L		05/09/23 09:05	05/25/23 16:09	1
Lead	<0.24		0.50	0.24	ug/L		05/09/23 09:05	05/25/23 16:09	1
Lithium	<2.5		10	2.5	ug/L		05/09/23 09:05	05/25/23 16:09	1
Molybdenum	<0.91		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 16:09	1
Selenium	<1.4		5.0	1.4	ug/L		05/09/23 09:05	05/25/23 16:09	1
Thallium	<0.26		1.0	0.26	ug/L		05/09/23 09:05	05/25/23 16:09	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:10	05/18/23 15:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	<34		50	34	mg/L			05/08/23 10:01	1
pH (SM 4500 H+ B)	**6.3**	**HF**	0.1	0.1	SU			05/08/23 10:25	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	-0.00702	U	0.0724	0.0724	1.00	0.166	pCi/L	05/17/23 09:41	06/11/23 21:16	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*95.5*		*30 - 110*	*05/17/23 09:41*	*06/11/23 21:16*	*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	0.170	U	0.346	0.346	1.00	0.597	pCi/L	05/17/23 11:25	06/09/23 10:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*95.5*		*30 - 110*	*05/17/23 11:25*	*06/09/23 10:36*	*1*
Y Carrier	*86.0*		*30 - 110*	*05/17/23 11:25*	*06/09/23 10:36*	*1*

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: Field Blank
Date Collected: 05/03/23 13:30
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-16
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.170	U	0.353	0.353	5.00	0.597	pCi/L		06/12/23 16:04	1

Qualifiers

HPLC/IC

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

Metals

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

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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.

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.
¤	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

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-388697/3
Matrix: Water
Analysis Batch: 388697

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			05/24/23 23:40	1
Fluoride	<0.075		0.20	0.075	mg/L			05/24/23 23:40	1
Sulfate	<0.42		1.0	0.42	mg/L			05/24/23 23:40	1

Lab Sample ID: LCS 310-388697/4
Matrix: Water
Analysis Batch: 388697

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	9.86		mg/L		99	90 - 110
Fluoride	2.00	2.09		mg/L		104	90 - 110
Sulfate	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: MB 310-388779/3
Matrix: Water
Analysis Batch: 388779

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			05/25/23 09:54	1
Fluoride	<0.075		0.20	0.075	mg/L			05/25/23 09:54	1
Sulfate	<0.42		1.0	0.42	mg/L			05/25/23 09:54	1

Lab Sample ID: LCS 310-388779/4
Matrix: Water
Analysis Batch: 388779

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	10.0		mg/L		100	90 - 110
Fluoride	2.00	2.12		mg/L		106	90 - 110
Sulfate	10.0	10.5		mg/L		105	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-386826/1-A
Matrix: Water
Analysis Batch: 388713

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 386826

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		05/09/23 09:05	05/25/23 14:18	1
Arsenic	<0.53		2.0	0.53	ug/L		05/09/23 09:05	05/25/23 14:18	1
Barium	<0.64		2.0	0.64	ug/L		05/09/23 09:05	05/25/23 14:18	1
Beryllium	<0.33		1.0	0.33	ug/L		05/09/23 09:05	05/25/23 14:18	1
Boron	<76		100	76	ug/L		05/09/23 09:05	05/25/23 14:18	1
Cadmium	<0.10		0.20	0.10	ug/L		05/09/23 09:05	05/25/23 14:18	1
Calcium	<190		500	190	ug/L		05/09/23 09:05	05/25/23 14:18	1
Chromium	<1.1		5.0	1.1	ug/L		05/09/23 09:05	05/25/23 14:18	1
Cobalt	<0.17		0.50	0.17	ug/L		05/09/23 09:05	05/25/23 14:18	1
Iron	<36		100	36	ug/L		05/09/23 09:05	05/25/23 14:18	1
Lead	<0.24		0.50	0.24	ug/L		05/09/23 09:05	05/25/23 14:18	1
Lithium	<2.5		10	2.5	ug/L		05/09/23 09:05	05/25/23 14:18	1

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

Lab Sample ID: MB 310-386826/1-A
Matrix: Water
Analysis Batch: 388713

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 386826

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	<150		500	150	ug/L		05/09/23 09:05	05/25/23 14:18	1
Manganese	<3.6		10	3.6	ug/L		05/09/23 09:05	05/25/23 14:18	1
Molybdenum	<0.91		2.0	0.91	ug/L		05/09/23 09:05	05/25/23 14:18	1
Potassium	<150		500	150	ug/L		05/09/23 09:05	05/25/23 14:18	1
Selenium	<1.4		5.0	1.4	ug/L		05/09/23 09:05	05/25/23 14:18	1
Sodium	<460		1000	460	ug/L		05/09/23 09:05	05/25/23 14:18	1
Thallium	<0.26		1.0	0.26	ug/L		05/09/23 09:05	05/25/23 14:18	1

Lab Sample ID: LCS 310-386826/2-A
Matrix: Water
Analysis Batch: 388713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 386826

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	200	216		ug/L		108	80 - 120
Arsenic	200	205		ug/L		103	80 - 120
Barium	100	101		ug/L		101	80 - 120
Beryllium	100	107		ug/L		107	80 - 120
Boron	200	205		ug/L		103	80 - 120
Cadmium	100	106		ug/L		106	80 - 120
Calcium	2000	2020		ug/L		101	80 - 120
Chromium	100	103		ug/L		103	80 - 120
Cobalt	100	100		ug/L		100	80 - 120
Iron	200	217		ug/L		109	80 - 120
Lead	200	209		ug/L		105	80 - 120
Lithium	200	211		ug/L		106	80 - 120
Magnesium	2000	2010		ug/L		100	80 - 120
Manganese	100	103		ug/L		103	80 - 120
Molybdenum	200	212		ug/L		106	80 - 120
Potassium	2000	1950		ug/L		98	80 - 120
Selenium	400	402		ug/L		101	80 - 120
Sodium	2000	2200		ug/L		110	80 - 120
Thallium	200	195		ug/L		98	80 - 120

Lab Sample ID: 310-255223-9 DU
Matrix: Water
Analysis Batch: 388713

Client Sample ID: MW-308
Prep Type: Total/NA
Prep Batch: 386826

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<1.0		<1.0		ug/L		NC	20
Arsenic	<0.53		<0.53		ug/L		NC	20
Barium	61		64.2		ug/L		5	20
Beryllium	<0.33		<0.33		ug/L		NC	20
Boron	290		281		ug/L		4	20
Cadmium	<0.10		<0.10		ug/L		NC	20
Calcium	68000		71100		ug/L		5	20
Chromium	<1.1		<1.1		ug/L		NC	20
Cobalt	0.32	J	0.333	J	ug/L		5	20
Iron	400		453		ug/L		12	20
Lead	<0.24		<0.24		ug/L		NC	20

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

Lab Sample ID: 310-255223-9 DU
Matrix: Water
Analysis Batch: 388713

Client Sample ID: MW-308
Prep Type: Total/NA
Prep Batch: 386826

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lithium	<2.5		<2.5		ug/L		NC	20
Magnesium	36000		36300		ug/L		0.05	20
Manganese	360		359		ug/L		0.2	20
Molybdenum	1.7	J	1.68	J	ug/L		0.7	20
Potassium	1300		1450		ug/L		8	20
Selenium	<1.4		<1.4		ug/L		NC	20
Sodium	24000		26900		ug/L		12	20
Thallium	<0.26		<0.26		ug/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-387838/1-A
Matrix: Water
Analysis Batch: 387997

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 387838

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		05/17/23 15:09	05/18/23 15:14	1

Lab Sample ID: LCS 310-387838/2-A
Matrix: Water
Analysis Batch: 387997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 387838

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.67	1.71		ug/L		103	80 - 120

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 310-386853/26
Matrix: Water
Analysis Batch: 386853

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	2.90	J	5.0	2.5	mg/L			05/08/23 16:24	1
Carbonate Alkalinity as CaCO3	<2.5		5.0	2.5	mg/L			05/08/23 16:24	1
Total Alkalinity as CaCO3	2.90	J	5.0	2.5	mg/L			05/08/23 16:24	1

Lab Sample ID: LCS 310-386853/27
Matrix: Water
Analysis Batch: 386853

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	932		mg/L		93	90 - 110

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

Lab Sample ID: MB 310-386744/1
Matrix: Water
Analysis Batch: 386744

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<34		50	34	mg/L			05/08/23 10:01	1

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

Lab Sample ID: LCS 310-386744/2
Matrix: Water
Analysis Batch: 386744

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: MB 310-386810/1
Matrix: Water
Analysis Batch: 386810

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<34		50	34	mg/L			05/08/23 15:48	1

Lab Sample ID: LCS 310-386810/2
Matrix: Water
Analysis Batch: 386810

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	944		mg/L		94	90 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-386610/1
Matrix: Water
Analysis Batch: 386610

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

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

Lab Sample ID: 310-255223-6 DU
Matrix: Water
Analysis Batch: 386610

Client Sample ID: MW-305
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.9	HF	6.9		SU		0.6	20

Lab Sample ID: LCS 310-386747/1
Matrix: Water
Analysis Batch: 386747

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

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-611873/1-A
Matrix: Water
Analysis Batch: 615477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 611873

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	-0.03133	U	0.0913	0.0913	1.00	0.206	pCi/L	05/17/23 09:41	06/11/23 17:28	1

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

Lab Sample ID: MB 160-611873/1-A
Matrix: Water
Analysis Batch: 615477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 611873

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Barium	82.3		30 - 110	05/17/23 09:41	06/11/23 17:28	1

Lab Sample ID: LCS 160-611873/2-A
Matrix: Water
Analysis Batch: 615350

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 611873

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium 226			11.3	10.41		1.19	1.00	0.217	pCi/L	92	75 - 113		

Carrier	LCS %Yield	LCS Qualifier	Limits
Barium	83.8		30 - 110

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-611897/1-A
Matrix: Water
Analysis Batch: 615293

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 611897

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.2077	U	0.372	0.373	1.00	0.639	pCi/L	05/17/23 11:24	06/09/23 10:35	1

Carrier	MB %Yield	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Barium	82.3		30 - 110	05/17/23 11:24	06/09/23 10:35	1
Y Carrier	81.5		30 - 110	05/17/23 11:24	06/09/23 10:35	1

Lab Sample ID: LCS 160-611897/2-A
Matrix: Water
Analysis Batch: 615291

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 611897

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium 228			8.13	10.54		1.43	1.00	0.505	pCi/L	130	75 - 125		

Carrier	LCS %Yield	LCS Qualifier	Limits
Barium	83.8		30 - 110
Y Carrier	84.8		30 - 110

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

HPLC/IC

Analysis Batch: 388697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	9056A	
310-255223-2	MW-302	Total/NA	Water	9056A	
310-255223-3	MW-303	Total/NA	Water	9056A	
310-255223-3	MW-303	Total/NA	Water	9056A	
310-255223-4	MW-304	Total/NA	Water	9056A	
310-255223-6	MW-305	Total/NA	Water	9056A	
310-255223-6	MW-305	Total/NA	Water	9056A	
310-255223-7	MW-306	Total/NA	Water	9056A	
310-255223-8	MW-307	Total/NA	Water	9056A	
310-255223-11	MW-310	Total/NA	Water	9056A	
MB 310-388697/3	Method Blank	Total/NA	Water	9056A	
LCS 310-388697/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 388779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-14	MW-312	Total/NA	Water	9056A	
310-255223-15	MW-313	Total/NA	Water	9056A	
310-255223-16	Field Blank	Total/NA	Water	9056A	
MB 310-388779/3	Method Blank	Total/NA	Water	9056A	
LCS 310-388779/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 386826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	3005A	
310-255223-2	MW-302	Total/NA	Water	3005A	
310-255223-3	MW-303	Total/NA	Water	3005A	
310-255223-4	MW-304	Total/NA	Water	3005A	
310-255223-5	MW-304A	Total/NA	Water	3005A	
310-255223-6	MW-305	Total/NA	Water	3005A	
310-255223-7	MW-306	Total/NA	Water	3005A	
310-255223-8	MW-307	Total/NA	Water	3005A	
310-255223-9	MW-308	Total/NA	Water	3005A	
310-255223-10	MW-309	Total/NA	Water	3005A	
310-255223-11	MW-310	Total/NA	Water	3005A	
310-255223-12	MW-311	Total/NA	Water	3005A	
310-255223-13	MW-311A	Total/NA	Water	3005A	
310-255223-14	MW-312	Total/NA	Water	3005A	
310-255223-15	MW-313	Total/NA	Water	3005A	
310-255223-16	Field Blank	Total/NA	Water	3005A	
MB 310-386826/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-386826/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-255223-9 DU	MW-308	Total/NA	Water	3005A	

Prep Batch: 387838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	7470A	
310-255223-2	MW-302	Total/NA	Water	7470A	
310-255223-3	MW-303	Total/NA	Water	7470A	
310-255223-4	MW-304	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 387838 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-6	MW-305	Total/NA	Water	7470A	
310-255223-7	MW-306	Total/NA	Water	7470A	
310-255223-8	MW-307	Total/NA	Water	7470A	
310-255223-11	MW-310	Total/NA	Water	7470A	
310-255223-14	MW-312	Total/NA	Water	7470A	
310-255223-16	Field Blank	Total/NA	Water	7470A	
MB 310-387838/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-387838/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 387997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	7470A	387838
310-255223-2	MW-302	Total/NA	Water	7470A	387838
310-255223-3	MW-303	Total/NA	Water	7470A	387838
310-255223-4	MW-304	Total/NA	Water	7470A	387838
310-255223-6	MW-305	Total/NA	Water	7470A	387838
310-255223-7	MW-306	Total/NA	Water	7470A	387838
310-255223-8	MW-307	Total/NA	Water	7470A	387838
310-255223-11	MW-310	Total/NA	Water	7470A	387838
310-255223-14	MW-312	Total/NA	Water	7470A	387838
310-255223-16	Field Blank	Total/NA	Water	7470A	387838
MB 310-387838/1-A	Method Blank	Total/NA	Water	7470A	387838
LCS 310-387838/2-A	Lab Control Sample	Total/NA	Water	7470A	387838

Analysis Batch: 388713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	6020B	386826
310-255223-2	MW-302	Total/NA	Water	6020B	386826
310-255223-3	MW-303	Total/NA	Water	6020B	386826
310-255223-4	MW-304	Total/NA	Water	6020B	386826
310-255223-5	MW-304A	Total/NA	Water	6020B	386826
310-255223-6	MW-305	Total/NA	Water	6020B	386826
310-255223-7	MW-306	Total/NA	Water	6020B	386826
310-255223-8	MW-307	Total/NA	Water	6020B	386826
310-255223-9	MW-308	Total/NA	Water	6020B	386826
310-255223-10	MW-309	Total/NA	Water	6020B	386826
310-255223-11	MW-310	Total/NA	Water	6020B	386826
310-255223-12	MW-311	Total/NA	Water	6020B	386826
310-255223-13	MW-311A	Total/NA	Water	6020B	386826
310-255223-14	MW-312	Total/NA	Water	6020B	386826
310-255223-15	MW-313	Total/NA	Water	6020B	386826
310-255223-16	Field Blank	Total/NA	Water	6020B	386826
MB 310-386826/1-A	Method Blank	Total/NA	Water	6020B	386826
LCS 310-386826/2-A	Lab Control Sample	Total/NA	Water	6020B	386826
310-255223-9 DU	MW-308	Total/NA	Water	6020B	386826

Analysis Batch: 391014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	6020B	386826
310-255223-2	MW-302	Total/NA	Water	6020B	386826
310-255223-4	MW-304	Total/NA	Water	6020B	386826

Metals (Continued)

Analysis Batch: 391014 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-6	MW-305	Total/NA	Water	6020B	386826

Analysis Batch: 391514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	6020B	386826
310-255223-2	MW-302	Total/NA	Water	6020B	386826
310-255223-4	MW-304	Total/NA	Water	6020B	386826
310-255223-6	MW-305	Total/NA	Water	6020B	386826

General Chemistry

Analysis Batch: 386610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	SM 4500 H+ B	
310-255223-2	MW-302	Total/NA	Water	SM 4500 H+ B	
310-255223-3	MW-303	Total/NA	Water	SM 4500 H+ B	
310-255223-4	MW-304	Total/NA	Water	SM 4500 H+ B	
310-255223-6	MW-305	Total/NA	Water	SM 4500 H+ B	
LCS 310-386610/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-255223-6 DU	MW-305	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 386744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	SM 2540C	
310-255223-2	MW-302	Total/NA	Water	SM 2540C	
310-255223-3	MW-303	Total/NA	Water	SM 2540C	
310-255223-4	MW-304	Total/NA	Water	SM 2540C	
310-255223-6	MW-305	Total/NA	Water	SM 2540C	
310-255223-7	MW-306	Total/NA	Water	SM 2540C	
310-255223-8	MW-307	Total/NA	Water	SM 2540C	
310-255223-14	MW-312	Total/NA	Water	SM 2540C	
310-255223-16	Field Blank	Total/NA	Water	SM 2540C	
MB 310-386744/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-386744/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 386747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-7	MW-306	Total/NA	Water	SM 4500 H+ B	
310-255223-8	MW-307	Total/NA	Water	SM 4500 H+ B	
310-255223-11	MW-310	Total/NA	Water	SM 4500 H+ B	
310-255223-14	MW-312	Total/NA	Water	SM 4500 H+ B	
310-255223-16	Field Blank	Total/NA	Water	SM 4500 H+ B	
LCS 310-386747/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 386810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-11	MW-310	Total/NA	Water	SM 2540C	
MB 310-386810/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-386810/2	Lab Control Sample	Total/NA	Water	SM 2540C	

General Chemistry

Analysis Batch: 386853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-14	MW-312	Total/NA	Water	SM 2320B	
310-255223-15	MW-313	Total/NA	Water	SM 2320B	
MB 310-386853/26	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-386853/27	Lab Control Sample	Total/NA	Water	SM 2320B	

Rad

Prep Batch: 611873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	PrecSep-21	
310-255223-2	MW-302	Total/NA	Water	PrecSep-21	
310-255223-3	MW-303	Total/NA	Water	PrecSep-21	
310-255223-4	MW-304	Total/NA	Water	PrecSep-21	
310-255223-6	MW-305	Total/NA	Water	PrecSep-21	
310-255223-7	MW-306	Total/NA	Water	PrecSep-21	
310-255223-8	MW-307	Total/NA	Water	PrecSep-21	
310-255223-11	MW-310	Total/NA	Water	PrecSep-21	
310-255223-14	MW-312	Total/NA	Water	PrecSep-21	
310-255223-16	Field Blank	Total/NA	Water	PrecSep-21	
MB 160-611873/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-611873/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 611897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	PrecSep_0	
310-255223-2	MW-302	Total/NA	Water	PrecSep_0	
310-255223-3	MW-303	Total/NA	Water	PrecSep_0	
310-255223-4	MW-304	Total/NA	Water	PrecSep_0	
310-255223-6	MW-305	Total/NA	Water	PrecSep_0	
310-255223-7	MW-306	Total/NA	Water	PrecSep_0	
310-255223-8	MW-307	Total/NA	Water	PrecSep_0	
310-255223-11	MW-310	Total/NA	Water	PrecSep_0	
310-255223-14	MW-312	Total/NA	Water	PrecSep_0	
310-255223-16	Field Blank	Total/NA	Water	PrecSep_0	
MB 160-611897/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-611897/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 386939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-1	MW-301	Total/NA	Water	Field Sampling	
310-255223-2	MW-302	Total/NA	Water	Field Sampling	
310-255223-3	MW-303	Total/NA	Water	Field Sampling	
310-255223-4	MW-304	Total/NA	Water	Field Sampling	
310-255223-5	MW-304A	Total/NA	Water	Field Sampling	
310-255223-6	MW-305	Total/NA	Water	Field Sampling	
310-255223-7	MW-306	Total/NA	Water	Field Sampling	
310-255223-8	MW-307	Total/NA	Water	Field Sampling	
310-255223-9	MW-308	Total/NA	Water	Field Sampling	
310-255223-10	MW-309	Total/NA	Water	Field Sampling	
310-255223-11	MW-310	Total/NA	Water	Field Sampling	

Field Service / Mobile Lab (Continued)

Analysis Batch: 386939 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-255223-12	MW-311	Total/NA	Water	Field Sampling	
310-255223-13	MW-311A	Total/NA	Water	Field Sampling	
310-255223-14	MW-312	Total/NA	Water	Field Sampling	
310-255223-15	MW-313	Total/NA	Water	Field Sampling	

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-301

Date Collected: 05/02/23 14:40
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	388697	QTZ5	EET CF	05/25/23 04:05
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		2	391014	A6US	EET CF	06/16/23 16:08
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		5	388713	A6US	EET CF	05/25/23 14:33
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		2	391514	A6US	EET CF	06/22/23 14:07
Total/NA	Prep	7470A			387838	XXW3	EET CF	05/17/23 15:10
Total/NA	Analysis	7470A		1	387997	XXW3	EET CF	05/18/23 15:34
Total/NA	Analysis	SM 2540C		1	386744	ENB7	EET CF	05/08/23 10:01
Total/NA	Analysis	SM 4500 H+ B		1	386610	A3GU	EET CF	05/05/23 17:09
Total/NA	Prep	PrecSep-21			611873	KAC	EET SL	05/17/23 09:41
Total/NA	Analysis	903.0		1	615349	FLC	EET SL	06/11/23 19:30
Total/NA	Prep	PrecSep_0			611897	KAC	EET SL	05/17/23 11:24
Total/NA	Analysis	904.0		1	615293	SCB	EET SL	06/09/23 10:35
Total/NA	Analysis	Ra226_Ra228 Pos		1	615678	EMH	EET SL	06/12/23 16:04
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/02/23 14:40

Client Sample ID: MW-302

Date Collected: 05/01/23 15:35
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	388697	QTZ5	EET CF	05/25/23 04:21
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		2	391014	A6US	EET CF	06/16/23 16:16
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		5	388713	A6US	EET CF	05/25/23 14:36
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		2	391514	A6US	EET CF	06/22/23 14:09
Total/NA	Prep	7470A			387838	XXW3	EET CF	05/17/23 15:10
Total/NA	Analysis	7470A		1	387997	XXW3	EET CF	05/18/23 15:36
Total/NA	Analysis	SM 2540C		1	386744	ENB7	EET CF	05/08/23 10:01
Total/NA	Analysis	SM 4500 H+ B		1	386610	A3GU	EET CF	05/05/23 17:08
Total/NA	Prep	PrecSep-21			611873	KAC	EET SL	05/17/23 09:41
Total/NA	Analysis	903.0		1	615349	FLC	EET SL	06/11/23 19:30
Total/NA	Prep	PrecSep_0			611897	KAC	EET SL	05/17/23 11:24
Total/NA	Analysis	904.0		1	615293	SCB	EET SL	06/09/23 10:36
Total/NA	Analysis	Ra226_Ra228 Pos		1	615678	EMH	EET SL	06/12/23 16:04
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/01/23 15:35

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-303

Date Collected: 05/02/23 10:10
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	388697	QTZ5	EET CF	05/25/23 04:36
Total/NA	Analysis	9056A		10	388697	QTZ5	EET CF	05/25/23 09:23
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 15:18
Total/NA	Prep	7470A			387838	XXW3	EET CF	05/17/23 15:10
Total/NA	Analysis	7470A		1	387997	XXW3	EET CF	05/18/23 15:38
Total/NA	Analysis	SM 2540C		1	386744	ENB7	EET CF	05/08/23 10:01
Total/NA	Analysis	SM 4500 H+ B		1	386610	A3GU	EET CF	05/05/23 17:05
Total/NA	Prep	PrecSep-21			611873	KAC	EET SL	05/17/23 09:41
Total/NA	Analysis	903.0		1	615477	FLC	EET SL	06/11/23 19:31
Total/NA	Prep	PrecSep_0			611897	KAC	EET SL	05/17/23 11:24
Total/NA	Analysis	904.0		1	615293	SCB	EET SL	06/09/23 10:36
Total/NA	Analysis	Ra226_Ra228 Pos		1	615678	EMH	EET SL	06/12/23 16:04
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/02/23 10:10

Client Sample ID: MW-304

Date Collected: 05/02/23 11:00
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	388697	QTZ5	EET CF	05/25/23 04:52
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		2	391014	A6US	EET CF	06/16/23 16:23
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		5	388713	A6US	EET CF	05/25/23 15:21
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		2	391514	A6US	EET CF	06/22/23 14:12
Total/NA	Prep	7470A			387838	XXW3	EET CF	05/17/23 15:10
Total/NA	Analysis	7470A		1	387997	XXW3	EET CF	05/18/23 15:40
Total/NA	Analysis	SM 2540C		1	386744	ENB7	EET CF	05/08/23 10:01
Total/NA	Analysis	SM 4500 H+ B		1	386610	A3GU	EET CF	05/05/23 17:04
Total/NA	Prep	PrecSep-21			611873	KAC	EET SL	05/17/23 09:41
Total/NA	Analysis	903.0		1	615350	FLC	EET SL	06/11/23 19:32
Total/NA	Prep	PrecSep_0			611897	KAC	EET SL	05/17/23 11:24
Total/NA	Analysis	904.0		1	615293	SCB	EET SL	06/09/23 10:36
Total/NA	Analysis	Ra226_Ra228 Pos		1	615678	EMH	EET SL	06/12/23 16:04
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/02/23 11:00

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-304A
Date Collected: 05/02/23 11:45
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 15:24
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/02/23 11:45

Client Sample ID: MW-305
Date Collected: 05/02/23 12:30
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	388697	QTZ5	EET CF	05/25/23 05:07
Total/NA	Analysis	9056A		10	388697	QTZ5	EET CF	05/25/23 09:38
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		2	391014	A6US	EET CF	06/16/23 16:32
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		5	388713	A6US	EET CF	05/25/23 15:26
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		2	391514	A6US	EET CF	06/22/23 14:14
Total/NA	Prep	7470A			387838	XXW3	EET CF	05/17/23 15:10
Total/NA	Analysis	7470A		1	387997	XXW3	EET CF	05/18/23 15:42
Total/NA	Analysis	SM 2540C		1	386744	ENB7	EET CF	05/08/23 10:01
Total/NA	Analysis	SM 4500 H+ B		1	386610	A3GU	EET CF	05/05/23 17:06
Total/NA	Prep	PrecSep-21			611873	KAC	EET SL	05/17/23 09:41
Total/NA	Analysis	903.0		1	615350	FLC	EET SL	06/11/23 19:32
Total/NA	Prep	PrecSep_0			611897	KAC	EET SL	05/17/23 11:24
Total/NA	Analysis	904.0		1	615293	SCB	EET SL	06/09/23 10:36
Total/NA	Analysis	Ra226_Ra228 Pos		1	615678	EMH	EET SL	06/12/23 16:04
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/02/23 12:30

Client Sample ID: MW-306
Date Collected: 05/02/23 13:25
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	388697	QTZ5	EET CF	05/25/23 05:54
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 15:29
Total/NA	Prep	7470A			387838	XXW3	EET CF	05/17/23 15:10
Total/NA	Analysis	7470A		1	387997	XXW3	EET CF	05/18/23 15:44
Total/NA	Analysis	SM 2540C		1	386744	ENB7	EET CF	05/08/23 10:01
Total/NA	Analysis	SM 4500 H+ B		1	386747	W9YR	EET CF	05/08/23 10:24
Total/NA	Prep	PrecSep-21			611873	KAC	EET SL	05/17/23 09:41
Total/NA	Analysis	903.0		1	615350	FLC	EET SL	06/11/23 19:32
Total/NA	Prep	PrecSep_0			611897	KAC	EET SL	05/17/23 11:24
Total/NA	Analysis	904.0		1	615293	SCB	EET SL	06/09/23 10:36

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-306
Date Collected: 05/02/23 13:25
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Ra226_Ra228 Pos		1	615678	EMH	EET SL	06/12/23 16:04
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/02/23 13:25

Client Sample ID: MW-307
Date Collected: 05/02/23 15:55
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	388697	QTZ5	EET CF	05/25/23 06:10
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 15:31
Total/NA	Prep	7470A			387838	XXW3	EET CF	05/17/23 15:10
Total/NA	Analysis	7470A		1	387997	XXW3	EET CF	05/18/23 15:46
Total/NA	Analysis	SM 2540C		1	386744	ENB7	EET CF	05/08/23 10:01
Total/NA	Analysis	SM 4500 H+ B		1	386747	W9YR	EET CF	05/08/23 10:23
Total/NA	Prep	PrecSep-21			611873	KAC	EET SL	05/17/23 09:41
Total/NA	Analysis	903.0		1	615350	FLC	EET SL	06/11/23 19:32
Total/NA	Prep	PrecSep_0			611897	KAC	EET SL	05/17/23 11:24
Total/NA	Analysis	904.0		1	615293	SCB	EET SL	06/09/23 10:36
Total/NA	Analysis	Ra226_Ra228 Pos		1	615678	EMH	EET SL	06/12/23 16:04
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/02/23 15:55

Client Sample ID: MW-308
Date Collected: 05/03/23 10:05
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 15:34
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/03/23 10:05

Client Sample ID: MW-309
Date Collected: 05/03/23 10:45
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 15:50
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/03/23 10:45

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-310
Date Collected: 05/04/23 09:35
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	388697	QTZ5	EET CF	05/25/23 06:26
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 15:52
Total/NA	Prep	7470A			387838	XXW3	EET CF	05/17/23 15:10
Total/NA	Analysis	7470A		1	387997	XXW3	EET CF	05/18/23 15:53
Total/NA	Analysis	SM 2540C		1	386810	ENB7	EET CF	05/08/23 15:48
Total/NA	Analysis	SM 4500 H+ B		1	386747	W9YR	EET CF	05/08/23 10:22
Total/NA	Prep	PrecSep-21			611873	KAC	EET SL	05/17/23 09:41
Total/NA	Analysis	903.0		1	615350	FLC	EET SL	06/11/23 19:32
Total/NA	Prep	PrecSep_0			611897	KAC	EET SL	05/17/23 11:24
Total/NA	Analysis	904.0		1	615293	SCB	EET SL	06/09/23 10:36
Total/NA	Analysis	Ra226_Ra228 Pos		1	615678	EMH	EET SL	06/12/23 16:04
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/04/23 09:35

Client Sample ID: MW-311
Date Collected: 05/03/23 11:45
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 15:55
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/03/23 11:45

Client Sample ID: MW-311A
Date Collected: 05/03/23 12:10
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 15:57
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/03/23 12:10

Client Sample ID: MW-312
Date Collected: 05/03/23 15:05
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	388779	QTZ5	EET CF	05/25/23 16:08
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 16:00
Total/NA	Prep	7470A			387838	XXW3	EET CF	05/17/23 15:10
Total/NA	Analysis	7470A		1	387997	XXW3	EET CF	05/18/23 15:55
Total/NA	Analysis	SM 2320B		1	386853	MAQ3	EET CF	05/08/23 19:30
Total/NA	Analysis	SM 2540C		1	386744	ENB7	EET CF	05/08/23 10:01

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

Client Sample ID: MW-312
Date Collected: 05/03/23 15:05
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 4500 H+ B		1	386747	W9YR	EET CF	05/08/23 10:21
Total/NA	Prep	PrecSep-21			611873	KAC	EET SL	05/17/23 09:41
Total/NA	Analysis	903.0		1	615349	FLC	EET SL	06/11/23 21:16
Total/NA	Prep	PrecSep_0			611897	KAC	EET SL	05/17/23 11:24
Total/NA	Analysis	904.0		1	615293	SCB	EET SL	06/09/23 10:36
Total/NA	Analysis	Ra226_Ra228 Pos		1	615678	EMH	EET SL	06/12/23 16:04
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/03/23 15:05

Client Sample ID: MW-313
Date Collected: 05/03/23 13:40
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	388779	QTZ5	EET CF	05/25/23 16:24
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 16:03
Total/NA	Analysis	SM 2320B		1	386853	MAQ3	EET CF	05/08/23 19:40
Total/NA	Analysis	Field Sampling		1	386939	BJ0R	EET CF	05/03/23 13:40

Client Sample ID: Field Blank
Date Collected: 05/03/23 13:30
Date Received: 05/05/23 16:40

Lab Sample ID: 310-255223-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	388779	QTZ5	EET CF	05/25/23 16:39
Total/NA	Prep	3005A			386826	DHM5	EET CF	05/09/23 09:05
Total/NA	Analysis	6020B		1	388713	A6US	EET CF	05/25/23 16:09
Total/NA	Prep	7470A			387838	XXW3	EET CF	05/17/23 15:10
Total/NA	Analysis	7470A		1	387997	XXW3	EET CF	05/18/23 15:57
Total/NA	Analysis	SM 2540C		1	386744	ENB7	EET CF	05/08/23 10:01
Total/NA	Analysis	SM 4500 H+ B		1	386747	W9YR	EET CF	05/08/23 10:25
Total/NA	Prep	PrecSep-21			611873	KAC	EET SL	05/17/23 09:41
Total/NA	Analysis	903.0		1	615349	FLC	EET SL	06/11/23 21:16
Total/NA	Prep	PrecSep_0			611897	KAC	EET SL	05/17/23 11:25
Total/NA	Analysis	904.0		1	615293	SCB	EET SL	06/09/23 10:36
Total/NA	Analysis	Ra226_Ra228 Pos		1	615678	EMH	EET SL	06/12/23 16:04

Laboratory References:

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

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

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

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

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	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
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	03-31-24
North Carolina (DW)	State	29700	07-31-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-24
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	05-18-26
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-23

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

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-255223-1

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 2320B	Alkalinity	SM	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228 Pos	Combined Radium-226 and Radium-228	TAL-STL	EET SL
Field Sampling	Field Sampling	EPA	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401
EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

eurofins | Environment Testing America

310-255223 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS Engineers

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 5/5/23 | TIME 1640 | Received By: LR

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 # 1 of 4

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? ↓

MW

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE

Thermometer ID: W | 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): 1.0 | Corrected Temp (°C): 1.0

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
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

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS Engineers

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 5/5/23 | TIME 1640 | Received By: LR

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: 6

Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 2 of 9

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? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE

Thermometer ID: W | 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): 1.3 | Corrected Temp (°C): 1.3

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
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

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS Engineers

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 5/5/23 | TIME 1640 | Received By: LR

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 # 3 of 4

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? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE

Thermometer ID: W | 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): 1.4 | Corrected Temp (°C): 1.4

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
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

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS Engineers

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 5/5/23 | TIME 1640 | Received By: LR

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 # 4 of 4

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? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: W | 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 1	CONTAINER 2
Container(s) used:		
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

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

eurofins

Client Information	Sampler: Tyler Stirling	Lab PM: Sandie Fredrick	Carrier Tracking No(s):	COC No
Client Contact: Meghan Blodgett	Phone: 515-505-2716	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin:	Page: Page 1 of 2
Company: SCS Engineers	PWSID:			Job #: 252230777
Address: 2830 Dairy Drive	Due Date Requested:			
City: Madison	TAT Requested (days):			
State, Zip: WI 53718	Compliance Project: Δ Yes Δ No			
Phone: 608-224-2830	PO #: 25223077			
Email: mblodgett@scsengineers.com	WO #:			
Project Name: ML Kapp 25223077	Project #: 25223077			
Site: Clinton IA	SSOW#:			

Analysis Requested

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, 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)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 Metals total (Sb, As, Ba, Be, B, Ca, Cd, Cr, Co, Fe, Pb, Li, Mo, Se, Tl)	6020 Metals total (Sb, As, Ba, Be, B, Ca, Cd, Cr, Co, Fe, Pb, Li, Mg, Mn, Mo, K, Se, Na, Tl)	6020 Metals total (As, Fe, Li, Mo)	6020 Metals Total (As, Ca, Fe, Li, Mn, Mg, Mo, Na, K)	7470 Mercury Total	TDS and pH	Chloride, Fluoride, Sulfate	Chloride, Sulfate	EPA 903/904 Radium 226 + 228	Bicarbonate & carbonate alkalinity					Total Number of containers	Special Instructions/Note
			Preservation Code:				D	D	D	D	D	I	I	I	I	I						
MW-301	5/2/23	2:40	G	W	N		X				X	X	X		X							
MW-302	5/1/23	3:35	G	W	N		X				X	X	X		X							
MW-303	5/2/23	10 10	G	W	N		X				X	X	X		X							
MW-304	5/2/23	11 00	G	W	N		X				X	X	X		X							
MW-304A	5/2/23	11 45	G	W	N				X													
MW-305	5/2/23	12 30	G	W	N		X				X	X	X		X							
MW-306	5/2/23	1 25	G	W	N		X				X	X	X		X							
MW-307	5/2/23	3 55	G	W	N		X				X	X	X		X							
MW-308	5/3/23	10 05	G	W	N				X													
MW-309	5/3/23	10 45	G	W	N				X													
MW-310	5/4/23	9 35	G	W	N		X				X	X	X		X							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ 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:	Date/Time:	Company	Received by:	Date/Time:	Company
	Tyler S	5/5/23 @ 1 00	SCS		5/5/23 1540	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks

Ver: 01/16/2019

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

eurofins

Client Information	Sampler: Tyler Stirling	Lab PM: Sandie Fredrick	Carrier Tracking No(s):	COC No:
Client Contact: Meghan Blodgett	Phone: 515-505-2716	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: SCS Engineers	PWSID:			Job #: 25223077
Address: 2830 Dairy Drive	Due Date Requested:			
City: Madison	TAT Requested (days):			
State, Zip: WI 53718	Compliance Project: Δ Yes Δ No			
Phone: 608-224-2830	PO #: 25223077			
Email: mblodgett@scsengineers.com	WO #:			
Project Name: ML Kapp 25223077	Project #: 25223077			
Site: Clinton IA	SSOW#:			

Analysis Requested

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; 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)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 Metals total (Sb As, Ba Be B Ca Cd Cr Co Fe Pb Li Mo Se Tl)	6020 Metals, total (Sb As, Ba Be B Ca Cd Cr Co Fe Pb Li Mg Mn Mo K Se Na Tl)	6020 Metals total (As Fe Li Mo)	6020 Metals Total (As, Ca Fe Li Mn Mg Mo Na K)	7470 Mercury Total	TDS and pH	Chloride Fluoride Sulfate	Chloride Sulfate	EPA 903/904 Radium 226 + 228	Bicarbonate & carbonate alkalinity	Total Number of containers	Special Instructions/Note
			Preservation Code:				D	D	D	D		I	I	I	I	I		
MW-311	5/3/23	1145	G	W	N				X									
MW-311A	5/3/23	1210	G	W	N				X									
MW-312	5/3/23	305	G	W	N			X			X	X	X		X	X		
MW-313	5/3/23	140	G	W	N					X				X		X		
Field Blank	5/3/23	1:30	G	W	N		X				X	X	X		X			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ 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:	Date/Time:	Company	Received by:	Date/Time:	Company
Tyler Stirling	5/5/23 @ 100	SCS		5/5/23 1640	
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ 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 #25223077 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	MW-312	MW-313	Field Blank	TOTAL
CCR Rule Parameters	Appendix III Parameters (total/ unfiltered)	Boron	X	X	X	X		X	X	X			X			X		X	10
		Calcium	X	X	X	X		X	X	X			X			X	X	X	11
		Chloride	X	X	X	X		X	X	X			X			X	X	X	11
		Fluoride	X	X	X	X		X	X	X			X			X		X	10
		pH	X	X	X	X		X	X	X			X			X		X	10
		Sulfate	X	X	X	X		X	X	X			X			X	X	X	11
		TDS	X	X	X	X		X	X	X			X			X		X	10
	Appendix IV Parameters (total/ unfiltered)	Antimony	X	X	X	X		X	X	X			X			X		X	10
		Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	16
		Barium	X	X	X	X		X	X	X			X			X		X	10
		Beryllium	X	X	X	X		X	X	X			X			X		X	10
		Cadmium	X	X	X	X		X	X	X			X			X		X	10
		Chromium	X	X	X	X		X	X	X			X			X		X	10
		Cobalt	X	X	X	X		X	X	X			X			X		X	10
		Fluoride	X	X	X	X		X	X	X			X			X		X	10
		Lead	X	X	X	X		X	X	X			X			X		X	10
		Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	16
		Mercury	X	X	X	X		X	X	X			X			X		X	10
		Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	16
		Selenium	X	X	X	X		X	X	X			X			X		X	10
		Thallium	X	X	X	X		X	X	X			X			X		X	10
		Radium	X	X	X	X		X	X	X			X			X		X	10
	Field Parameters	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
Additional Parameters	Total (Unfiltered)	Alkalinity Carbonate														X	X		2
		Alkalinity - Bicarbonate														X	X		2
		Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Magnesium														X	X		2
		Manganese														X	X		2
		Potassium														X	X		2
		Sodium														X	X		2

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 310-61097.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Iowa	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Iowa		Job #: 310-255223-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 6/12/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: ML Kapp 25223077	Project #: 31011020			
Site:	SSOW#:			

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, 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, Y - Trizma, Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 Radium-226 (GFPC)	904.0/PrecSep_0 Radium-228 (GFPC)	Ra226_228GFPC_P/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-301 (310-255223-1)	5/2/23	14:40 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-302 (310-255223-2)	5/1/23	15:35 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-303 (310-255223-3)	5/2/23	10:10 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-304 (310-255223-4)	5/2/23	11:00 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-305 (310-255223-6)	5/2/23	12:30 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-306 (310-255223-7)	5/2/23	13:25 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-307 (310-255223-8)	5/2/23	15:55 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-310 (310-255223-11)	5/4/23	09:35 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-312 (310-255223-14)	5/3/23	15:05 Central		Water			X	X	X	2	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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	5/8/23 0925		fedex		
2	fedex			Briana Sharkey - Hamm	5/9/23 0845	ETATE
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 310-61097.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Iowa	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Iowa		Job #: 310-255223-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 6/12/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: ML Kapp 25223077	Project #: 31011020			
Site:	SSOW#:			

Analysis Requested

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, 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, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 Radium-226 (GFPC)	904.0/PrecSep_0 Radium-228 (GFPC)	Ra226_228GFPC_P/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
Field Blank (310-255223-16)	5/3/23	13:30 Central		Water			X	X	X	2	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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	5823 0925		fedex		
2	fedex			[illegible] Sharkey - Hamilton	5/9/23 0845	ETAT
3						

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-255223-1

Login Number: 255223
List Number: 1
Creator: Richardson, Lydia E

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.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <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: 310-255223-1

Login Number: 255223
List Number: 2
Creator: Sharkey-Gonzalez, Briana L

List Source: Eurofins St. Louis
List Creation: 05/09/23 12:26 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 25223077

Job ID: 310-255223-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
310-255223-1	MW-301	84.0
310-255223-2	MW-302	87.8
310-255223-3	MW-303	88.3
310-255223-4	MW-304	65.5
310-255223-6	MW-305	90.0
310-255223-7	MW-306	84.5
310-255223-8	MW-307	75.3
310-255223-11	MW-310	91.5
310-255223-14	MW-312	80.8
310-255223-16	Field Blank	95.5
LCS 160-611873/2-A	Lab Control Sample	83.8
MB 160-611873/1-A	Method Blank	82.3

Tracer/Carrier Legend

Ba = Barium

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
310-255223-1	MW-301	84.0	84.0
310-255223-2	MW-302	87.8	84.3
310-255223-3	MW-303	88.3	85.4
310-255223-4	MW-304	65.5	83.1
310-255223-6	MW-305	90.0	86.0
310-255223-7	MW-306	84.5	84.8
310-255223-8	MW-307	75.3	82.3
310-255223-11	MW-310	91.5	81.5
310-255223-14	MW-312	80.8	84.3
310-255223-16	Field Blank	95.5	86.0
LCS 160-611897/2-A	Lab Control Sample	83.8	84.8
MB 160-611897/1-A	Method Blank	82.3	81.5

Tracer/Carrier Legend

Ba = Barium
Y = Y Carrier

Groundwater Monitoring Results - Field Parameters
M.L. Kapp Generating Station / SCS Engineers Project #25223077.00
May 2023

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	5/2/23 14:40	586.13	11.3	6.51	0.02	1,006	49.2	8.10
MW-302	5/1/23 15:35	586.44	10.3	7.16	1.61	883	193.4	3.73
MW-303	5/2/23 10:10	585.50	11.1	6.73	0.71	1,431	51.7	81.2
MW-304	5/2/23 11:00	586.17	11.4	6.93	0.13	844	12.1	40.0
MW-304A	5/2/23 11:45	586.14	11.9	7.04	1.99	682	1.8	2.62
MW-305	5/2/23 12:30	586.15	10.7	6.58	0.02	1,605	65.8	13.40
MW-306	5/2/23 13:25	586.28	10.1	6.79	4.92	1,168	135.8	4.07
MW-307	5/2/23 15:55	593.89	9.8	6.59	0.03	1,938	-30.8	3.12
MW-308	5/3/23 10:05	585.90	10.4	6.26	3.34	653	165.1	8.45
MW-309	5/3/23 10:45	585.33	10.4	6.62	0.02	1,528	-171.5	4.49
MW-310	5/4/23 9:35	589.98	12.9	6.69	0.41	1,115	44.1	4.80
MW-311	5/3/23 11:45	583.83	10.6	6.58	7.12	903	90.3	44.9
MW-311A	5/3/23 12:10	583.44	12.3	7.58	0.08	838	68.1	2.78
MW-312	5/3/23 15:05	577.84	12.7	7.00	1.10	598	40.1	4.96
MW-313	5/3/23 13:40	577.93	11.3	7.10	0.69	790	-83.4	11.3

Abbreviations:
mg/L = milligrams per liter
mV = millivolts
-- = Not measured
amsl = above mean sea level

Notes:
None

Created by: NDK Date: 10/6/2021
Last revision by: NLB Date: 5/8/2023
Checked by: RM Date: 5/9/2023

C:\Users\hld0\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\USG3GGGC\[2305_M.L. Kapp_CCR_Field.xlsx]GW Field Parameters

C2 October 2023 Assessment Monitoring

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ANALYTICAL REPORT

PREPARED FOR

Attn: Meghan Blodgett
SCS Engineers
2830 Dairy Drive
Madison, Wisconsin 53718

Generated 12/4/2023 4:41:21 PM

JOB DESCRIPTION

ML Kapp 25223077

JOB NUMBER

310-268384-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

Job Notes

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

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

Authorization

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

Table of Contents

Case Narrative

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Job ID: 310-268384-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-268384-1

Receipt
The samples were received on 10/27/2023 4:35 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 0.8º C, 1.1º C and 1.6º C.

HPLC/IC
Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-301 (310-268384-1), MW-302 (310-268384-2), MW-303 (310-268384-3), MW-304 (310-268384-4), MW-305 (310-268384-6), MW-306 (310-268384-7), MW-307 (310-268384-8), MW-310 (310-268384-11) and MW-312 (310-268384-14). 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.

RAD
Method 904.0: Radium-228 prep batch 160-634752: The following sample have a RER/RPD result outside of QC limits. There is insufficient volume to re-analyze the sample. The sample have been reported with this narrative. Field Blank (310-268384-16) and (310-268384-E-1-B DU)

Methods 904.0, 9320: Radium 228 batch 638365 The LCS/LCSD recovered at (73% / 68%). The limits in our LIMS system at 75-125 reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS/LCSD are not from this agency and are therefore held to our in-house statistical limits of (63-150%) per method requirements. The LCS/LCSD passes, no further action is required (LCS 160-638365/2-A) and (LCSD 160-638365/3-A)

Method PrecSep_0: Radium-228 Prep Batch 160-638365 Insufficient sample volume was available to perform a sample duplicate for the following samples: MW-302 (310-268384-2), MW-303 (310-268384-3), MW-304 (310-268384-4), MW-305 (310-268384-6), MW-306 (310-268384-7), MW-307 (310-268384-8), MW-310 (310-268384-11) and MW-312 (310-268384-14). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

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

Metals
Method 6020B: The following samples were diluted due to the nature of the sample matrix: MW-301 (310-268384-1), MW-302 (310-268384-2), MW-304 (310-268384-4) and MW-305 (310-268384-6). 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.

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 25223077

Job ID: 310-268384-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-268384-1	MW-301	Water	10/25/23 17:25	10/27/23 16:35
310-268384-2	MW-302	Water	10/25/23 11:00	10/27/23 16:35
310-268384-3	MW-303	Water	10/25/23 12:30	10/27/23 16:35
310-268384-4	MW-304	Water	10/25/23 13:45	10/27/23 16:35
310-268384-5	MW-304A	Water	10/25/23 13:38	10/27/23 16:35
310-268384-6	MW-305	Water	10/25/23 14:55	10/27/23 16:35
310-268384-7	MW-306	Water	10/25/23 16:00	10/27/23 16:35
310-268384-8	MW-307	Water	10/24/23 15:00	10/27/23 16:35
310-268384-9	MW-308	Water	10/24/23 12:05	10/27/23 16:35
310-268384-10	MW-309	Water	10/24/23 10:55	10/27/23 16:35
310-268384-11	MW-310	Water	10/26/23 13:15	10/27/23 16:35
310-268384-12	MW-311	Water	10/24/23 13:25	10/27/23 16:35
310-268384-13	MW-311A	Water	10/24/23 14:05	10/27/23 16:35
310-268384-14	MW-312	Water	10/24/23 09:40	10/27/23 16:35
310-268384-15	MW-313	Water	10/26/23 12:15	10/27/23 16:35
310-268384-16	Field Blank	Water	10/26/23 13:30	10/27/23 16:35

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-301 — Lab Sample ID: 310-268384-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	79		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	200		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.75	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	75		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	12000		1000	760	ug/L	10		6020B	Total/NA
Cadmium	0.27		0.20	0.10	ug/L	1		6020B	Total/NA
Calcium	120		0.50	0.19	mg/L	1		6020B	Total/NA
Chromium	1.9	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	4.3		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	800		100	36	ug/L	1		6020B	Total/NA
Molybdenum	550		2.0	0.91	ug/L	1		6020B	Total/NA
Thallium	1.3		1.0	0.26	ug/L	1		6020B	Total/NA
Total Dissolved Solids	660		50	34	mg/L	1		SM 2540C	Total/NA
pH	6.8	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	576.21				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	6.8				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.84				mg/L	1		Field Sampling	Total/NA
Field pH	6.53				SU	1		Field Sampling	Total/NA
Field Conductivity	1074				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	5.26				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-302 — Lab Sample ID: 310-268384-2

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	410		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	7.8		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	97		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	6700		1000	760	ug/L	10		6020B	Total/NA
Cadmium	0.13	J	0.20	0.10	ug/L	1		6020B	Total/NA
Calcium	140		0.50	0.19	mg/L	1		6020B	Total/NA
Chromium	1.4	J	5.0	1.1	ug/L	1		6020B	Total/NA
Cobalt	0.31	J	0.50	0.17	ug/L	1		6020B	Total/NA
Molybdenum	270		2.0	0.91	ug/L	1		6020B	Total/NA
Selenium	1.4	J	5.0	1.4	ug/L	1		6020B	Total/NA
Total Dissolved Solids	770		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.5	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	573.31				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	30.1				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.41				mg/L	1		Field Sampling	Total/NA
Field pH	7.15				SU	1		Field Sampling	Total/NA
Field Conductivity	1084				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.0				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.02				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-303 — Lab Sample ID: 310-268384-3

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	310		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	9.9		2.0	0.53	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample ID: MW-303 (Continued) — Lab Sample ID: 310-268384-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	61		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	4100		1000	760	ug/L	10		6020B	Total/NA
Calcium	80		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.64		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	1500		100	36	ug/L	1		6020B	Total/NA
Lithium	32	J	100	25	ug/L	10		6020B	Total/NA
Molybdenum	250		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	660		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	574.45				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-69.1				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.37				mg/L	1		Field Sampling	Total/NA
Field pH	7.05				SU	1		Field Sampling	Total/NA
Field Conductivity	1086				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	78.11				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-304 — Lab Sample ID: 310-268384-4

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	390		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	2.4		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	110		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	8800		1000	760	ug/L	10		6020B	Total/NA
Cadmium	0.34		0.20	0.10	ug/L	1		6020B	Total/NA
Calcium	110		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	1.6		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	270		100	36	ug/L	1		6020B	Total/NA
Molybdenum	900		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	850		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.0	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	573.43				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	11.4				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.09				mg/L	1		Field Sampling	Total/NA
Field pH	6.76				SU	1		Field Sampling	Total/NA
Field Conductivity	1260				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.32				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-304A — Lab Sample ID: 310-268384-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.3	J	2.0	0.53	ug/L	1		6020B	Total/NA
Iron	250		100	36	ug/L	1		6020B	Total/NA
Molybdenum	42		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	573.53				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-39.1				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.26				mg/L	1		Field Sampling	Total/NA
Field pH	7.03				SU	1		Field Sampling	Total/NA
Field Conductivity	686				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.7				Degrees C	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-304A (Continued) — Lab Sample ID: 310-268384-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field Turbidity	10.05				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-305 — Lab Sample ID: 310-268384-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	480		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	1.7	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	79		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	9000		1000	760	ug/L	10		6020B	Total/NA
Cadmium	0.16	J	0.20	0.10	ug/L	1		6020B	Total/NA
Calcium	130		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.39	J	0.50	0.17	ug/L	1		6020B	Total/NA
Iron	1500		100	36	ug/L	1		6020B	Total/NA
Molybdenum	790		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	990		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	573.29				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-106.6				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.38				mg/L	1		Field Sampling	Total/NA
Field pH	7.18				SU	1		Field Sampling	Total/NA
Field Conductivity	1244				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.9				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.38				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-306 — Lab Sample ID: 310-268384-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	250		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	200		5.0	2.1	mg/L	5		9056A	Total/NA
Barium	110		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	13000		1000	760	ug/L	10		6020B	Total/NA
Calcium	160		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	46	J	100	36	ug/L	1		6020B	Total/NA
Lithium	120		100	25	ug/L	10		6020B	Total/NA
Molybdenum	63		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	1100		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	574.58				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	40.8				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.66				mg/L	1		Field Sampling	Total/NA
Field pH	6.88				SU	1		Field Sampling	Total/NA
Field Conductivity	1825				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.9				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	3.33				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-307 — Lab Sample ID: 310-268384-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	60		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	23		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.99	J	2.0	0.53	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample ID: MW-307 (Continued) — Lab Sample ID: 310-268384-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	410		2.0	0.64	ug/L	1		6020B	Total/NA
Calcium	170		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	6.8		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	380		100	36	ug/L	1		6020B	Total/NA
Lithium	6.5	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	4.5		2.0	0.91	ug/L	1		6020B	Total/NA
Total Dissolved Solids	720		50	34	mg/L	1		SM 2540C	Total/NA
pH	6.7	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	590.47				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	15.4				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.37				mg/L	1		Field Sampling	Total/NA
Field pH	6.34				SU	1		Field Sampling	Total/NA
Field Conductivity	1401				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	16.2				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	4.64				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-308 — Lab Sample ID: 310-268384-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.58	J	2.0	0.53	ug/L	1		6020B	Total/NA
Iron	220		100	36	ug/L	1		6020B	Total/NA
Molybdenum	1.6	J	2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	573.76				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	44.7				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.14				mg/L	1		Field Sampling	Total/NA
Field pH	6.46				SU	1		Field Sampling	Total/NA
Field Conductivity	784				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	18.8				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	5.22				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-309 — Lab Sample ID: 310-268384-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.4		2.0	0.53	ug/L	1		6020B	Total/NA
Iron	29000		100	36	ug/L	1		6020B	Total/NA
Groundwater Elevation	571.70				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-148.9				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.78				mg/L	1		Field Sampling	Total/NA
Field pH	6.70				SU	1		Field Sampling	Total/NA
Field Conductivity	1289				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	20.8				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	6.19				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-310 — Lab Sample ID: 310-268384-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	67		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	120		5.0	2.1	mg/L	5		9056A	Total/NA
Barium	43		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	1000		100	76	ug/L	1		6020B	Total/NA
Calcium	110		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.55		0.50	0.17	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-310 (Continued) — Lab Sample ID: 310-268384-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	3.9	J	10	2.5	ug/L	1		6020B	Total/NA
Total Dissolved Solids	660		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	589.30				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	27.8				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.37				mg/L	1		Field Sampling	Total/NA
Field pH	6.95				SU	1		Field Sampling	Total/NA
Field Conductivity	1164				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.1				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	3.30				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-311 — Lab Sample ID: 310-268384-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	69		10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	30		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	572.75				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	24.9				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	2.16				mg/L	1		Field Sampling	Total/NA
Field pH	7.20				SU	1		Field Sampling	Total/NA
Field Conductivity	833				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	16.2				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	10.01				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-311A — Lab Sample ID: 310-268384-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lithium	6.5	J	10	2.5	ug/L	1		6020B	Total/NA
Molybdenum	23		2.0	0.91	ug/L	1		6020B	Total/NA
Groundwater Elevation	573.05				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	24.9				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.33				mg/L	1		Field Sampling	Total/NA
Field pH	7.10				SU	1		Field Sampling	Total/NA
Field Conductivity	686				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	18.4				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	4.82				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-312 — Lab Sample ID: 310-268384-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.5		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	25		5.0	2.1	mg/L	5		9056A	Total/NA
Barium	44		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	160		100	76	ug/L	1		6020B	Total/NA
Calcium	67		0.50	0.19	mg/L	1		6020B	Total/NA
Magnesium	32000		500	150	ug/L	1		6020B	Total/NA
Manganese	26		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	1.3	J	2.0	0.91	ug/L	1		6020B	Total/NA
Potassium	860		500	150	ug/L	1		6020B	Total/NA
Sodium	6400		1000	460	ug/L	1		6020B	Total/NA
Bicarbonate Alkalinity as CaCO3	270		5.0	2.5	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	270		5.0	2.5	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-312 (Continued) — Lab Sample ID: 310-268384-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	330		50	34	mg/L	1		SM 2540C	Total/NA
pH	7.5	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Groundwater Elevation	573.84				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	60.0				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.69				mg/L	1		Field Sampling	Total/NA
Field pH	7.13				SU	1		Field Sampling	Total/NA
Field Conductivity	621				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.6				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	3.83				NTU	1		Field Sampling	Total/NA

Client Sample ID: MW-313 — Lab Sample ID: 310-268384-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	75		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	4.0	J	5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	3.0		2.0	0.53	ug/L	1		6020B	Total/NA
Calcium	56		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	830		100	36	ug/L	1		6020B	Total/NA
Magnesium	25000		500	150	ug/L	1		6020B	Total/NA
Manganese	510		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	1.2	J	2.0	0.91	ug/L	1		6020B	Total/NA
Potassium	3400		500	150	ug/L	1		6020B	Total/NA
Sodium	94000		1000	460	ug/L	1		6020B	Total/NA
Bicarbonate Alkalinity as CaCO3	280		5.0	2.5	mg/L	1		SM 2320B	Total/NA
Total Alkalinity as CaCO3	280		5.0	2.5	mg/L	1		SM 2320B	Total/NA
Groundwater Elevation	573.34				ft	1		Field Sampling	Total/NA
Oxidation Reduction Potential	-110.4				mV	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.23				mg/L	1		Field Sampling	Total/NA
Field pH	7.23				SU	1		Field Sampling	Total/NA
Field Conductivity	845				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.0				Degrees C	1		Field Sampling	Total/NA
Field Turbidity	34.81				NTU	1		Field Sampling	Total/NA

Client Sample ID: Field Blank — Lab Sample ID: 310-268384-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	1.4	J	2.0	0.64	ug/L	1		6020B	Total/NA
Calcium	1.3		0.50	0.19	mg/L	1		6020B	Total/NA
pH	7.8	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-301
Date Collected: 10/25/23 17:25
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-1
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	79		5.0	2.3	mg/L			11/08/23 10:25	5
Fluoride	<0.38		1.0	0.38	mg/L			11/08/23 10:25	5
Sulfate	200		5.0	2.1	mg/L			11/08/23 10:25	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/03/23 23:51	1
Arsenic	0.75	J	2.0	0.53	ug/L		10/31/23 10:40	11/03/23 23:51	1
Barium	75		2.0	0.64	ug/L		10/31/23 10:40	11/03/23 23:51	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/03/23 23:51	1
Boron	12000		1000	760	ug/L		10/31/23 10:40	11/06/23 13:00	10
Cadmium	0.27		0.20	0.10	ug/L		10/31/23 10:40	11/03/23 23:51	1
Calcium	120		0.50	0.19	mg/L		10/31/23 10:40	11/03/23 23:51	1
Chromium	1.9	J	5.0	1.1	ug/L		10/31/23 10:40	11/03/23 23:51	1
Cobalt	4.3		0.50	0.17	ug/L		10/31/23 10:40	11/03/23 23:51	1
Iron	800		100	36	ug/L		10/31/23 10:40	11/03/23 23:51	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/03/23 23:51	1
Lithium	<25		100	25	ug/L		10/31/23 10:40	11/06/23 13:00	10
Molybdenum	550		2.0	0.91	ug/L		10/31/23 10:40	11/03/23 23:51	1
Selenium	<1.4		5.0	1.4	ug/L		10/31/23 10:40	11/03/23 23:51	1
Thallium	1.3		1.0	0.26	ug/L		10/31/23 10:40	11/03/23 23:51	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 11:59	11/08/23 11:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	660		50	34	mg/L			10/30/23 15:41	1
pH (SM 4500 H+ B)	6.8	HF	1.0	1.0	SU			10/27/23 17:56	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.197		0.0884	0.0902	1.00	0.0943	pCi/L	11/01/23 11:23	11/30/23 16:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*89.4*		*30 - 110*	*11/01/23 11:23*	*11/30/23 16:57*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	1.35		0.475	0.491	1.00	0.584	pCi/L	11/01/23 11:34	11/21/23 16:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*89.4*		*30 - 110*	*11/01/23 11:34*	*11/21/23 16:27*	*1*
Y Carrier	*80.7*		*30 - 110*	*11/01/23 11:34*	*11/21/23 16:27*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-301

Date Collected: 10/25/23 17:25
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-1

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.54		0.483	0.499	5.00	0.584	pCi/L		12/01/23 16:17	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	576.21				ft			10/25/23 17:25	1
Oxidation Reduction Potential	6.8				mV			10/25/23 17:25	1
Oxygen, Dissolved	0.84				mg/L			10/25/23 17:25	1
Field pH	6.53				SU			10/25/23 17:25	1
Field Conductivity	1074				umhos/cm			10/25/23 17:25	1
Field Temperature	15.4				Degrees C			10/25/23 17:25	1
Field Turbidity	5.26				NTU			10/25/23 17:25	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-302
Date Collected: 10/25/23 11:00
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-2
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13**		5.0	2.3	mg/L			11/08/23 11:02	5
Fluoride	<0.38		1.0	0.38	mg/L			11/08/23 11:02	5
Sulfate	**410**		5.0	2.1	mg/L			11/08/23 11:02	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/04/23 00:06	1
Arsenic	**7.8**		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:06	1
Barium	**97**		2.0	0.64	ug/L		10/31/23 10:40	11/04/23 00:06	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/04/23 00:06	1
Boron	**6700**		1000	760	ug/L		10/31/23 10:40	11/06/23 13:03	10
Cadmium	**0.13**	**J**	0.20	0.10	ug/L		10/31/23 10:40	11/04/23 00:06	1
Calcium	**140**		0.50	0.19	mg/L		10/31/23 10:40	11/04/23 00:06	1
Chromium	**1.4**	**J**	5.0	1.1	ug/L		10/31/23 10:40	11/04/23 00:06	1
Cobalt	**0.31**	**J**	0.50	0.17	ug/L		10/31/23 10:40	11/04/23 00:06	1
Iron	<36		100	36	ug/L		10/31/23 10:40	11/04/23 00:06	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/04/23 00:06	1
Lithium	<25		100	25	ug/L		10/31/23 10:40	11/06/23 13:03	10
Molybdenum	**270**		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:06	1
Selenium	**1.4**	**J**	5.0	1.4	ug/L		10/31/23 10:40	11/04/23 00:06	1
Thallium	<0.26		1.0	0.26	ug/L		10/31/23 10:40	11/04/23 00:06	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 11:59	11/08/23 11:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**770**		50	34	mg/L			10/30/23 15:35	1
pH (SM 4500 H+ B)	**7.5**	**HF**	1.0	1.0	SU			10/27/23 18:04	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	**0.198**		0.0881	0.0899	1.00	0.0982	pCi/L	11/01/23 11:23	11/30/23 16:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*95.8*		*30 - 110*	*11/01/23 11:23*	*11/30/23 16:57*	*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	0.187	U	0.282	0.283	1.00	0.477	pCi/L	11/27/23 11:24	12/04/23 11:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*81.2*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:57*	*1*
Y Carrier	*84.1*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:57*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-302

Date Collected: 10/25/23 11:00
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-2

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.385	U	0.295	0.297	5.00	0.477	pCi/L		12/04/23 16:01	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	573.31				ft			10/25/23 11:00	1
Oxidation Reduction Potential	30.1				mV			10/25/23 11:00	1
Oxygen, Dissolved	0.41				mg/L			10/25/23 11:00	1
Field pH	7.15				SU			10/25/23 11:00	1
Field Conductivity	1084				umhos/cm			10/25/23 11:00	1
Field Temperature	15.0				Degrees C			10/25/23 11:00	1
Field Turbidity	6.02				NTU			10/25/23 11:00	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-303

Date Collected: 10/25/23 12:30
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-3

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19**		5.0	2.3	mg/L			11/08/23 11:15	5
Fluoride	<0.38		1.0	0.38	mg/L			11/08/23 11:15	5
Sulfate	**310**		5.0	2.1	mg/L			11/08/23 11:15	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/04/23 00:09	1
Arsenic	**9.9**		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:09	1
Barium	**61**		2.0	0.64	ug/L		10/31/23 10:40	11/04/23 00:09	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/04/23 00:09	1
Boron	**4100**		1000	760	ug/L		10/31/23 10:40	11/06/23 13:07	10
Cadmium	<0.10		0.20	0.10	ug/L		10/31/23 10:40	11/04/23 00:09	1
Calcium	**80**		0.50	0.19	mg/L		10/31/23 10:40	11/04/23 00:09	1
Chromium	<1.1		5.0	1.1	ug/L		10/31/23 10:40	11/04/23 00:09	1
Cobalt	**0.64**		0.50	0.17	ug/L		10/31/23 10:40	11/04/23 00:09	1
Iron	**1500**		100	36	ug/L		10/31/23 10:40	11/04/23 00:09	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/04/23 00:09	1
Lithium	**32**	**J**	100	25	ug/L		10/31/23 10:40	11/06/23 13:07	10
Molybdenum	**250**		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:09	1
Selenium	<1.4		5.0	1.4	ug/L		10/31/23 10:40	11/04/23 00:09	1
Thallium	<0.26		1.0	0.26	ug/L		10/31/23 10:40	11/04/23 00:09	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 11:59	11/08/23 11:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**660**		50	34	mg/L			10/30/23 15:35	1
pH (SM 4500 H+ B)	**7.3**	**HF**	1.0	1.0	SU			10/27/23 17:59	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	**0.132**		0.0802	0.0811	1.00	0.105	pCi/L	11/01/23 11:23	11/30/23 16:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.4*		*30 - 110*	*11/01/23 11:23*	*11/30/23 16:58*	*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	**0.410**		0.267	0.270	1.00	0.398	pCi/L	11/27/23 11:24	12/04/23 11:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*95.9*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:57*	*1*
Y Carrier	*83.0*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:57*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-303

Date Collected: 10/25/23 12:30
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-3

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.542		0.279	0.282	5.00	0.398	pCi/L		12/04/23 16:01	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	574.45				ft			10/25/23 12:30	1
Oxidation Reduction Potential	-69.1				mV			10/25/23 12:30	1
Oxygen, Dissolved	0.37				mg/L			10/25/23 12:30	1
Field pH	7.05				SU			10/25/23 12:30	1
Field Conductivity	1086				umhos/cm			10/25/23 12:30	1
Field Temperature	14.4				Degrees C			10/25/23 12:30	1
Field Turbidity	78.11				NTU			10/25/23 12:30	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-304

Date Collected: 10/25/23 13:45
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-4

Matrix: Water

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			11/08/23 11:27	5
Fluoride	<0.38		1.0	0.38	mg/L			11/08/23 11:27	5
Sulfate	**390**		5.0	2.1	mg/L			11/08/23 11:27	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/04/23 00:12	1
Arsenic	**2.4**		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:12	1
Barium	**110**		2.0	0.64	ug/L		10/31/23 10:40	11/04/23 00:12	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/04/23 00:12	1
Boron	**8800**		1000	760	ug/L		10/31/23 10:40	11/06/23 13:12	10
Cadmium	**0.34**		0.20	0.10	ug/L		10/31/23 10:40	11/04/23 00:12	1
Calcium	**110**		0.50	0.19	mg/L		10/31/23 10:40	11/04/23 00:12	1
Chromium	<1.1		5.0	1.1	ug/L		10/31/23 10:40	11/04/23 00:12	1
Cobalt	**1.6**		0.50	0.17	ug/L		10/31/23 10:40	11/04/23 00:12	1
Iron	**270**		100	36	ug/L		10/31/23 10:40	11/04/23 00:12	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/04/23 00:12	1
Lithium	<25		100	25	ug/L		10/31/23 10:40	11/06/23 13:12	10
Molybdenum	**900**		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:12	1
Selenium	<1.4		5.0	1.4	ug/L		10/31/23 10:40	11/04/23 00:12	1
Thallium	<0.26		1.0	0.26	ug/L		10/31/23 10:40	11/04/23 00:12	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 11:59	11/08/23 11:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**850**		50	34	mg/L			10/30/23 15:35	1
pH (SM 4500 H+ B)	**7.0**	**HF**	1.0	1.0	SU			10/27/23 18:01	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	**0.215**		0.0946	0.0965	1.00	0.104	pCi/L	11/01/23 11:23	11/30/23 16:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*88.9*		*30 - 110*	*11/01/23 11:23*	*11/30/23 16:58*	*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	0.149	U	0.224	0.224	1.00	0.379	pCi/L	11/27/23 11:24	12/04/23 11:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*100*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:57*	*1*
Y Carrier	*83.4*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:57*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-304

Date Collected: 10/25/23 13:45
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-4

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.364	U	0.243	0.244	5.00	0.379	pCi/L		12/04/23 16:01	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	573.43				ft			10/25/23 13:45	1
Oxidation Reduction Potential	11.4				mV			10/25/23 13:45	1
Oxygen, Dissolved	0.09				mg/L			10/25/23 13:45	1
Field pH	6.76				SU			10/25/23 13:45	1
Field Conductivity	1260				umhos/cm			10/25/23 13:45	1
Field Temperature	13.4				Degrees C			10/25/23 13:45	1
Field Turbidity	6.32				NTU			10/25/23 13:45	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-304A

Date Collected: 10/25/23 13:38
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.3	J	2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:15	1
Iron	250		100	36	ug/L		10/31/23 10:40	11/04/23 00:15	1
Lithium	<2.5		10	2.5	ug/L		10/31/23 10:40	11/06/23 13:30	1
Molybdenum	42		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:15	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	573.53				ft			10/25/23 13:38	1
Oxidation Reduction Potential	-39.1				mV			10/25/23 13:38	1
Oxygen, Dissolved	1.26				mg/L			10/25/23 13:38	1
Field pH	7.03				SU			10/25/23 13:38	1
Field Conductivity	686				umhos/cm			10/25/23 13:38	1
Field Temperature	13.7				Degrees C			10/25/23 13:38	1
Field Turbidity	10.05				NTU			10/25/23 13:38	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-305

Date Collected: 10/25/23 14:55
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-6

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20**		5.0	2.3	mg/L			11/08/23 11:40	5
Fluoride	<0.38		1.0	0.38	mg/L			11/08/23 11:40	5
Sulfate	**480**		5.0	2.1	mg/L			11/08/23 11:40	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/04/23 00:18	1
Arsenic	**1.7**	**J**	2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:18	1
Barium	**79**		2.0	0.64	ug/L		10/31/23 10:40	11/04/23 00:18	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/04/23 00:18	1
Boron	**9000**		1000	760	ug/L		10/31/23 10:40	11/06/23 13:32	10
Cadmium	**0.16**	**J**	0.20	0.10	ug/L		10/31/23 10:40	11/04/23 00:18	1
Calcium	**130**		0.50	0.19	mg/L		10/31/23 10:40	11/04/23 00:18	1
Chromium	<1.1		5.0	1.1	ug/L		10/31/23 10:40	11/04/23 00:18	1
Cobalt	**0.39**	**J**	0.50	0.17	ug/L		10/31/23 10:40	11/04/23 00:18	1
Iron	**1500**		100	36	ug/L		10/31/23 10:40	11/04/23 00:18	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/04/23 00:18	1
Lithium	<25		100	25	ug/L		10/31/23 10:40	11/06/23 13:32	10
Molybdenum	**790**		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:18	1
Selenium	<1.4		5.0	1.4	ug/L		10/31/23 10:40	11/04/23 00:18	1
Thallium	<0.26		1.0	0.26	ug/L		10/31/23 10:40	11/04/23 00:18	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 11:59	11/08/23 11:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**990**		50	34	mg/L			10/30/23 15:35	1
pH (SM 4500 H+ B)	**7.3**	**HF**	1.0	1.0	SU			10/27/23 18:03	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	**0.233**		0.0965	0.0988	1.00	0.105	pCi/L	11/01/23 11:23	11/30/23 16:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*94.8*		*30 - 110*	*11/01/23 11:23*	*11/30/23 16:58*	*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	0.233	U	0.224	0.225	1.00	0.357	pCi/L	11/27/23 11:24	12/04/23 11:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*90.5*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:57*	*1*
Y Carrier	*86.7*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:57*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-305

Date Collected: 10/25/23 14:55
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-6

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.465		0.244	0.246	5.00	0.357	pCi/L		12/04/23 16:01	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	573.29				ft			10/25/23 14:55	1
Oxidation Reduction Potential	-106.6				mV			10/25/23 14:55	1
Oxygen, Dissolved	0.38				mg/L			10/25/23 14:55	1
Field pH	7.18				SU			10/25/23 14:55	1
Field Conductivity	1244				umhos/cm			10/25/23 14:55	1
Field Temperature	14.9				Degrees C			10/25/23 14:55	1
Field Turbidity	6.38				NTU			10/25/23 14:55	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-306

Date Collected: 10/25/23 16:00
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-7

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**250**		5.0	2.3	mg/L			11/08/23 12:18	5
Fluoride	<0.38		1.0	0.38	mg/L			11/08/23 12:18	5
Sulfate	**200**		5.0	2.1	mg/L			11/08/23 12:18	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/04/23 00:21	1
Arsenic	<0.53		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:21	1
Barium	**110**		2.0	0.64	ug/L		10/31/23 10:40	11/04/23 00:21	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/04/23 00:21	1
Boron	**13000**		1000	760	ug/L		10/31/23 10:40	11/06/23 13:37	10
Cadmium	<0.10		0.20	0.10	ug/L		10/31/23 10:40	11/04/23 00:21	1
Calcium	**160**		0.50	0.19	mg/L		10/31/23 10:40	11/04/23 00:21	1
Chromium	<1.1		5.0	1.1	ug/L		10/31/23 10:40	11/04/23 00:21	1
Cobalt	<0.17		0.50	0.17	ug/L		10/31/23 10:40	11/04/23 00:21	1
Iron	**46**	**J**	100	36	ug/L		10/31/23 10:40	11/04/23 00:21	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/04/23 00:21	1
Lithium	**120**		100	25	ug/L		10/31/23 10:40	11/06/23 13:37	10
Molybdenum	**63**		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:21	1
Selenium	<1.4		5.0	1.4	ug/L		10/31/23 10:40	11/04/23 00:21	1
Thallium	<0.26		1.0	0.26	ug/L		10/31/23 10:40	11/04/23 00:21	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 11:59	11/08/23 11:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1100**		50	34	mg/L			10/30/23 15:35	1
pH (SM 4500 H+ B)	**7.1**	**HF**	1.0	1.0	SU			10/27/23 17:57	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0979	U	0.0726	0.0732	1.00	0.102	pCi/L	11/01/23 11:23	11/30/23 16:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*92.3*		*30 - 110*	*11/01/23 11:23*	*11/30/23 16:58*	*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	0.153	U	0.219	0.219	1.00	0.368	pCi/L	11/27/23 11:24	12/04/23 11:57	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*97.2*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:57*	*1*
Y Carrier	*85.6*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:57*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-306

Date Collected: 10/25/23 16:00
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-7

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.251	U	0.231	0.231	5.00	0.368	pCi/L		12/04/23 16:01	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	574.58				ft			10/25/23 16:00	1
Oxidation Reduction Potential	40.8				mV			10/25/23 16:00	1
Oxygen, Dissolved	1.66				mg/L			10/25/23 16:00	1
Field pH	6.88				SU			10/25/23 16:00	1
Field Conductivity	1825				umhos/cm			10/25/23 16:00	1
Field Temperature	13.9				Degrees C			10/25/23 16:00	1
Field Turbidity	3.33				NTU			10/25/23 16:00	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-307

Date Collected: 10/24/23 15:00
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-8

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**60**		5.0	2.3	mg/L			11/08/23 12:30	5
Fluoride	<0.38		1.0	0.38	mg/L			11/08/23 12:30	5
Sulfate	**23**		5.0	2.1	mg/L			11/08/23 12:30	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/04/23 00:24	1
Arsenic	**0.99**	**J**	2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:24	1
Barium	**410**		2.0	0.64	ug/L		10/31/23 10:40	11/04/23 00:24	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/04/23 00:24	1
Boron	<76		100	76	ug/L		10/31/23 10:40	11/06/23 13:39	1
Cadmium	<0.10		0.20	0.10	ug/L		10/31/23 10:40	11/04/23 00:24	1
Calcium	**170**		0.50	0.19	mg/L		10/31/23 10:40	11/04/23 00:24	1
Chromium	<1.1		5.0	1.1	ug/L		10/31/23 10:40	11/04/23 00:24	1
Cobalt	**6.8**		0.50	0.17	ug/L		10/31/23 10:40	11/04/23 00:24	1
Iron	**380**		100	36	ug/L		10/31/23 10:40	11/04/23 00:24	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/04/23 00:24	1
Lithium	**6.5**	**J**	10	2.5	ug/L		10/31/23 10:40	11/06/23 13:39	1
Molybdenum	**4.5**		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:24	1
Selenium	<1.4		5.0	1.4	ug/L		10/31/23 10:40	11/04/23 00:24	1
Thallium	<0.26		1.0	0.26	ug/L		10/31/23 10:40	11/04/23 00:24	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 11:59	11/08/23 12:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**720**		50	34	mg/L			10/30/23 15:35	1
pH (SM 4500 H+ B)	**6.7**	**HF**	1.0	1.0	SU			10/27/23 17:54	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	**0.250**		0.116	0.118	1.00	0.121	pCi/L	11/01/23 11:23	11/30/23 16:58	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*88.4*		*30 - 110*	*11/01/23 11:23*	*11/30/23 16:58*	*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	**0.455**		0.235	0.239	1.00	0.323	pCi/L	11/27/23 11:24	12/04/23 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*96.7*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:56*	*1*
Y Carrier	*84.9*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:56*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-307

Date Collected: 10/24/23 15:00
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-8

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.705		0.262	0.267	5.00	0.323	pCi/L		12/04/23 16:01	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	590.47				ft			10/24/23 15:00	1
Oxidation Reduction Potential	15.4				mV			10/24/23 15:00	1
Oxygen, Dissolved	0.37				mg/L			10/24/23 15:00	1
Field pH	6.34				SU			10/24/23 15:00	1
Field Conductivity	1401				umhos/cm			10/24/23 15:00	1
Field Temperature	16.2				Degrees C			10/24/23 15:00	1
Field Turbidity	4.64				NTU			10/24/23 15:00	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-308

Date Collected: 10/24/23 12:05
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.58	J	2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:30	1
Iron	220		100	36	ug/L		10/31/23 10:40	11/04/23 00:30	1
Lithium	<2.5		10	2.5	ug/L		10/31/23 10:40	11/06/23 14:06	1
Molybdenum	1.6	J	2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:30	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	573.76				ft			10/24/23 12:05	1
Oxidation Reduction Potential	44.7				mV			10/24/23 12:05	1
Oxygen, Dissolved	1.14				mg/L			10/24/23 12:05	1
Field pH	6.46				SU			10/24/23 12:05	1
Field Conductivity	784				umhos/cm			10/24/23 12:05	1
Field Temperature	18.8				Degrees C			10/24/23 12:05	1
Field Turbidity	5.22				NTU			10/24/23 12:05	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-309

Date Collected: 10/24/23 10:55
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.4**		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:33	1
Iron	**29000**		100	36	ug/L		10/31/23 10:40	11/04/23 00:33	1
Lithium	<2.5		10	2.5	ug/L		10/31/23 10:40	11/06/23 14:08	1
Molybdenum	<0.91		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:33	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	**571.70**				ft			10/24/23 10:55	1
Oxidation Reduction Potential	**-148.9**				mV			10/24/23 10:55	1
Oxygen, Dissolved	**0.78**				mg/L			10/24/23 10:55	1
Field pH	**6.70**				SU			10/24/23 10:55	1
Field Conductivity	**1289**				umhos/cm			10/24/23 10:55	1
Field Temperature	**20.8**				Degrees C			10/24/23 10:55	1
Field Turbidity	**6.19**				NTU			10/24/23 10:55	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-310
Date Collected: 10/26/23 13:15
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-11
Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**67**		5.0	2.3	mg/L			11/08/23 12:43	5
Fluoride	<0.38		1.0	0.38	mg/L			11/08/23 12:43	5
Sulfate	**120**		5.0	2.1	mg/L			11/08/23 12:43	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/04/23 00:49	1
Arsenic	<0.53		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:49	1
Barium	**43**		2.0	0.64	ug/L		10/31/23 10:40	11/04/23 00:49	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/04/23 00:49	1
Boron	**1000**		100	76	ug/L		10/31/23 10:40	11/06/23 14:10	1
Cadmium	<0.10		0.20	0.10	ug/L		10/31/23 10:40	11/04/23 00:49	1
Calcium	**110**		0.50	0.19	mg/L		10/31/23 10:40	11/04/23 00:49	1
Chromium	<1.1		5.0	1.1	ug/L		10/31/23 10:40	11/04/23 00:49	1
Cobalt	**0.55**		0.50	0.17	ug/L		10/31/23 10:40	11/04/23 00:49	1
Iron	<36		100	36	ug/L		10/31/23 10:40	11/04/23 00:49	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/04/23 00:49	1
Lithium	**3.9**	**J**	10	2.5	ug/L		10/31/23 10:40	11/06/23 14:10	1
Molybdenum	<0.91		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:49	1
Selenium	<1.4		5.0	1.4	ug/L		10/31/23 10:40	11/04/23 00:49	1
Thallium	<0.26		1.0	0.26	ug/L		10/31/23 10:40	11/04/23 00:49	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 11:59	11/08/23 12:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**660**		50	34	mg/L			10/30/23 15:41	1
pH (SM 4500 H+ B)	**7.2**	**HF**	1.0	1.0	SU			10/27/23 17:55	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0854	U	0.0642	0.0646	1.00	0.0876	pCi/L	11/01/23 11:23	11/30/23 16:59	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*93.3*		*30 - 110*	*11/01/23 11:23*	*11/30/23 16:59*	*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	0.281	U	0.226	0.227	1.00	0.350	pCi/L	11/27/23 11:24	12/04/23 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*91.5*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:56*	*1*
Y Carrier	*91.6*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:56*	*1*

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-310

Date Collected: 10/26/23 13:15
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-11

Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.366		0.235	0.236	5.00	0.350	pCi/L		12/04/23 16:01	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	589.30				ft			10/26/23 13:15	1
Oxidation Reduction Potential	27.8				mV			10/26/23 13:15	1
Oxygen, Dissolved	0.37				mg/L			10/26/23 13:15	1
Field pH	6.95				SU			10/26/23 13:15	1
Field Conductivity	1164				umhos/cm			10/26/23 13:15	1
Field Temperature	14.1				Degrees C			10/26/23 13:15	1
Field Turbidity	3.30				NTU			10/26/23 13:15	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-311

Date Collected: 10/24/23 13:25
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-12

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:52	1
Iron	<36		100	36	ug/L		10/31/23 10:40	11/04/23 00:52	1
Lithium	**69**		10	2.5	ug/L		10/31/23 10:40	11/06/23 14:38	1
Molybdenum	**30**		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:52	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	**572.75**				ft			10/24/23 13:25	1
Oxidation Reduction Potential	**24.9**				mV			10/24/23 13:25	1
Oxygen, Dissolved	**2.16**				mg/L			10/24/23 13:25	1
Field pH	**7.20**				SU			10/24/23 13:25	1
Field Conductivity	**833**				umhos/cm			10/24/23 13:25	1
Field Temperature	**16.2**				Degrees C			10/24/23 13:25	1
Field Turbidity	**10.01**				NTU			10/24/23 13:25	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-311A

Date Collected: 10/24/23 14:05
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:55	1
Iron	<36		100	36	ug/L		10/31/23 10:40	11/04/23 00:55	1
Lithium	**6.5**	**J**	10	2.5	ug/L		10/31/23 10:40	11/06/23 14:40	1
Molybdenum	**23**		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:55	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	**573.05**				ft			10/24/23 14:05	1
Oxidation Reduction Potential	**24.9**				mV			10/24/23 14:05	1
Oxygen, Dissolved	**1.33**				mg/L			10/24/23 14:05	1
Field pH	**7.10**				SU			10/24/23 14:05	1
Field Conductivity	**686**				umhos/cm			10/24/23 14:05	1
Field Temperature	**18.4**				Degrees C			10/24/23 14:05	1
Field Turbidity	**4.82**				NTU			10/24/23 14:05	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-312

Date Collected: 10/24/23 09:40
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-14

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9.5**		5.0	2.3	mg/L			11/08/23 12:56	5
Fluoride	<0.38		1.0	0.38	mg/L			11/08/23 12:56	5
Sulfate	**25**		5.0	2.1	mg/L			11/08/23 12:56	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/04/23 00:58	1
Arsenic	<0.53		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 00:58	1
Barium	**44**		2.0	0.64	ug/L		10/31/23 10:40	11/04/23 00:58	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/04/23 00:58	1
Boron	**160**		100	76	ug/L		10/31/23 10:40	11/06/23 14:43	1
Cadmium	<0.10		0.20	0.10	ug/L		10/31/23 10:40	11/04/23 00:58	1
Calcium	**67**		0.50	0.19	mg/L		10/31/23 10:40	11/04/23 00:58	1
Chromium	<1.1		5.0	1.1	ug/L		10/31/23 10:40	11/04/23 00:58	1
Cobalt	<0.17		0.50	0.17	ug/L		10/31/23 10:40	11/04/23 00:58	1
Iron	<36		100	36	ug/L		10/31/23 10:40	11/04/23 00:58	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/04/23 00:58	1
Lithium	<2.5		10	2.5	ug/L		10/31/23 10:40	11/06/23 14:43	1
Magnesium	**32000**		500	150	ug/L		10/31/23 10:40	11/04/23 00:58	1
Manganese	**26**		10	3.6	ug/L		10/31/23 10:40	11/04/23 00:58	1
Molybdenum	**1.3**	**J**	2.0	0.91	ug/L		10/31/23 10:40	11/04/23 00:58	1
Potassium	**860**		500	150	ug/L		10/31/23 10:40	11/04/23 00:58	1
Selenium	<1.4		5.0	1.4	ug/L		10/31/23 10:40	11/04/23 00:58	1
Sodium	**6400**		1000	460	ug/L		10/31/23 10:40	11/06/23 14:43	1
Thallium	<0.26		1.0	0.26	ug/L		10/31/23 10:40	11/04/23 00:58	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 12:02	11/08/23 12:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**270**		5.0	2.5	mg/L			11/01/23 12:58	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<2.5		5.0	2.5	mg/L			11/01/23 12:58	1
Total Alkalinity as CaCO3 (SM 2320B)	**270**		5.0	2.5	mg/L			11/01/23 12:58	1
Total Dissolved Solids (SM 2540C)	**330**		50	34	mg/L			10/30/23 15:35	1
pH (SM 4500 H+ B)	**7.5**	**HF**	1.0	1.0	SU			10/27/23 17:53	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0982	U	0.0722	0.0727	1.00	0.102	pCi/L	11/01/23 11:23	12/01/23 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*95.6*		*30 - 110*	*11/01/23 11:23*	*12/01/23 07:09*	*1*

Eurofins Cedar Falls

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-312

Date Collected: 10/24/23 09:40
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-14

Matrix: Water

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		0.232	0.238	1.00	0.291	pCi/L	11/27/23 11:24	12/04/23 11:56	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*101*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:56*	*1*
Y Carrier	*87.5*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:56*	*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	0.662		0.243	0.249	5.00	0.291	pCi/L		12/04/23 16:01	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	573.84				ft			10/24/23 09:40	1
Oxidation Reduction Potential	60.0				mV			10/24/23 09:40	1
Oxygen, Dissolved	0.69				mg/L			10/24/23 09:40	1
Field pH	7.13				SU			10/24/23 09:40	1
Field Conductivity	621				umhos/cm			10/24/23 09:40	1
Field Temperature	14.6				Degrees C			10/24/23 09:40	1
Field Turbidity	3.83				NTU			10/24/23 09:40	1

Client Sample Results

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-313

Date Collected: 10/26/23 12:15
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-15

Matrix: Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	75		5.0	2.3	mg/L			11/08/23 13:08	5
Sulfate	4.0	J	5.0	2.1	mg/L			11/08/23 13:08	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.0		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 01:01	1
Calcium	56		0.50	0.19	mg/L		10/31/23 10:40	11/04/23 01:01	1
Iron	830		100	36	ug/L		10/31/23 10:40	11/04/23 01:01	1
Lithium	<2.5		10	2.5	ug/L		10/31/23 10:40	11/06/23 14:45	1
Magnesium	25000		500	150	ug/L		10/31/23 10:40	11/04/23 01:01	1
Manganese	510		10	3.6	ug/L		10/31/23 10:40	11/04/23 01:01	1
Molybdenum	1.2	J	2.0	0.91	ug/L		10/31/23 10:40	11/04/23 01:01	1
Potassium	3400		500	150	ug/L		10/31/23 10:40	11/04/23 01:01	1
Sodium	94000		1000	460	ug/L		10/31/23 10:40	11/06/23 14:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	280		5.0	2.5	mg/L			11/01/23 13:07	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<2.5		5.0	2.5	mg/L			11/01/23 13:07	1
Total Alkalinity as CaCO3 (SM 2320B)	280		5.0	2.5	mg/L			11/01/23 13:07	1

Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	573.34				ft			10/26/23 12:15	1
Oxidation Reduction Potential	-110.4				mV			10/26/23 12:15	1
Oxygen, Dissolved	1.23				mg/L			10/26/23 12:15	1
Field pH	7.23				SU			10/26/23 12:15	1
Field Conductivity	845				umhos/cm			10/26/23 12:15	1
Field Temperature	14.0				Degrees C			10/26/23 12:15	1
Field Turbidity	34.81				NTU			10/26/23 12:15	1

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: Field Blank

Lab Sample ID: 310-268384-16

Date Collected: 10/26/23 13:30

Matrix: Water

Date Received: 10/27/23 16:35

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			11/08/23 13:21	1
Fluoride	<0.075		0.20	0.075	mg/L			11/08/23 13:21	1
Sulfate	<0.42		1.0	0.42	mg/L			11/08/23 13:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/04/23 01:04	1
Arsenic	<0.53		2.0	0.53	ug/L		10/31/23 10:40	11/04/23 01:04	1
Barium	**1.4**	**J**	2.0	0.64	ug/L		10/31/23 10:40	11/04/23 01:04	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/04/23 01:04	1
Boron	<76		100	76	ug/L		10/31/23 10:40	11/06/23 14:47	1
Cadmium	<0.10		0.20	0.10	ug/L		10/31/23 10:40	11/04/23 01:04	1
Calcium	**1.3**		0.50	0.19	mg/L		10/31/23 10:40	11/04/23 01:04	1
Chromium	<1.1		5.0	1.1	ug/L		10/31/23 10:40	11/04/23 01:04	1
Cobalt	<0.17		0.50	0.17	ug/L		10/31/23 10:40	11/04/23 01:04	1
Iron	<36		100	36	ug/L		10/31/23 10:40	11/04/23 01:04	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/04/23 01:04	1
Lithium	<2.5		10	2.5	ug/L		10/31/23 10:40	11/06/23 14:47	1
Molybdenum	<0.91		2.0	0.91	ug/L		10/31/23 10:40	11/04/23 01:04	1
Selenium	<1.4		5.0	1.4	ug/L		10/31/23 10:40	11/04/23 01:04	1
Thallium	<0.26		1.0	0.26	ug/L		10/31/23 10:40	11/04/23 01:04	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 12:02	11/08/23 12:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	<34		50	34	mg/L			10/30/23 15:41	1
pH (SM 4500 H+ B)	**7.8**	**HF**	1.0	1.0	SU			10/27/23 17:58	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.0327	U	0.0570	0.0571	1.00	0.101	pCi/L	11/01/23 11:23	12/01/23 07:09	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*94.3*		*30 - 110*	*11/01/23 11:23*	*12/01/23 07:09*	*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	-0.293	U	0.273	0.275	1.00	0.583	pCi/L	11/01/23 11:34	11/21/23 16:30	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*94.3*		*30 - 110*	*11/01/23 11:34*	*11/21/23 16:30*	*1*
Y Carrier	*86.7*		*30 - 110*	*11/01/23 11:34*	*11/21/23 16:30*	*1*

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: Field Blank
Date Collected: 10/26/23 13:30
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-16
Matrix: Water

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

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.0327	U	0.279	0.281	5.00	0.583	pCi/L		12/01/23 16:17	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

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

Rad

Qualifier	Qualifier Description
F	Duplicate RPD exceeds the control limit
U	Result is less than the sample detection limit.

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

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-405473/3
Matrix: Water
Analysis Batch: 405473

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			11/08/23 10:00	1
Fluoride	<0.075		0.20	0.075	mg/L			11/08/23 10:00	1
Sulfate	<0.42		1.0	0.42	mg/L			11/08/23 10:00	1

Lab Sample ID: LCS 310-405473/4
Matrix: Water
Analysis Batch: 405473

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	9.90		mg/L		99	90 - 110
Fluoride	2.00	2.10		mg/L		105	90 - 110
Sulfate	10.0	10.6		mg/L		106	90 - 110

Lab Sample ID: 310-268384-1 MS
Matrix: Water
Analysis Batch: 405473

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	79		25.0	101		mg/L		88	80 - 120
Fluoride	<0.38		5.00	5.24		mg/L		105	80 - 120
Sulfate	200		25.0	213	4	mg/L		68	80 - 120

Lab Sample ID: 310-268384-1 MSD
Matrix: Water
Analysis Batch: 405473

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	79		25.0	102		mg/L		90	80 - 120	1	15
Fluoride	<0.38		5.00	5.27		mg/L		105	80 - 120	1	15
Sulfate	200		25.0	211	4	mg/L		62	80 - 120	1	15

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-404278/1-A
Matrix: Water
Analysis Batch: 404905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404278

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		2.0	1.0	ug/L		10/31/23 10:40	11/03/23 23:24	1
Arsenic	<0.53		2.0	0.53	ug/L		10/31/23 10:40	11/03/23 23:24	1
Barium	<0.64		2.0	0.64	ug/L		10/31/23 10:40	11/03/23 23:24	1
Beryllium	<0.33		1.0	0.33	ug/L		10/31/23 10:40	11/03/23 23:24	1
Cadmium	<0.10		0.20	0.10	ug/L		10/31/23 10:40	11/03/23 23:24	1
Calcium	<0.19		0.50	0.19	mg/L		10/31/23 10:40	11/03/23 23:24	1
Chromium	<1.1		5.0	1.1	ug/L		10/31/23 10:40	11/03/23 23:24	1
Cobalt	<0.17		0.50	0.17	ug/L		10/31/23 10:40	11/03/23 23:24	1
Iron	<36		100	36	ug/L		10/31/23 10:40	11/03/23 23:24	1
Lead	<0.24		0.50	0.24	ug/L		10/31/23 10:40	11/03/23 23:24	1
Magnesium	<150		500	150	ug/L		10/31/23 10:40	11/03/23 23:24	1
Manganese	<3.6		10	3.6	ug/L		10/31/23 10:40	11/03/23 23:24	1

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

Lab Sample ID: MB 310-404278/1-A
Matrix: Water
Analysis Batch: 404905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404278

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.91		2.0	0.91	ug/L		10/31/23 10:40	11/03/23 23:24	1
Selenium	<1.4		5.0	1.4	ug/L		10/31/23 10:40	11/03/23 23:24	1
Thallium	<0.26		1.0	0.26	ug/L		10/31/23 10:40	11/03/23 23:24	1

Lab Sample ID: MB 310-404278/1-A
Matrix: Water
Analysis Batch: 405025

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 404278

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<76		100	76	ug/L		10/31/23 10:40	11/06/23 12:45	1
Lithium	<2.5		10	2.5	ug/L		10/31/23 10:40	11/06/23 12:45	1
Potassium	<150		500	150	ug/L		10/31/23 10:40	11/06/23 12:45	1
Sodium	<460		1000	460	ug/L		10/31/23 10:40	11/06/23 12:45	1

Lab Sample ID: LCS 310-404278/2-A
Matrix: Water
Analysis Batch: 404905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404278

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	200	205		ug/L		102	80 - 120
Arsenic	200	199		ug/L		99	80 - 120
Barium	100	109		ug/L		109	80 - 120
Beryllium	100	87.0		ug/L		87	80 - 120
Cadmium	100	97.4		ug/L		97	80 - 120
Calcium	2.00	1.84		mg/L		92	80 - 120
Chromium	100	112		ug/L		112	80 - 120
Cobalt	100	97.4		ug/L		97	80 - 120
Iron	200	226		ug/L		113	80 - 120
Lead	200	185		ug/L		93	80 - 120
Magnesium	2000	2040		ug/L		102	80 - 120
Manganese	100	103		ug/L		103	80 - 120
Molybdenum	200	201		ug/L		101	80 - 120
Selenium	400	355		ug/L		89	80 - 120
Thallium	200	163		ug/L		82	80 - 120

Lab Sample ID: LCS 310-404278/2-A
Matrix: Water
Analysis Batch: 405025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 404278

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	200	186		ug/L		93	80 - 120
Lithium	200	193		ug/L		97	80 - 120
Potassium	2000	2130		ug/L		106	80 - 120
Sodium	2000	2120		ug/L		106	80 - 120

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

Lab Sample ID: 310-268384-8 DU — **Client Sample ID: MW-307**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 404905 — **Prep Batch: 404278**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Antimony	<1.0			<1.0		ug/L				NC	20
Arsenic	0.99	J		1.04	J	ug/L				5	20
Barium	410			422		ug/L				3	20
Beryllium	<0.33			<0.33		ug/L				NC	20
Boron	960	^2		351	F3	ug/L				93	20
Cadmium	<0.10			<0.10		ug/L				NC	20
Calcium	170			173		mg/L				1	20
Chromium	<1.1			3.70	J	ug/L				NC	20
Cobalt	6.8			7.01		ug/L				3	20
Iron	380			451		ug/L				17	20
Lead	<0.24			<0.24		ug/L				NC	20
Molybdenum	4.5			1.35	J F3	ug/L				107	20
Selenium	<1.4			<1.4		ug/L				NC	20
Thallium	<0.26			<0.26		ug/L				NC	20

Lab Sample ID: 310-268384-8 DU — **Client Sample ID: MW-307**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 405025 — **Prep Batch: 404278**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Boron	<76			<76		ug/L				NC	20
Lithium	6.5	J		6.87	J	ug/L				6	20
Sodium	15000			15600		ug/L				4	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-405112/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 405314 — **Prep Batch: 405112**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 11:58	11/08/23 11:06	1

Lab Sample ID: LCS 310-405112/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 405314 — **Prep Batch: 405112**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			1.67	1.74		ug/L		105	80 - 120		

Lab Sample ID: 310-268384-4 MS — **Client Sample ID: MW-304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 405314 — **Prep Batch: 405112**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	<0.14		1.67	1.81		ug/L		109	80 - 120		

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 310-268384-4 MSD
Matrix: Water
Analysis Batch: 405314

Client Sample ID: MW-304
Prep Type: Total/NA
Prep Batch: 405112

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.14		1.67	1.88		ug/L		113	80 - 120	3	20

Lab Sample ID: MB 310-405113/1-A
Matrix: Water
Analysis Batch: 405314

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 405113

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.14		0.20	0.14	ug/L		11/07/23 12:02	11/08/23 12:10	1

Lab Sample ID: LCS 310-405113/2-A
Matrix: Water
Analysis Batch: 405314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405113

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			1.67	1.78		ug/L		107	80 - 120		

Lab Sample ID: 310-268384-14 MS
Matrix: Water
Analysis Batch: 405314

Client Sample ID: MW-312
Prep Type: Total/NA
Prep Batch: 405113

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	<0.14		1.67	1.88		ug/L		113	80 - 120		

Lab Sample ID: 310-268384-14 MSD
Matrix: Water
Analysis Batch: 405314

Client Sample ID: MW-312
Prep Type: Total/NA
Prep Batch: 405113

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.14		1.67	1.83		ug/L		110	80 - 120	3	20

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 310-404574/2
Matrix: Water
Analysis Batch: 404574

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	955		mg/L		95	90 - 110		

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

Lab Sample ID: MB 310-404259/1
Matrix: Water
Analysis Batch: 404259

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<34		50	34	mg/L			10/30/23 15:35	1

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

Lab Sample ID: LCS 310-404259/2
Matrix: Water
Analysis Batch: 404259

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	954		mg/L		95	90 - 110

Lab Sample ID: MB 310-404260/1
Matrix: Water
Analysis Batch: 404260

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<34		50	34	mg/L			10/30/23 15:41	1

Lab Sample ID: LCS 310-404260/2
Matrix: Water
Analysis Batch: 404260

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	968		mg/L		97	90 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-404100/1
Matrix: Water
Analysis Batch: 404100

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

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

Lab Sample ID: 310-268384-4 DU
Matrix: Water
Analysis Batch: 404100

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.0	HF	7.0		SU		0.3	20

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-634751/1-A
Matrix: Water
Analysis Batch: 638803

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 634751

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226	0.04647	U	0.0598	0.0600	1.00	0.0995	pCi/L	11/01/23 11:23	11/30/23 16:56	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*97.3*		*30 - 110*	*11/01/23 11:23*	*11/30/23 16:56*	*1*

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

Lab Sample ID: LCS 160-634751/2-A
Matrix: Water
Analysis Batch: 638803

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 634751

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium 226			11.3	10.04		1.05	1.00	0.0995	pCi/L	89	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Barium	*95.1*		*30 - 110*

Lab Sample ID: 310-268384-1 DU
Matrix: Water
Analysis Batch: 638803

Client Sample ID: MW-301
Prep Type: Total/NA
Prep Batch: 634751

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium 226	0.197			0.2537		0.102	1.00	0.0996	pCi/L			0.29	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Barium	*86.9*		*30 - 110*

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-634752/1-A
Matrix: Water
Analysis Batch: 637733

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 634752

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.2607	U	0.352	0.353	1.00	0.589	pCi/L	11/01/23 11:34	11/21/23 16:26	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*97.3*		*30 - 110*	*11/01/23 11:34*	*11/21/23 16:26*	*1*
Y Carrier	*85.2*		*30 - 110*	*11/01/23 11:34*	*11/21/23 16:26*	*1*

Lab Sample ID: LCS 160-634752/2-A
Matrix: Water
Analysis Batch: 637733

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 634752

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium 228			7.70	6.993		1.03	1.00	0.524	pCi/L	91	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Barium	*95.1*		*30 - 110*
Y Carrier	*87.5*		*30 - 110*

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

Lab Sample ID: 310-268384-1 DU
Matrix: Water
Analysis Batch: 637733

Client Sample ID: MW-301
Prep Type: Total/NA
Prep Batch: 634752

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit			RER	RER Limit
Radium 228	1.35			0.1943	U F	0.357	1.00	0.616	pCi/L			1.36	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Barium	*86.9*		*30 - 110*
Y Carrier	*77.8*		*30 - 110*

Lab Sample ID: MB 160-638365/1-A
Matrix: Water
Analysis Batch: 639352

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638365

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 228	0.2216	U	0.198	0.199	1.00	0.309	pCi/L	11/27/23 11:24	12/04/23 11:46	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Barium	*97.9*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:46*	*1*
Y Carrier	*80.0*		*30 - 110*	*11/27/23 11:24*	*12/04/23 11:46*	*1*

Lab Sample ID: LCS 160-638365/2-A
Matrix: Water
Analysis Batch: 639352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638365

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits		
Radium 228			9.43	6.885		0.930	1.00	0.354	pCi/L	73	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Barium	*98.5*		*30 - 110*
Y Carrier	*76.3*		*30 - 110*

Lab Sample ID: LCSD 160-638365/3-A
Matrix: Water
Analysis Batch: 639352

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 638365

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium 228			9.43	6.399		0.943	1.00	0.460	pCi/L	68	75 - 125	0.26	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Barium	*101*		*30 - 110*
Y Carrier	*60.9*		*30 - 110*

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

HPLC/IC

Analysis Batch: 405473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	9056A	
310-268384-2	MW-302	Total/NA	Water	9056A	
310-268384-3	MW-303	Total/NA	Water	9056A	
310-268384-4	MW-304	Total/NA	Water	9056A	
310-268384-6	MW-305	Total/NA	Water	9056A	
310-268384-7	MW-306	Total/NA	Water	9056A	
310-268384-8	MW-307	Total/NA	Water	9056A	
310-268384-11	MW-310	Total/NA	Water	9056A	
310-268384-14	MW-312	Total/NA	Water	9056A	
310-268384-15	MW-313	Total/NA	Water	9056A	
310-268384-16	Field Blank	Total/NA	Water	9056A	
MB 310-405473/3	Method Blank	Total/NA	Water	9056A	
LCS 310-405473/4	Lab Control Sample	Total/NA	Water	9056A	
310-268384-1 MS	MW-301	Total/NA	Water	9056A	
310-268384-1 MSD	MW-301	Total/NA	Water	9056A	

Metals

Prep Batch: 404278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	3005A	
310-268384-2	MW-302	Total/NA	Water	3005A	
310-268384-3	MW-303	Total/NA	Water	3005A	
310-268384-4	MW-304	Total/NA	Water	3005A	
310-268384-5	MW-304A	Total/NA	Water	3005A	
310-268384-6	MW-305	Total/NA	Water	3005A	
310-268384-7	MW-306	Total/NA	Water	3005A	
310-268384-8	MW-307	Total/NA	Water	3005A	
310-268384-9	MW-308	Total/NA	Water	3005A	
310-268384-10	MW-309	Total/NA	Water	3005A	
310-268384-11	MW-310	Total/NA	Water	3005A	
310-268384-12	MW-311	Total/NA	Water	3005A	
310-268384-13	MW-311A	Total/NA	Water	3005A	
310-268384-14	MW-312	Total/NA	Water	3005A	
310-268384-15	MW-313	Total/NA	Water	3005A	
310-268384-16	Field Blank	Total/NA	Water	3005A	
MB 310-404278/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-404278/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-268384-8 DU	MW-307	Total/NA	Water	3005A	

Analysis Batch: 404905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	6020B	404278
310-268384-2	MW-302	Total/NA	Water	6020B	404278
310-268384-3	MW-303	Total/NA	Water	6020B	404278
310-268384-4	MW-304	Total/NA	Water	6020B	404278
310-268384-5	MW-304A	Total/NA	Water	6020B	404278
310-268384-6	MW-305	Total/NA	Water	6020B	404278
310-268384-7	MW-306	Total/NA	Water	6020B	404278
310-268384-8	MW-307	Total/NA	Water	6020B	404278
310-268384-9	MW-308	Total/NA	Water	6020B	404278

Metals (Continued)

Analysis Batch: 404905 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-10	MW-309	Total/NA	Water	6020B	404278
310-268384-11	MW-310	Total/NA	Water	6020B	404278
310-268384-12	MW-311	Total/NA	Water	6020B	404278
310-268384-13	MW-311A	Total/NA	Water	6020B	404278
310-268384-14	MW-312	Total/NA	Water	6020B	404278
310-268384-15	MW-313	Total/NA	Water	6020B	404278
310-268384-16	Field Blank	Total/NA	Water	6020B	404278
MB 310-404278/1-A	Method Blank	Total/NA	Water	6020B	404278
LCS 310-404278/2-A	Lab Control Sample	Total/NA	Water	6020B	404278
310-268384-8 DU	MW-307	Total/NA	Water	6020B	404278

Analysis Batch: 405025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	6020B	404278
310-268384-2	MW-302	Total/NA	Water	6020B	404278
310-268384-3	MW-303	Total/NA	Water	6020B	404278
310-268384-4	MW-304	Total/NA	Water	6020B	404278
310-268384-5	MW-304A	Total/NA	Water	6020B	404278
310-268384-6	MW-305	Total/NA	Water	6020B	404278
310-268384-7	MW-306	Total/NA	Water	6020B	404278
310-268384-8	MW-307	Total/NA	Water	6020B	404278
310-268384-9	MW-308	Total/NA	Water	6020B	404278
310-268384-10	MW-309	Total/NA	Water	6020B	404278
310-268384-11	MW-310	Total/NA	Water	6020B	404278
310-268384-12	MW-311	Total/NA	Water	6020B	404278
310-268384-13	MW-311A	Total/NA	Water	6020B	404278
310-268384-14	MW-312	Total/NA	Water	6020B	404278
310-268384-15	MW-313	Total/NA	Water	6020B	404278
310-268384-16	Field Blank	Total/NA	Water	6020B	404278
MB 310-404278/1-A	Method Blank	Total/NA	Water	6020B	404278
LCS 310-404278/2-A	Lab Control Sample	Total/NA	Water	6020B	404278
310-268384-8 DU	MW-307	Total/NA	Water	6020B	404278

Prep Batch: 405112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	7470A	
310-268384-2	MW-302	Total/NA	Water	7470A	
310-268384-3	MW-303	Total/NA	Water	7470A	
310-268384-4	MW-304	Total/NA	Water	7470A	
310-268384-6	MW-305	Total/NA	Water	7470A	
310-268384-7	MW-306	Total/NA	Water	7470A	
310-268384-8	MW-307	Total/NA	Water	7470A	
310-268384-11	MW-310	Total/NA	Water	7470A	
MB 310-405112/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-405112/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-268384-4 MS	MW-304	Total/NA	Water	7470A	
310-268384-4 MSD	MW-304	Total/NA	Water	7470A	

Prep Batch: 405113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-14	MW-312	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 405113 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-16	Field Blank	Total/NA	Water	7470A	
MB 310-405113/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-405113/2-A	Lab Control Sample	Total/NA	Water	7470A	
310-268384-14 MS	MW-312	Total/NA	Water	7470A	
310-268384-14 MSD	MW-312	Total/NA	Water	7470A	

Analysis Batch: 405314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	7470A	405112
310-268384-2	MW-302	Total/NA	Water	7470A	405112
310-268384-3	MW-303	Total/NA	Water	7470A	405112
310-268384-4	MW-304	Total/NA	Water	7470A	405112
310-268384-6	MW-305	Total/NA	Water	7470A	405112
310-268384-7	MW-306	Total/NA	Water	7470A	405112
310-268384-8	MW-307	Total/NA	Water	7470A	405112
310-268384-11	MW-310	Total/NA	Water	7470A	405112
310-268384-14	MW-312	Total/NA	Water	7470A	405113
310-268384-16	Field Blank	Total/NA	Water	7470A	405113
MB 310-405112/1-A	Method Blank	Total/NA	Water	7470A	405112
MB 310-405113/1-A	Method Blank	Total/NA	Water	7470A	405113
LCS 310-405112/2-A	Lab Control Sample	Total/NA	Water	7470A	405112
LCS 310-405113/2-A	Lab Control Sample	Total/NA	Water	7470A	405113
310-268384-4 MS	MW-304	Total/NA	Water	7470A	405112
310-268384-4 MSD	MW-304	Total/NA	Water	7470A	405112
310-268384-14 MS	MW-312	Total/NA	Water	7470A	405113
310-268384-14 MSD	MW-312	Total/NA	Water	7470A	405113

General Chemistry

Analysis Batch: 404100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	SM 4500 H+ B	
310-268384-2	MW-302	Total/NA	Water	SM 4500 H+ B	
310-268384-3	MW-303	Total/NA	Water	SM 4500 H+ B	
310-268384-4	MW-304	Total/NA	Water	SM 4500 H+ B	
310-268384-6	MW-305	Total/NA	Water	SM 4500 H+ B	
310-268384-7	MW-306	Total/NA	Water	SM 4500 H+ B	
310-268384-8	MW-307	Total/NA	Water	SM 4500 H+ B	
310-268384-11	MW-310	Total/NA	Water	SM 4500 H+ B	
310-268384-14	MW-312	Total/NA	Water	SM 4500 H+ B	
310-268384-16	Field Blank	Total/NA	Water	SM 4500 H+ B	
LCS 310-404100/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-268384-4 DU	MW-304	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 404259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-2	MW-302	Total/NA	Water	SM 2540C	
310-268384-3	MW-303	Total/NA	Water	SM 2540C	
310-268384-4	MW-304	Total/NA	Water	SM 2540C	
310-268384-6	MW-305	Total/NA	Water	SM 2540C	
310-268384-7	MW-306	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 404259 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-8	MW-307	Total/NA	Water	SM 2540C	
310-268384-14	MW-312	Total/NA	Water	SM 2540C	
MB 310-404259/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-404259/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 404260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	SM 2540C	
310-268384-11	MW-310	Total/NA	Water	SM 2540C	
310-268384-16	Field Blank	Total/NA	Water	SM 2540C	
MB 310-404260/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-404260/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 404574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-14	MW-312	Total/NA	Water	SM 2320B	
310-268384-15	MW-313	Total/NA	Water	SM 2320B	
LCS 310-404574/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Rad

Prep Batch: 634751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	PrecSep-21	
310-268384-2	MW-302	Total/NA	Water	PrecSep-21	
310-268384-3	MW-303	Total/NA	Water	PrecSep-21	
310-268384-4	MW-304	Total/NA	Water	PrecSep-21	
310-268384-6	MW-305	Total/NA	Water	PrecSep-21	
310-268384-7	MW-306	Total/NA	Water	PrecSep-21	
310-268384-8	MW-307	Total/NA	Water	PrecSep-21	
310-268384-11	MW-310	Total/NA	Water	PrecSep-21	
310-268384-14	MW-312	Total/NA	Water	PrecSep-21	
310-268384-16	Field Blank	Total/NA	Water	PrecSep-21	
MB 160-634751/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-634751/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
310-268384-1 DU	MW-301	Total/NA	Water	PrecSep-21	

Prep Batch: 634752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	PrecSep_0	
310-268384-16	Field Blank	Total/NA	Water	PrecSep_0	
MB 160-634752/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-634752/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
310-268384-1 DU	MW-301	Total/NA	Water	PrecSep_0	

Prep Batch: 638365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-2	MW-302	Total/NA	Water	PrecSep_0	
310-268384-3	MW-303	Total/NA	Water	PrecSep_0	
310-268384-4	MW-304	Total/NA	Water	PrecSep_0	
310-268384-6	MW-305	Total/NA	Water	PrecSep_0	

QC Association Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Rad (Continued)

Prep Batch: 638365 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-7	MW-306	Total/NA	Water	PrecSep_0	
310-268384-8	MW-307	Total/NA	Water	PrecSep_0	
310-268384-11	MW-310	Total/NA	Water	PrecSep_0	
310-268384-14	MW-312	Total/NA	Water	PrecSep_0	
MB 160-638365/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-638365/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-638365/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Field Service / Mobile Lab

Analysis Batch: 405269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-268384-1	MW-301	Total/NA	Water	Field Sampling	
310-268384-2	MW-302	Total/NA	Water	Field Sampling	
310-268384-3	MW-303	Total/NA	Water	Field Sampling	
310-268384-4	MW-304	Total/NA	Water	Field Sampling	
310-268384-5	MW-304A	Total/NA	Water	Field Sampling	
310-268384-6	MW-305	Total/NA	Water	Field Sampling	
310-268384-7	MW-306	Total/NA	Water	Field Sampling	
310-268384-8	MW-307	Total/NA	Water	Field Sampling	
310-268384-9	MW-308	Total/NA	Water	Field Sampling	
310-268384-10	MW-309	Total/NA	Water	Field Sampling	
310-268384-11	MW-310	Total/NA	Water	Field Sampling	
310-268384-12	MW-311	Total/NA	Water	Field Sampling	
310-268384-13	MW-311A	Total/NA	Water	Field Sampling	
310-268384-14	MW-312	Total/NA	Water	Field Sampling	
310-268384-15	MW-313	Total/NA	Water	Field Sampling	

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-301
Date Collected: 10/25/23 17:25
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	405473	QTZ5	EET CF	11/08/23 10:25
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/03/23 23:51
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		10	405025	A6US	EET CF	11/06/23 13:00
Total/NA	Prep	7470A			405112	NFT2	EET CF	11/07/23 11:59
Total/NA	Analysis	7470A		1	405314	NFT2	EET CF	11/08/23 11:44
Total/NA	Analysis	SM 2540C		1	404260	D7CP	EET CF	10/30/23 15:41
Total/NA	Analysis	SM 4500 H+ B		1	404100	D7CP	EET CF	10/27/23 17:56
Total/NA	Prep	PrecSep-21			634751	KAC	EET SL	11/01/23 11:23
Total/NA	Analysis	903.0		1	638803	FLC	EET SL	11/30/23 16:57
Total/NA	Prep	PrecSep_0			634752	KAC	EET SL	11/01/23 11:34
Total/NA	Analysis	904.0		1	637733	FLC	EET SL	11/21/23 16:27
Total/NA	Analysis	Ra226_Ra228 Pos		1	639167	FLC	EET SL	12/01/23 16:17
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/25/23 17:25

Client Sample ID: MW-302
Date Collected: 10/25/23 11:00
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	405473	QTZ5	EET CF	11/08/23 11:02
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:06
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		10	405025	A6US	EET CF	11/06/23 13:03
Total/NA	Prep	7470A			405112	NFT2	EET CF	11/07/23 11:59
Total/NA	Analysis	7470A		1	405314	NFT2	EET CF	11/08/23 11:46
Total/NA	Analysis	SM 2540C		1	404259	D7CP	EET CF	10/30/23 15:35
Total/NA	Analysis	SM 4500 H+ B		1	404100	D7CP	EET CF	10/27/23 18:04
Total/NA	Prep	PrecSep-21			634751	KAC	EET SL	11/01/23 11:23
Total/NA	Analysis	903.0		1	638803	FLC	EET SL	11/30/23 16:57
Total/NA	Prep	PrecSep_0			638365	KAC	EET SL	11/27/23 11:24
Total/NA	Analysis	904.0		1	639351	FLC	EET SL	12/04/23 11:57
Total/NA	Analysis	Ra226_Ra228 Pos		1	639385	EMH	EET SL	12/04/23 16:01
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/25/23 11:00

Client Sample ID: MW-303
Date Collected: 10/25/23 12:30
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	405473	QTZ5	EET CF	11/08/23 11:15

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-303
Date Collected: 10/25/23 12:30
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:09
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		10	405025	A6US	EET CF	11/06/23 13:07
Total/NA	Prep	7470A			405112	NFT2	EET CF	11/07/23 11:59
Total/NA	Analysis	7470A		1	405314	NFT2	EET CF	11/08/23 11:49
Total/NA	Analysis	SM 2540C		1	404259	D7CP	EET CF	10/30/23 15:35
Total/NA	Analysis	SM 4500 H+ B		1	404100	D7CP	EET CF	10/27/23 17:59
Total/NA	Prep	PrecSep-21			634751	KAC	EET SL	11/01/23 11:23
Total/NA	Analysis	903.0		1	638803	FLC	EET SL	11/30/23 16:58
Total/NA	Prep	PrecSep_0			638365	KAC	EET SL	11/27/23 11:24
Total/NA	Analysis	904.0		1	639351	FLC	EET SL	12/04/23 11:57
Total/NA	Analysis	Ra226_Ra228 Pos		1	639385	EMH	EET SL	12/04/23 16:01
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/25/23 12:30

Client Sample ID: MW-304
Date Collected: 10/25/23 13:45
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	405473	QTZ5	EET CF	11/08/23 11:27
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:12
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		10	405025	A6US	EET CF	11/06/23 13:12
Total/NA	Prep	7470A			405112	NFT2	EET CF	11/07/23 11:59
Total/NA	Analysis	7470A		1	405314	NFT2	EET CF	11/08/23 11:51
Total/NA	Analysis	SM 2540C		1	404259	D7CP	EET CF	10/30/23 15:35
Total/NA	Analysis	SM 4500 H+ B		1	404100	D7CP	EET CF	10/27/23 18:01
Total/NA	Prep	PrecSep-21			634751	KAC	EET SL	11/01/23 11:23
Total/NA	Analysis	903.0		1	638803	FLC	EET SL	11/30/23 16:58
Total/NA	Prep	PrecSep_0			638365	KAC	EET SL	11/27/23 11:24
Total/NA	Analysis	904.0		1	639351	FLC	EET SL	12/04/23 11:57
Total/NA	Analysis	Ra226_Ra228 Pos		1	639385	EMH	EET SL	12/04/23 16:01
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/25/23 13:45

Client Sample ID: MW-304A
Date Collected: 10/25/23 13:38
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:15

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-304A
Date Collected: 10/25/23 13:38
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	405025	A6US	EET CF	11/06/23 13:30
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/25/23 13:38

Client Sample ID: MW-305
Date Collected: 10/25/23 14:55
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	405473	QTZ5	EET CF	11/08/23 11:40
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:18
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		10	405025	A6US	EET CF	11/06/23 13:32
Total/NA	Prep	7470A			405112	NFT2	EET CF	11/07/23 11:59
Total/NA	Analysis	7470A		1	405314	NFT2	EET CF	11/08/23 11:57
Total/NA	Analysis	SM 2540C		1	404259	D7CP	EET CF	10/30/23 15:35
Total/NA	Analysis	SM 4500 H+ B		1	404100	D7CP	EET CF	10/27/23 18:03
Total/NA	Prep	PrecSep-21			634751	KAC	EET SL	11/01/23 11:23
Total/NA	Analysis	903.0		1	638803	FLC	EET SL	11/30/23 16:58
Total/NA	Prep	PrecSep_0			638365	KAC	EET SL	11/27/23 11:24
Total/NA	Analysis	904.0		1	639351	FLC	EET SL	12/04/23 11:57
Total/NA	Analysis	Ra226_Ra228 Pos		1	639385	EMH	EET SL	12/04/23 16:01
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/25/23 14:55

Client Sample ID: MW-306
Date Collected: 10/25/23 16:00
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	405473	QTZ5	EET CF	11/08/23 12:18
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:21
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		10	405025	A6US	EET CF	11/06/23 13:37
Total/NA	Prep	7470A			405112	NFT2	EET CF	11/07/23 11:59
Total/NA	Analysis	7470A		1	405314	NFT2	EET CF	11/08/23 11:59
Total/NA	Analysis	SM 2540C		1	404259	D7CP	EET CF	10/30/23 15:35
Total/NA	Analysis	SM 4500 H+ B		1	404100	D7CP	EET CF	10/27/23 17:57
Total/NA	Prep	PrecSep-21			634751	KAC	EET SL	11/01/23 11:23
Total/NA	Analysis	903.0		1	638803	FLC	EET SL	11/30/23 16:58
Total/NA	Prep	PrecSep_0			638365	KAC	EET SL	11/27/23 11:24
Total/NA	Analysis	904.0		1	639351	FLC	EET SL	12/04/23 11:57
Total/NA	Analysis	Ra226_Ra228 Pos		1	639385	EMH	EET SL	12/04/23 16:01

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-306
Date Collected: 10/25/23 16:00
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/25/23 16:00

Client Sample ID: MW-307
Date Collected: 10/24/23 15:00
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	405473	QTZ5	EET CF	11/08/23 12:30
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:24
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	405025	A6US	EET CF	11/06/23 13:39
Total/NA	Prep	7470A			405112	NFT2	EET CF	11/07/23 11:59
Total/NA	Analysis	7470A		1	405314	NFT2	EET CF	11/08/23 12:01
Total/NA	Analysis	SM 2540C		1	404259	D7CP	EET CF	10/30/23 15:35
Total/NA	Analysis	SM 4500 H+ B		1	404100	D7CP	EET CF	10/27/23 17:54
Total/NA	Prep	PrecSep-21			634751	KAC	EET SL	11/01/23 11:23
Total/NA	Analysis	903.0		1	638803	FLC	EET SL	11/30/23 16:58
Total/NA	Prep	PrecSep_0			638365	KAC	EET SL	11/27/23 11:24
Total/NA	Analysis	904.0		1	639351	FLC	EET SL	12/04/23 11:56
Total/NA	Analysis	Ra226_Ra228 Pos		1	639385	EMH	EET SL	12/04/23 16:01
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/24/23 15:00

Client Sample ID: MW-308
Date Collected: 10/24/23 12:05
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:30
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	405025	A6US	EET CF	11/06/23 14:06
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/24/23 12:05

Client Sample ID: MW-309
Date Collected: 10/24/23 10:55
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:33
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	405025	A6US	EET CF	11/06/23 14:08
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/24/23 10:55

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-310
Date Collected: 10/26/23 13:15
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	405473	QTZ5	EET CF	11/08/23 12:43
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:49
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	405025	A6US	EET CF	11/06/23 14:10
Total/NA	Prep	7470A			405112	NFT2	EET CF	11/07/23 11:59
Total/NA	Analysis	7470A		1	405314	NFT2	EET CF	11/08/23 12:04
Total/NA	Analysis	SM 2540C		1	404260	D7CP	EET CF	10/30/23 15:41
Total/NA	Analysis	SM 4500 H+ B		1	404100	D7CP	EET CF	10/27/23 17:55
Total/NA	Prep	PrecSep-21			634751	KAC	EET SL	11/01/23 11:23
Total/NA	Analysis	903.0		1	638803	FLC	EET SL	11/30/23 16:59
Total/NA	Prep	PrecSep_0			638365	KAC	EET SL	11/27/23 11:24
Total/NA	Analysis	904.0		1	639351	FLC	EET SL	12/04/23 11:56
Total/NA	Analysis	Ra226_Ra228 Pos		1	639385	EMH	EET SL	12/04/23 16:01
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/26/23 13:15

Client Sample ID: MW-311
Date Collected: 10/24/23 13:25
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:52
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	405025	A6US	EET CF	11/06/23 14:38
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/24/23 13:25

Client Sample ID: MW-311A
Date Collected: 10/24/23 14:05
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:55
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	405025	A6US	EET CF	11/06/23 14:40
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/24/23 14:05

Client Sample ID: MW-312
Date Collected: 10/24/23 09:40
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	405473	QTZ5	EET CF	11/08/23 12:56

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: MW-312
Date Collected: 10/24/23 09:40
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 00:58
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	405025	A6US	EET CF	11/06/23 14:43
Total/NA	Prep	7470A			405113	NFT2	EET CF	11/07/23 12:02
Total/NA	Analysis	7470A		1	405314	NFT2	EET CF	11/08/23 12:14
Total/NA	Analysis	SM 2320B		1	404574	WZC8	EET CF	11/01/23 12:58
Total/NA	Analysis	SM 2540C		1	404259	D7CP	EET CF	10/30/23 15:35
Total/NA	Analysis	SM 4500 H+ B		1	404100	D7CP	EET CF	10/27/23 17:53
Total/NA	Prep	PrecSep-21			634751	KAC	EET SL	11/01/23 11:23
Total/NA	Analysis	903.0		1	638995	SCB	EET SL	12/01/23 07:09
Total/NA	Prep	PrecSep_0			638365	KAC	EET SL	11/27/23 11:24
Total/NA	Analysis	904.0		1	639351	FLC	EET SL	12/04/23 11:56
Total/NA	Analysis	Ra226_Ra228 Pos		1	639385	EMH	EET SL	12/04/23 16:01
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/24/23 09:40

Client Sample ID: MW-313
Date Collected: 10/26/23 12:15
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	405473	QTZ5	EET CF	11/08/23 13:08
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 01:01
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	405025	A6US	EET CF	11/06/23 14:45
Total/NA	Analysis	SM 2320B		1	404574	WZC8	EET CF	11/01/23 13:07
Total/NA	Analysis	Field Sampling		1	405269	BJ0R	EET CF	10/26/23 12:15

Client Sample ID: Field Blank
Date Collected: 10/26/23 13:30
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-16
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	405473	QTZ5	EET CF	11/08/23 13:21
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	404905	A6US	EET CF	11/04/23 01:04
Total/NA	Prep	3005A			404278	KCK5	EET CF	10/31/23 10:40
Total/NA	Analysis	6020B		1	405025	A6US	EET CF	11/06/23 14:47
Total/NA	Prep	7470A			405113	NFT2	EET CF	11/07/23 12:02
Total/NA	Analysis	7470A		1	405314	NFT2	EET CF	11/08/23 12:21
Total/NA	Analysis	SM 2540C		1	404260	D7CP	EET CF	10/30/23 15:41
Total/NA	Analysis	SM 4500 H+ B		1	404100	D7CP	EET CF	10/27/23 17:58

Lab Chronicle

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Client Sample ID: Field Blank

Date Collected: 10/26/23 13:30
Date Received: 10/27/23 16:35

Lab Sample ID: 310-268384-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			634751	KAC	EET SL	11/01/23 11:23
Total/NA	Analysis	903.0		1	638995	SCB	EET SL	12/01/23 07:09
Total/NA	Prep	PrecSep_0			634752	KAC	EET SL	11/01/23 11:34
Total/NA	Analysis	904.0		1	637733	FLC	EET SL	11/21/23 16:30
Total/NA	Analysis	Ra226_Ra228 Pos		1	639167	FLC	EET SL	12/01/23 16:17

Laboratory References:

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

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

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	11-15-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-24
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-24
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO000542021-14	07-31-24
Virginia	NELAP	10310	06-15-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	12-31-23

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

Method Summary

Client: SCS Engineers
Project/Site: ML Kapp 25223077

Job ID: 310-268384-1

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 2320B	Alkalinity	SM	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
Pos			
Field Sampling	Field Sampling	EPA	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401
EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

eurofins | Environment Testing America

310-268384 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 10-27-23 | TIME 1635 | Received By: CE

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 # 1 of 3

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? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE

Thermometer ID: X | Correction Factor (°C): 0.0

Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 0.8 | Corrected Temp (°C): 0.8

Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
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

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 10-27-23 | TIME 1635 | Received By: CE

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 # 2 of 3

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? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: X | Correction Factor (°C): 0.0

Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.6 | Corrected Temp (°C): 1.6

Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
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

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 10-27-23 | TIME 1635 | Received By: CC

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 # 3 of 3

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? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: X | Correction Factor (°C): 0.0

Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.1 | Corrected Temp (°C): 1.1

Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
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

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Tyler Stirling	Lab PM: Sandie Fredrick	Carrier Tracking No(s):	COC No:
Client Contact: Meghan Blodgett	Phone: 515-505-2716	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: IA	Page: Page 1 of 2
Company: SCS Engineers	PWSID:			Job #:
Address: 2830 Dairy Drive	Due Date Requested:			
City: Madison	TAT Requested (days):			
State, Zip: WI 53718	Compliance Project: Δ Yes Δ No			
Phone: 608-224-2830	PO #: 25223077			
Email: mblodgett@scsengineers.com	WO #:			
Project Name: ML Kapp 25223077	Project #: 25223077			
Site: Clinton IA	SSOW#:			

Analysis Requested

Preservation Codes

A - HCL	M Hexane
B NaOH	N None
C Zn Acetate	O AsNaO2
D Nitric Acid	P - Na2O4S
E - NaHSO4	Q Na2SO3
F MeOH	R Na2S2O3
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:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 Metals total (Sb As Ba Be B Ca Cd Cr Co Fe Pb Li Mo Se Tl)	6020 Metals total (Sb As Ba Be B Ca Cd Cr Co Fe Pb Li Mg Mn Mo K Se Na Tl)	6020 Metals total (As Fe Li Mo)	6020 Metals Total (As Ca Fe Li Mn Mg Mo Na K)	7470 Mercury Total	TDS and pH	Chloride Fluoride Sulfate	Chloride Sulfate	EPA 903/904 Radium 226 + 228	Bicarbonate & carbonate alkalinity	Total Number of containers	Special Instructions/Note
			Preservation Code				D	D	D	D	D	I	I	I	I	I		
MW-301	10/25/23	17 25	G	W	N		X				X	X	X		X			
MW-302	10/25/23	11 00	G	W	N		X				X	X	X		X			
MW-303	10/25/23	12 30	G	W	N		X				X	X	X		X			
MW-304	10/25/23	13 45	G	W	N		X				X	X	X		X			
MW-304A	10/25/23	13 38	G	W	N				X									
MW-305	10/25/23	14 55	G	W	N		X				X	X	X		X			
MW-306	10/25/23	16 00	G	W	N		X				X	X	X		X			
MW-307	10/24/23	15 00	G	W	N		X				X	X	X		X			
MW-308	10/24/23	12 05	G	W	N				X									
MW-309	10/24/23	10 55	G	W	N				X									
MW-310	10/26/23	13 15	G	W	N		X				X	X	X		X			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ 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	Date/Time	Company	Received by	Date/Time	Company
1	Tyler S	10/27/23 2:00	SCS	MC	10-27-23 1635	
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks

Ver: 01/16/2019

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Tyler Stirling	Lab PM: Sandie Fredrick	Carrier Tracking No(s):	COC No:
Client Contact: Meghan Blodgett	Phone: 515-505-2716	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: IA	Page: Page 2 of 2
Company: SCS Engineers	PWSID:			Job #:
Address: 2830 Dairy Drive	Due Date Requested:			
City: Madison	TAT Requested (days):			
State Zip: WI 53718	Compliance Project: Δ Yes Δ No			
Phone: 608-224-2830	PO #: 25223077			
Email: mblodgett@scsengineers.com	WO #:			
Project Name: ML Kapp 25223077	Project #: 25223077			
Site: Clinton IA	SSOW#:			

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
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:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 Metals Total (Sb As Ba Be B Ca Cd Cr Co Fe Pb Li Mo Se Tl)	6020 Metals Total (Sb As Ba Be B Ca Cd Cr Co Fe Pb Li Mg Mn Mo K Se Na Tl)	6020 Metals Total (As Fe Li Mo)	6020 Metals Total (As Ca Fe Li Mn Mg Mo Na K)	7470 Mercury Total	TDS and pH	Chloride Fluoride Sulfate	Chloride Sulfate	EPA 903/904 Radium 226 + 228	Bicarbonate & carbonate alkalinity	Total Number of containers	Special Instructions/Note
			Preservation Code				D	D	D	D		I	I	I	I	I		
MW-311	10/24/23	13 25	G	W	N				X									
MW-311A	10/24/23	14 05	G	W	N				X									
MW-312	10/24/23	9 40	G	W	N			X			X	X	X		X	X		
MW-313	10/26/23	12 15	G	W	N					X				X		X		
Field Blank	10/26/23	13 30	G	W	N		X				X	X	X		X			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ 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	Date/Time	Company	Received by	Date/Time	Company
	Tyler Stirling	10/27/23 2 00	SCS	[illegible]	10 27 23 1635	
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ 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 #25223077 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	MW-312	MW-313	Field Blank	TOTAL
CCR Rule Parameters	Appendix III Parameters (total/ unfiltered)	Boron	X	X	X	X		X	X	X			X			X		X	10
		Calcium	X	X	X	X		X	X	X			X			X	X	X	11
		Chloride	X	X	X	X		X	X	X			X			X	X	X	11
		Fluoride	X	X	X	X		X	X	X			X			X		X	10
		pH	X	X	X	X		X	X	X			X			X		X	10
		Sulfate	X	X	X	X		X	X	X			X			X	X	X	11
		TDS	X	X	X	X		X	X	X			X			X		X	10
	Appendix IV Parameters (total/ unfiltered)	Antimony	X	X	X	X		X	X	X			X			X		X	10
		Arsenic	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	16
		Barium	X	X	X	X		X	X	X			X			X		X	10
		Beryllium	X	X	X	X		X	X	X			X			X		X	10
		Cadmium	X	X	X	X		X	X	X			X			X		X	10
		Chromium	X	X	X	X		X	X	X			X			X		X	10
		Cobalt	X	X	X	X		X	X	X			X			X		X	10
		Fluoride	X	X	X	X		X	X	X			X			X		X	10
		Lead	X	X	X	X		X	X	X			X			X		X	10
		Lithium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	16
		Mercury	X	X	X	X		X	X	X			X			X		X	10
		Molybdenum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	16
		Selenium	X	X	X	X		X	X	X			X			X		X	10
		Thallium	X	X	X	X		X	X	X			X			X		X	10
		Radium	X	X	X	X		X	X	X			X			X		X	10
	Field Parameters	Groundwater Elevation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		pH (field)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Well Depth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Specific Conductance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Dissolved Oxygen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		ORP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Temperature	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Turbidity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Color	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Odor	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
Additional Parameters	Total (Unfiltered)	Alkalinity Carbonate														X	X		2
		Alkalinity Bicarbonate														X	X		2
		Iron	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		15
		Magnesium														X	X		2
		Manganese														X	X		2
		Potassium														X	X		2
		Sodium														X	X		2

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 310-66866.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Iowa	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Iowa		Job #: 310-268384-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 11/9/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: ML Kapp 25223077	Project #: 31011020			
Site:	SSOW#:			

Analysis Requested

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, 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, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 Radium-226 (GFPC)	904.0/PrecSep_0 Radium-228 (GFPC)	Ra226_228GFPC_P/ Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-301 (310-268384-1)	10/25/23	17:25 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-302 (310-268384-2)	10/25/23	11:00 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-303 (310-268384-3)	10/25/23	12:30 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-304 (310-268384-4)	10/25/23	13:45 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-305 (310-268384-6)	10/25/23	14:55 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-306 (310-268384-7)	10/25/23	16:00 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-307 (310-268384-8)	10/24/23	15:00 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-310 (310-268384-11)	10/26/23	13:15 Central		Water			X	X	X	2	DO NOT SHIP ON ICE TO ST. LOUIS
MW-312 (310-268384-14)	10/24/23	09:40 Central		Water			X	X	X	2	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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/31/23 1010			10/31/23 0910	ETNSL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	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

eurofins Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fredrick, Sandie	Carrier Tracking No(s):	COC No: 310-66866.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: Sandra.Fredrick@et.eurofinsus.com	State of Origin: Iowa	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Iowa		Job #: 310-268384-1
Address: 13715 Rider Trail North, ,	Due Date Requested: 11/9/2023			
City: Earth City	TAT Requested (days):			
State, Zip: MO, 63045				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:			
Email:	WO #:			
Project Name: ML Kapp 25223077	Project #: 31011020			
Site:	SSOW#:			

Analysis Requested

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, 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, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 Radium-226 (GFPC)	904.0/PrecSep_0 Radium-228 (GFPC)	Ra226_228GFPC_PI Combined Radium-226 and Radium-228	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
Field Blank (310-268384-16)	10/26/23	13:30 Central		Water			X	X	X	1	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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: SW 10/31/23

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	10/30/23 1615		[signature]	~~10/30/23~~ 10/31/23 0910	EMSR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 10/31/23	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-268384-1

Login Number: 268384
List Number: 1
Creator: Costello, Mackenzie K

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.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <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: 310-268384-1

Login Number: 268384
List Number: 2
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis
List Creation: 10/31/23 10:26 AM

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 25223077

Job ID: 310-268384-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (30-110)
310-268384-1	MW-301	89.4
310-268384-1 DU	MW-301	86.9
310-268384-2	MW-302	95.8
310-268384-3	MW-303	90.4
310-268384-4	MW-304	88.9
310-268384-6	MW-305	94.8
310-268384-7	MW-306	92.3
310-268384-8	MW-307	88.4
310-268384-11	MW-310	93.3
310-268384-14	MW-312	95.6
310-268384-16	Field Blank	94.3
LCS 160-634751/2-A	Lab Control Sample	95.1
MB 160-634751/1-A	Method Blank	97.3

Tracer/Carrier Legend

Ba = Barium

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
310-268384-1	MW-301	89.4	80.7
310-268384-1 DU	MW-301	86.9	77.8
310-268384-2	MW-302	81.2	84.1
310-268384-3	MW-303	95.9	83.0
310-268384-4	MW-304	100	83.4
310-268384-6	MW-305	90.5	86.7
310-268384-7	MW-306	97.2	85.6
310-268384-8	MW-307	96.7	84.9
310-268384-11	MW-310	91.5	91.6
310-268384-14	MW-312	101	87.5
310-268384-16	Field Blank	94.3	86.7
LCS 160-634752/2-A	Lab Control Sample	95.1	87.5
LCS 160-638365/2-A	Lab Control Sample	98.5	76.3
LCSD 160-638365/3-A	Lab Control Sample Dup	101	60.9
MB 160-634752/1-A	Method Blank	97.3	85.2
MB 160-638365/1-A	Method Blank	97.9	80.0

Tracer/Carrier Legend

Ba = Barium
Y = Y Carrier

Groundwater Monitoring Results - Field Parameters
M.L. Kapp Generating Station / SCS Engineers Project #25223077.00
October 2023

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	10/25/23 17:25	576.21	15.4	6.53	0.84	1,074	6.8	5.26
MW-302	10/25/23 11:00	573.31	15.0	7.15	0.41	1,084	30.1	6.02
MW-303	10/25/23 12:30	574.45	14.4	7.05	0.37	1,086	-69.1	78.11
MW-304	10/25/23 13:45	573.43	13.4	6.76	0.09	1,260	11.4	6.32
MW-304A	10/25/23 13:38	573.53	13.7	7.03	1.26	686	-39.1	10.05
MW-305	10/25/23 14:55	573.29	14.9	7.18	0.38	1,244	-106.6	6.38
MW-306	10/25/23 16:00	574.58	13.9	6.88	1.66	1,825	40.8	3.33
MW-307	10/24/23 15:00	590.47	16.2	6.34	0.37	1,401	15.4	4.64
MW-308	10/24/23 12:05	573.76	18.8	6.46	1.14	784	44.7	5.22
MW-309	10/24/23 10:55	571.70	20.8	6.70	0.78	1,289	-148.9	6.19
MW-310	10/26/23 13:15	589.30	14.1	6.95	0.37	1,164	27.8	3.30
MW-311	10/24/23 13:25	572.75	16.2	7.20	2.16	833	24.9	10.01
MW-311A	10/24/23 14:05	573.05	18.4	7.10	1.33	686	24.9	4.82
MW-312	10/24/23 9:40	573.84	14.6	7.13	0.69	621	60.0	3.83
MW-313	10/26/23 12:15	573.34	14.0	7.23	1.23	845	-110.4	34.81

Abbreviations:
mg/L = milligrams per liter
mV = millivolts
-- = Not measured
amsl = above mean sea level

Notes:
None

Created by: NDK Date: 10/6/2021
Last revision by: BAS Date: 11/6/2023
Checked by: RM Date: 11/6/2023

C:\Users\hld0\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\USG3GGGC\[2310_M.L. Kapp_CCR_Field.xlsx]GW Field Parameters

Appendix D

Historical Monitoring Results

MW-301

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-301
Number of Sampling Dates: 20

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	5/2/2023	10/25/2023
Boron	ug/L	15700	12500	2280	2040	3620	10900	13000	13800	15000	13000	12000	13000	10000	13000	14000	13000	12000	12000	11000	12000
Calcium	mg/L	131	123	105	118	114	121	140	137	150	140	140	110	130	130	130	130	120	110	110	120
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	63	79
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	6.51	6.53
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	0.51	<0.38
Sulfate	mg/L	475	456	61	54.3	130	306	418	450	360	350	320	360	250	310	250	310	240	230	220	200
Total Dissolved Solids	mg/L	776	833	567	611	608	762	892	826	820	840	760	790	720	820	690	630	660	680	610	660
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	<2	<1
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	<1.1	0.75
Barium	ug/L	72.9	116	167	193	165	208	149	119	--	--	120	72	140	76	79	77	71	64	64	75
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	<0.66	<0.33
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	0.22	0.27
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	<2.2	1.9
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	3.5	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	<0.48	<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	8.2	<25
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	<0.14	<0.14
Molybdenum	ug/L	345	251	33.1	31.1	42.8	237	294	242	--	--	310	300	250	510	430	430	380	490	480	550
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	<2.8	<1.4
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	<0.52	1.3
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	0.807	1.54
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	0.228	0.197
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	0.579	1.35
Field Specific Conductance	umhos/cm	930	1060	902	953	780	690	725	938	1139	1058	1026	1054	1069	979	991	1012	885	840	1006	1074
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	11.3	15.4
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	586.13	576.21
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	8.1	5.26
Collected By		--	0	0	0	--	--	--	0	--	--	--	--	--	--	--	--	--	--	--	--
Collected Date		--	--	--	7	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
Collected Time		--	--	--	14	--	--	--	12	--	--	--	--	--	--	--	--	--	--	--	--
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	49.2	6.8
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	0.02	0.84
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	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	870	800
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	--	--

MW-302

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-302
Number of Sampling Dates: 20

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	5/1/2023	10/25/2023
Boron	ug/L	5620	4720	4100	4950	5190	6300	5940	6420	4700	4600	6100	5900	4700	5700	5500	6200	5800	6300	5500	6700
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	140	140
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	8.1	13
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	7.16	7.15
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	<0.38	<0.38
Sulfate	mg/L	221	199	201	208	215	203	214	211	200	180	240	250	230	260	210	260	240	270	230	410
Total Dissolved Solids	mg/L	430	494	426	442	467	505	534	564	620	510	530	550	490	580	580	510	590	640	590	770
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	<2	<1
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	5.2	7.8
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	75	97
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	<0.66	<0.33
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	<0.2	0.13
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	<2.2	1.4
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	<0.34	0.31
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	<0.48	<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	46	<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	<0.14	<0.14
Molybdenum	ug/L	281	235	274	260	212	185	214	127	--	--	260	280	360	320	170	200	140	170	98	270
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	36	1.4
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	<0.52	<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	0.338	0.385
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	0.0574	0.198
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	0.281	0.187
Field Specific Conductance	umhos/cm	492	687	633	641	11	495	503	713	870	714	727	781	785	743	834	832	815	759	883	1084
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	10.3	15
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	586.44	573.31
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	3.73	6.02
Collected By		--	0	0	0	--	--	--	0	--	--	--	--	--	--	--	--	--	--	--	--
Collected Date		--	--	--	7	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
Collected Time		--	--	--	12	--	--	--	13	--	--	--	--	--	--	--	--	--	--	--	--
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	193.4	30.1
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	1.61	0.41
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	7.2	7.5
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	<72	<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	--	--

MW-303

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-303
Number of Sampling Dates: 20

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	11/1/2022	5/2/2023	10/25/2023
Boron	ug/L	2510	3080	3500	1910	3980	3080	3720	3780	2600	2900	3200	4000	4200	3800	5200	5300	5800	5800	2400	4100
Calcium	mg/L	72	84.5	109	69.3	129	116	213	198	150	200	110	130	220	71	170	70	230	85	210	80
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	14	19
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	6.73	7.05
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	<0.38	<0.38
Sulfate	mg/L	256	308	379	243	459	378	644	659	440	480	350	380	590	260	470	240	600	290	680	310
Total Dissolved Solids	mg/L	438	562	690	452	753	703	1080	968	790	1000	620	760	1000	510	920	430	1300	720	1000	660
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	<1	<1
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	44	9.9
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	97	61
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	<0.33	<0.33
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	0.19	<0.1
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	1.2	<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	1.8	0.64
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	<0.24	<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	30	32
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	<0.14	<0.14
Molybdenum	ug/L	135	152	122	145	110	127	55.9	67.1	--	--	140	96	74	180	150	190	96	200	110	250
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	5.2	<1.4
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	<0.26	<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	1.15	0.542
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	0.268	0.132
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	0.88	0.41
Field Specific Conductance	umhos/cm	608.7	797	927	706	872	668	948	1092	1024	1220	861	1057	1484	723	1306	768	1592	894	1431	1086
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	11.1	14.4
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	585.5	574.45
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	81.2	78.11
Collected By		--	0	0	0	--	--	--	0	--	--	--	--	--	--	--	--	--	--	--	--
Collected Date		--	--	--	7	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
Collected Time		--	--	--	13	--	--	--	14	--	--	--	--	--	--	--	--	--	--	--	--
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	51.7	-69.1
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	0.71	0.37
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	7	7.3
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	28000	1500
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	--	--

MW-304

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-304

Number of Sampling Dates: 21

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	5/2/2023	10/25/2023
Boron	ug/L	10900	6880	8530	8330	8820	9140	8920	9920	10000	10000	10000	10000	8900	--	9400	11000	8900	10000	11000	8700	8800
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	81	110
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	27	21
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	6.93	6.76
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	<0.38	<0.38
Sulfate	mg/L	213	188	186	177	206	286	349	319	200	330	330	310	290	--	340	490	300	380	370	260	390
Total Dissolved Solids	mg/L	441	419	443	443	459	601	645	602	440	660	660	620	590	--	660	920	520	830	710	520	850
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	<2	<1
Arsenic	ug/L	3.1	3	3.7	4.5	3.3	4.5	3.8	3.1	--	--	4.5	3.7	18	4.4	4.5	6.6	3.1	3.3	3.5	4.1	2.4
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	83	110
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	<0.66	<0.33
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	<0.2	0.34
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	<2.2	<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	0.53	1.6
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	<0.48	<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	<5	<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	<0.14	<0.14
Molybdenum	ug/L	1530	1260	807	828	788	790	778	640	--	--	820	950	1200	--	930	650	1200	500	880	740	900
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	<2.8	<1.4
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	<0.52	<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	1.47	0.364
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	0.652	0.215
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	0.814	0.149
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	844	1260
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	11.4	13.4
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	586.17	573.43
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	40	6.32
Collected By		--	0	0	0	--	--	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--
Collected Date		--	--	--	7	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--
Collected Time		--	--	--	13	--	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	--
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	12.1	11.4
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	0.13	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	7.2	7
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	1700	270
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	--	--

MW-304A

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-304A
Number of Sampling Dates: 7

Parameter Name	Units	2/22/2021	4/5/2021	10/18/2021	4/18/2022	11/2/2022	5/2/2023	10/25/2023
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	7.04	7.03
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	1.4	1.3
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	<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	3.4	42

Location ID: MW-304A

Number of Sampling Dates: 7

Parameter Name	Units	2/22/2021	4/5/2021	10/18/2021	4/18/2022	11/2/2022	5/2/2023	10/25/2023
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	682	686
Field Temperature	deg C	12.1	12.6	13.2	11.2	12.4	11.9	13.7
Groundwater Elevation	feet	573.91	577.35	573.41	576.65	573.47	586.14	573.53
Turbidity	NTU	33.1	2.31	9.6	6.7	1.06	2.62	10.05
Field Oxidation Potential	millivolts	-153.5	-11.2	10.2	83.9	15.8	1.8	-39.1
Oxygen, Dissolved	mg/L	0.23	0.45	0.15	0.17	0.01	1.99	1.26
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	470	250
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	--	--

MW-305

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-305
Number of Sampling Dates: 21

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	5/2/2023	10/25/2023
Boron	ug/L	16800	14000	16400	11900	16500	18500	18800	18700	1600	17000	20000	15000	15000	16000	16000	16000	13000	16000	14000	14000	9000
Calcium	mg/L	131	122	148	88.4	137	150	172	167	170	--	210	160	160	190	190	190	130	200	160	210	130
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	12	20
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	6.58	7.18
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	<0.38	<0.38
Sulfate	mg/L	623	468	673	341	472	<0.24	689	619	480	--	690	620	590	690	760	710	470	810	600	650	480
Total Dissolved Solids	mg/L	885	872	1080	690	941	1040	1140	1110	1100	--	1300	1100	1100	1200	1300	1200	810	1200	1100	1200	990
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	<2	<1
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	<1.1	1.7
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	87	79
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	<0.66	<0.33
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	0.2	0.16
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	<2.2	<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	0.77	0.39
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	<0.48	<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	15	<25
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	<0.14	<0.14
Molybdenum	ug/L	613	671	724	886	666	670	663	468	--	--	--	650	680	720	580	650	810	560	690	380	790
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	7.8	<1.4
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	<0.52	<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	0.0603	0.465
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	0.0198	0.233
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	0.0405	0.233
Field Specific Conductance	umhos/cm	934	1155	1405	954	1069	950	958	1272	1425	1590	1604	1391	1415	1545	1354	1585	1224	1438	1178	1605	1244
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	10.7	14.9
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	586.15	573.29
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	13.4	6.38
Collected By		--	0	0	0	--	--	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--
Collected Date		--	--	--	7	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--
Collected Time		--	--	--	14	--	--	--	16	--	--	--	--	--	--	--	--	--	--	--	--	--
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	65.8	-106.6
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	0.02	0.38
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	6.9	7.3
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	760	1500
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	--	--

MW-306

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-306
Number of Sampling Dates: 20

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	5/2/2023	10/25/2023
Boron	ug/L	17600	18600	15600	17900	17000	17600	17300	18900	14000	12000	15000	20000	22000	14000	15000	15000	9300	10000	3900	13000
Calcium	mg/L	168	164	165	155	154	141	152	154	150	160	130	120	130	150	150	160	210	160	120	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	99	250
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	7.4/7.05	7.24	6.88	6.93	6.79	6.88
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	<0.38	<0.38
Sulfate	mg/L	488	600	396	454	419	416	452	457	340	270	390	500	560	340	270	320	170	180	72	200
Total Dissolved Solids	mg/L	1100	1130	1080	1090	1020	1030	1110	1070	1000	910	960	1100	1200	1000	970	1000	1100	1200	660	1100
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	<1	<1
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	<0.53	<0.53
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	45	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	<0.33	<0.33
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	<0.1	<0.1
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	<1.1	<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	<0.17	<0.17
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	0.48	<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	26	120
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	<0.14	<0.14
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	27	63
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	8.5	<1.4
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	<0.26	<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	0.193	0.251
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	-0.0355	0.0979
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	0.193	0.153
Field Specific Conductance	umhos/cm	1355	1511	1498	1431	15.4	936	980	1344	1499	1290	1304	1557	1683	1427	1461	1594	1588	1508	1168	1825
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	10.1	13.9
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	586.28	574.58
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	4.07	3.33
Collected By		--	0	0	0	--	--	--	0	--	--	--	--	--	--	--	--	--	--	--	--
Collected Date		--	--	--	7	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--
Collected Time		--	--	--	15	--	--	--	16	--	--	--	--	--	--	--	--	--	--	--	--
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	135.8	40.8
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	4.92	1.66
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	7.1	7.1
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	<36	46
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	--	--

MW-307

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-307
Number of Sampling Date12

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	5/2/2023	10/24/2023
Boron	ug/L	280	<80	130	<58	<230	<58	<58	<58	<58	63	170	<76
Calcium	mg/L	260	260	230	230	230	210	240	200	180	170	260	170
Chloride	mg/L	53	55	52	53	63	77	82	71	64	62	64	60
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	6.59	6.34
Fluoride	mg/L	<0.23	<0.23	<0.23	<0.28	<0.28	<0.28	<0.28	<0.28	<0.22	<0.22	<0.38	<0.38
Sulfate	mg/L	15	17	21	19	19	19	18	22	23	24	26	23
Total Dissolved Solids	mg/L	1100	980	940	860	930	750	710	770	680	770	1000	720
Antimony	ug/L	<0.51	<0.51	--	<1.1	<1.1	<1.1	<1.1	<1.1	<0.69	<0.69	<1	<1
Arsenic	ug/L	1.7	1.1	0.92	<0.75	0.96	<0.75	0.98	0.99	1	1.1	3.1	0.99
Barium	ug/L	320	330	330	310	310	310	290	330	290	320	360	410
Beryllium	ug/L	<0.27	<0.27	--	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.33	<0.33
Cadmium	ug/L	0.098	0.13	0.13	0.21	<0.2	0.11	0.083	0.085	0.07	<0.055	0.33	<0.1
Chromium	ug/L	<1.1	<1.1	--	<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	6.8	6.8
Lead	ug/L	0.12	<0.11	<0.11	<0.21	<0.21	<0.21	<0.21	<0.21	<0.24	<0.24	0.37	<0.24
Lithium	ug/L	<2.5	<2.5	3	3.3	2.5	<2.5	<2.5	4.8	5.3	7	<2.5	6.5
Mercury	ug/L	<0.1	<0.1	--	<0.15	<0.15	<0.15	<0.15	<0.15	<0.11	<0.11	<0.14	<0.14
Molybdenum	ug/L	2.5	<1.1	<1.1	<1.3	3.4	<1.3	<1.3	<1.3	<1.2	5.1	2.2	4.5
Selenium	ug/L	<1	<1	--	<0.96	<0.96	<0.96	<0.96	<0.96	1.1	<0.96	<1.4	<1.4
Thallium	ug/L	<0.26	<0.26	--	<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	0.433	0.705
Radium-226	pCi/L	0.381	0.21	0.177	3.28	0.227	0.331	0.111	1.2	0.109	0.322	0.266	0.25
Radium-228	pCi/L	0.461	0.455	0.447	0.18	0.313	0.298	0.127	0.262	0.44	0.541	0.167	0.455
Field Specific Conductance	umhos/cm	1911	1759	1590	1563	1627	1565	1712	1501	1199	1096	1938	1401
Field Temperature	deg C	14.2	15.6	15.7	12.46	10.3	12.4	16	15.3	9.8	14.7	9.8	16.2
Groundwater Elevation	feet	593.85	593.06	592.77	592.12	594.32	593.33	592.65	590.84	592.46	589.14	593.89	590.47
Turbidity	NTU	3.5	6.61	2.68	0	0.77	0.71	0	13.1	6.6	2.11	3.12	4.64
Field Oxidation Potential	millivolts	-0.4	31.8	22.4	55.4	62.7	90	69.5	50.4	11.2	66.5	-30.8	15.4
Oxygen, Dissolved	mg/L	0.39	0.13	0.09	0.2	0.17	0.2	0.74	1.15	0.12	0.08	0.03	0.37
pH at 25 Degrees C	Std. Units	6.7	6.9	7.4	7.7	--	--	--	6.7	6.7	6.8	6.9	6.7
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	4200	380
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	--	--

MW-308

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-308
Number of Sampling Date6:

Parameter Name	Units	6/17/2021	10/19/2021	4/19/2022	11/2/2022	5/3/2023	10/24/2023
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	6.26	6.46
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	<0.53	0.58
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	<2.5	<2.5
Mercury	ug/L	<0.15	<0.15	<0.11	<0.11	--	--
Molybdenum	ug/L	<1.3	<1.3	<1.2	1.3	1.7	1.6
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	653	784
Field Temperature	deg C	12.1	16.2	9.8	16	10.4	18.8
Groundwater Elevation	feet	576.05	573.43	576.93	573.8	585.9	573.76
Turbidity	NTU	48.2	22.7	6.06	12.5	8.45	5.22
Field Oxidation Potential	millivolts	101	61.8	103.2	137.7	165.1	44.7
Oxygen, Dissolved	mg/L	0.3	1.06	1.02	0.21	3.34	1.14
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	400	220
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	--	--	--	--	--

MW-309

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-309
Number of Sampling Date6:

Parameter Name	Units	6/17/2021	10/19/2021	4/19/2022	11/2/2022	5/3/2023	10/24/2023
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	6.62	6.7
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	5.6	2.4
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	2.6	<2.5
Mercury	ug/L	<0.15	<0.15	<0.11	<0.11	--	--
Molybdenum	ug/L	<1.3	<1.3	<1.2	1.4	<0.91	<0.91
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	1528	1289
Field Temperature	deg C	18	19	9.1	15.8	10.4	20.8
Groundwater Elevation	feet	571.84	571.64	576.75	--	585.33	571.7
Turbidity	NTU	47.2	27.3	5.33	2.89	4.49	6.19
Field Oxidation Potential	millivolts	-91	124	-124.3	-126.9	-171.5	-148.9
Oxygen, Dissolved	mg/L	0.3	0.16	0.16	0	0.02	0.78
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	43000	29000
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	--	--	--	--	--

MW-310

Name: IPL - M.L. Kapp Generating Station

Location ID:	MW-310							
Number of Sampling Date7:								
Parameter Name	**Units**	**10/5/2021**	**10/19/2021**	**2/21/2022**	**4/19/2022**	**11/3/2022**	**5/4/2023**	**10/26/2023**
Boron	ug/L	1000	1100	1000	1000	900	1000	1000
Calcium	mg/L	100	110	100	110	110	110	110
Chloride	mg/L	81	83	78	68	70	74	67
Field pH	Std. Units	7.2	7.17	7.21	7.04	6.88	6.69	6.95
Fluoride	mg/L	<0.28	<0.28	<0.22	<0.22	<0.22	<0.38	<0.38
Sulfate	mg/L	120	120	120	110	120	130	120
Total Dissolved Solids	mg/L	640	610	590	630	640	620	660
Antimony	ug/L	<1.1	<1.1	<0.69	<0.69	<0.69	<1	<1
Arsenic	ug/L	<0.75	<0.75	<0.75	<0.75	<0.75	<0.53	<0.53
Barium	ug/L	110	96	55	50	39	43	43
Beryllium	ug/L	<0.27	<0.27	<0.27	<0.27	<0.27	<0.33	<0.33
Cadmium	ug/L	<0.051	<0.051	<0.055	<0.055	<0.055	<0.1	<0.1
Chromium	ug/L	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Cobalt	ug/L	0.67	0.68	0.43	0.48	0.43	0.45	0.55
Lead	ug/L	<0.21	<0.21	<0.24	<0.24	<0.24	0.4	<0.24
Lithium	ug/L	4	3	2.8	2.7	3.1	2.9	3.9
Mercury	ug/L	<0.15	<0.15	<0.11	<0.11	<0.11	<0.14	<0.14
Molybdenum	ug/L	2	<1.3	<1.2	1.5	<1.2	<0.91	<0.91
Selenium	ug/L	<0.96	<0.96	<0.96	1.7	<0.96	<1.4	<1.4
Thallium	ug/L	<0.26	<0.26	<0.26	0.26	<0.26	<0.26	<0.26
Total Radium	pCi/L	1.08	0.783	0.213	0.317	0.384	0.12	0.366
Radium-226	pCi/L	0.206	0.471	0.213	0.135	0.159	0.12	0.0854
Radium-228	pCi/L	0.878	0.313	-0.0116	0.182	0.225	-0.119	0.281
Field Specific Conductance	umhos/cm	1141	1150	1060	1004	943	1115	1164
Field Temperature	deg C	14.3	13.9	12.4	12.2	13.7	12.9	14.1
Groundwater Elevation	feet	--	589.55	589.1	590.2	578.18	589.98	589.3
Turbidity	NTU	2.74	20.8	2	4.91	1.49	4.8	3.3
Field Oxidation Potential	millivolts	53.7	83.5	48.8	-35.3	130.3	44.1 mV	27.8
Oxygen, Dissolved	mg/L	1.52	0.28	0.3	0.29	0.05	0.41	0.37
pH at 25 Degrees C	Std. Units	7.3	7.3	7.2	7.1	7.3	7.2	7.2
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	43	<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	--	--

MW-311

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-311
Number of Sampling Date7:

Parameter Name	Units	12/30/2021	2/21/2022	4/19/2022	8/22/2022	11/3/2022	5/3/2023	10/24/2023
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	6.58	7.2
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	<0.53	<0.53
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	5.5	69
Mercury	ug/L	<0.15	<0.11	<0.11	--	<0.11	--	--
Molybdenum	ug/L	30	31	25	29	26	18	30
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	903	833
Field Temperature	deg C	12.4	12	11.4	13.8	14.2	10.6	16.2
Groundwater Elevation	feet	572.33	572.14	574.77	574.51	572.54	583.83	572.75
Turbidity	NTU	2.88	3	5.94	1.9	1.94	44.9	10.01
Field Oxidation Potential	millivolts	6.6	100.9	111.8	89.7	149	90.3	24.9
Oxygen, Dissolved	mg/L	3.33	3.39	2.43	4.89	2.72	7.12	2.16
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	75	<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	--	--

MW-311

Name: IPL - M.L. Kapp Generating Station

Location ID: MW-311A
Number of Sampling Date7:

Parameter Name	Units	12/30/2021	2/21/2022	4/19/2022	8/22/2022	11/3/2022	5/3/2023	10/24/2023
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	7.58	7.1
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	<0.53	<0.53
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	9.2	6.5
Mercury	ug/L	<0.15	<0.11	<0.11	--	<0.11	--	--
Molybdenum	ug/L	160	210	140	180	140	210	23
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	838	686
Field Temperature	deg C	11.8	12.3	12.2	13.6	12.9	12.3	18.4
Groundwater Elevation	feet	572.54	572.34	575.17	574.76	572.9	583.44	573.05
Turbidity	NTU	2.49	1	4.57	0.14	1.05	2.78	4.82
Field Oxidation Potential	millivolts	-6	80.7	95.1	79.6	147.4	68.1	24.9
Oxygen, Dissolved	mg/L	0.19	0.1	0.13	0.89	0	0.08	1.33
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	<36	<36
Magnesium, total	ug/L	--	21000	18000	--	23000	--	--
Manganese, dissolved	ug/L	--	--	<3.6	--	6.4	--	--
Manganese, total	ug/L	--	4	<14	--	6.9	--	--
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	--	--	--	--	--

MW-312

Name: IPL - M.L. Kapp Generating Station

Location ID:	MW-312		
Number of Sampling Date2:			
Parameter Name	**Units**	**5/3/2023**	**10/24/2023**
Boron	ug/L	370	160
Calcium	mg/L	78	67
Chloride	mg/L	10	9.5
Field pH	Std. Units	7	7.13
Fluoride	mg/L	<0.38	<0.38
Sulfate	mg/L	33	25
Total Dissolved Solids	mg/L	290	330
Antimony	ug/L	<1	<1
Arsenic	ug/L	<0.53	<0.53
Barium	ug/L	63	44
Beryllium	ug/L	<0.33	<0.33
Cadmium	ug/L	<0.1	<0.1
Chromium	ug/L	<1.1	<1.1
Cobalt	ug/L	<0.17	<0.17
Lead	ug/L	<0.24	<0.24
Lithium	ug/L	<2.5	<2.5
Mercury	ug/L	<0.14	<0.14
Molybdenum	ug/L	1.4	1.3
Selenium	ug/L	<1.4	<1.4
Thallium	ug/L	<0.26	<0.26
Total Radium	pCi/L	0.132	0.662
Radium-226	pCi/L	0.132	0.0982
Radium-228	pCi/L	-0.00515	0.564
Field Specific Conductance	umhos/cm	598	621
Field Temperature	deg C	12.7	14.6
Groundwater Elevation	feet	577.84	573.84
Turbidity	NTU	4.96	3.83
Field Oxidation Potential	millivolts	40.1	60
Oxygen, Dissolved	mg/L	1.1	0.69
pH at 25 Degrees C	Std. Units	7.6	7.5
Bicarbonate Alkalinity as CaCO3	mg/L	260	270
Carbonate Alkalinity as CaCO3	mg/L	<2.5	<2.5
Iron, total	ug/L	<36	<36
Magnesium, total	ug/L	36000	32000
Manganese, total	ug/L	98	26
Potassium, total	ug/L	890	860
Sodium, total	ug/L	6300	6400
Total Alkalinity as CaCO3	mg/L	260	270

MW-313

Name: IPL - M.L. Kapp Generating Station

Location ID:	MW-313		
Number of Sampling Date2:			
Parameter Name	**Units**	**5/3/2023**	**10/26/2023**
Calcium	mg/L	54	56
Chloride	mg/L	87	75
Field pH	Std. Units	7.1	7.23
Sulfate	mg/L	4.3	4
Arsenic	ug/L	2.4	3
Lithium	ug/L	4	<2.5
Molybdenum	ug/L	5.6	1.2
Field Specific Conductance	umhos/cm	790	845
Field Temperature	deg C	11.3	14
Groundwater Elevation	feet	577.93	573.34
Turbidity	NTU	11.3	34.81
Field Oxidation Potential	millivolts	-83.4	-110.4
Oxygen, Dissolved	mg/L	0.69	1.23
Bicarbonate Alkalinity as CaCO3	mg/L	280	280
Carbonate Alkalinity as CaCO3	mg/L	<2.5	<2.5
Iron, total	ug/L	250	830
Magnesium, total	ug/L	25000	25000
Manganese, total	ug/L	550	510
Potassium, total	ug/L	2800	3400
Sodium, total	ug/L	88000	94000
Total Alkalinity as CaCO3	mg/L	280	280

Appendix E

Statistical Evaluation

E1 LCL Evaluation – May 2023 Event

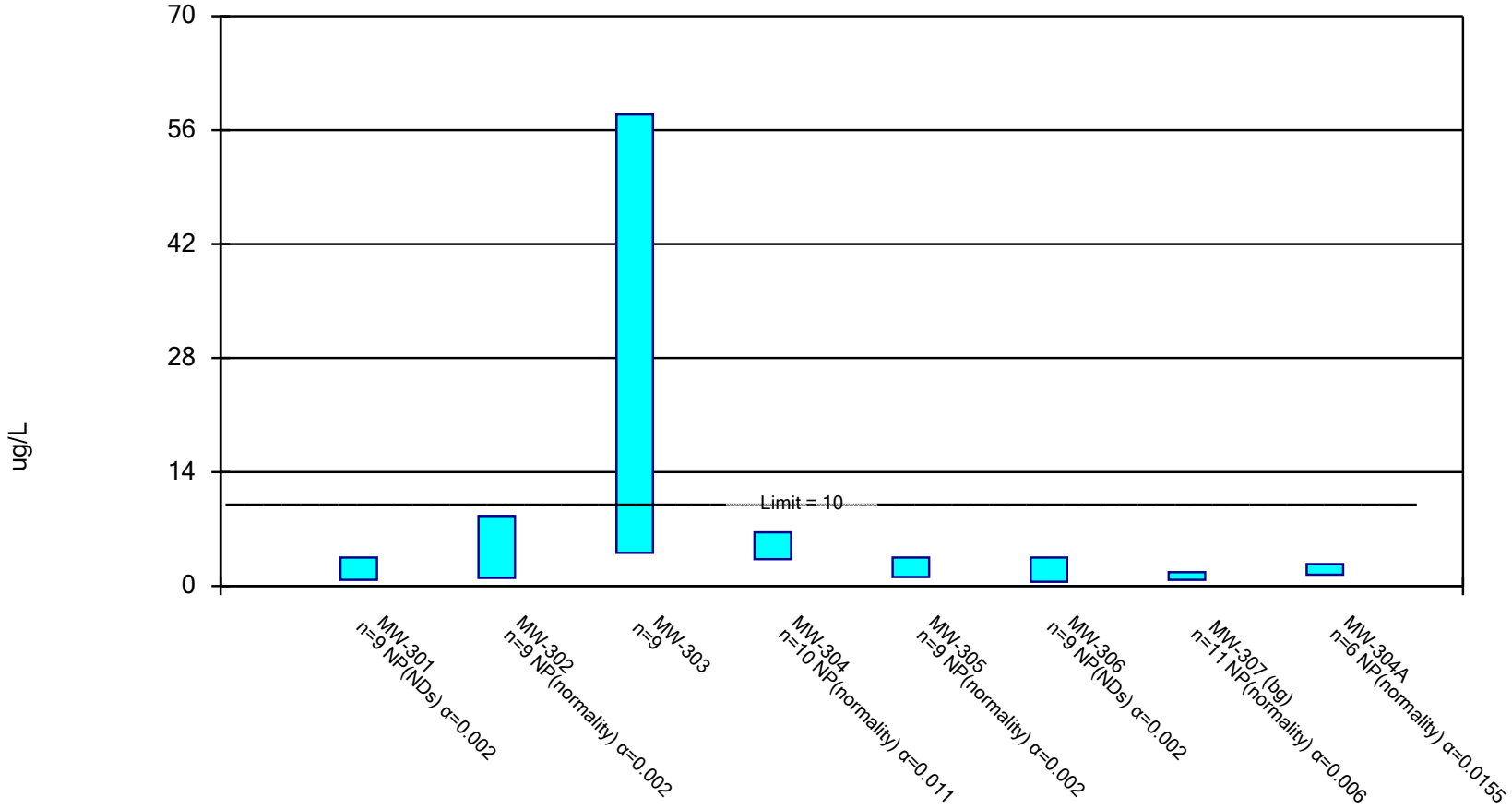
Confidence Interval

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020 Printed 7/10/2023, 10:03 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (ug/L)	MW-301	3.5	0.75	10	No	9	77.78	None	No	0.002	NP (NDs)
Arsenic (ug/L)	MW-302	8.6	1	10	No	9	11.11	None	No	0.002	NP (normality)
Arsenic (ug/L)	MW-303	57.93	4.072	10	No	9	0	None	No	0.01	Param.
Arsenic (ug/L)	MW-304	6.6	3.3	10	No	10	0	None	No	0.011	NP (normality)
Arsenic (ug/L)	MW-305	3.5	1.1	10	No	9	33.33	None	No	0.002	NP (normality)
Arsenic (ug/L)	MW-306	3.5	0.53	10	No	9	100	None	No	0.002	NP (NDs)
Arsenic (ug/L)	MW-307 (bg)	1.7	0.75	10	No	11	18.18	None	No	0.006	NP (normality)
Arsenic (ug/L)	MW-304A	2.7	1.4	10	No	6	0	None	No	0.0155	NP (normality)
Arsenic (ug/L)	MW-308	0.88	0.53	10	No	5	80	None	No	0.031	NP (NDs)
Arsenic (ug/L)	MW-309	6.108	0.5393	10	No	5	0	None	ln(x)	0.01	Param.
Arsenic (ug/L)	MW-310	0.75	0.53	10	No	6	100	None	No	0.0155	NP (NDs)
Arsenic (ug/L)	MW-311	3	0.53	10	No	5	100	None	No	0.031	NP (NDs)
Arsenic (ug/L)	MW-311A	3	0.53	10	No	5	100	None	No	0.031	NP (NDs)
Lithium (ug/L)	MW-301	13.72	5.805	40	No	9	44.44	Cohen`s	No	0.01	Param.
Lithium (ug/L)	MW-302	30.71	8.184	40	No	9	0	None	No	0.01	Param.
Lithium (ug/L)	MW-303	53	16.34	40	No	9	0	None	No	0.01	Param.
Lithium (ug/L)	MW-304	11	2.3	40	No	9	66.67	None	No	0.002	NP (Cohens/xfrm)
Lithium (ug/L)	MW-305	22.04	15.51	40	No	9	0	None	No	0.01	Param.
Lithium (ug/L)	**MW-306**	**88.96**	**47.26**	**40**	**Yes**	**9**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (ug/L)	MW-307 (bg)	5.3	2.5	40	No	11	45.45	None	No	0.006	NP (normality)
Lithium (ug/L)	MW-304A	3.9	2.5	40	No	6	66.67	None	No	0.0155	NP (normality)
Lithium (ug/L)	MW-308	3	2.5	40	No	5	80	None	No	0.031	NP (NDs)
Lithium (ug/L)	MW-309	2.6	2.5	40	No	5	80	None	No	0.031	NP (NDs)
Lithium (ug/L)	MW-310	4	2.7	40	No	6	0	None	No	0.0155	NP (normality)
Lithium (ug/L)	MW-311	53	5.5	40	No	6	0	None	No	0.0155	NP (normality)
Lithium (ug/L)	MW-311A	23.27	11.13	40	No	6	0	None	No	0.01	Param.
Molybdenum (ug/L)	**MW-301**	**487.7**	**307.9**	**100**	**Yes**	**9**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	**MW-302**	**306.6**	**137.4**	**100**	**Yes**	**9**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	MW-303	181.7	93	100	No	9	0	None	No	0.01	Param.
Molybdenum (ug/L)	**MW-304**	**1099**	**650**	**100**	**Yes**	**9**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	**MW-305**	**752.3**	**518.8**	**100**	**Yes**	**9**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	MW-306	94	21.73	100	No	9	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-307 (bg)	3.4	1.1	100	No	11	63.64	None	No	0.006	NP (normality)
Molybdenum (ug/L)	MW-304A	17	3.1	100	No	6	0	None	No	0.0155	NP (normality)
Molybdenum (ug/L)	MW-308	1.7	1.2	100	No	5	60	None	No	0.031	NP (normality)
Molybdenum (ug/L)	MW-309	1.4	0.91	100	No	5	80	None	No	0.031	NP (NDs)
Molybdenum (ug/L)	MW-310	1.861	0.8428	100	No	6	66.67	None	No	0.01	Param.
Molybdenum (ug/L)	MW-311	33.05	19.95	100	No	6	0	None	No	0.01	Param.
Molybdenum (ug/L)	**MW-311A**	**217.3**	**129.3**	**100**	**Yes**	**6**	**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 7/10/2023 10:01 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Arsenic (ug/L) Analysis Run 7/10/2023 10:03 AM

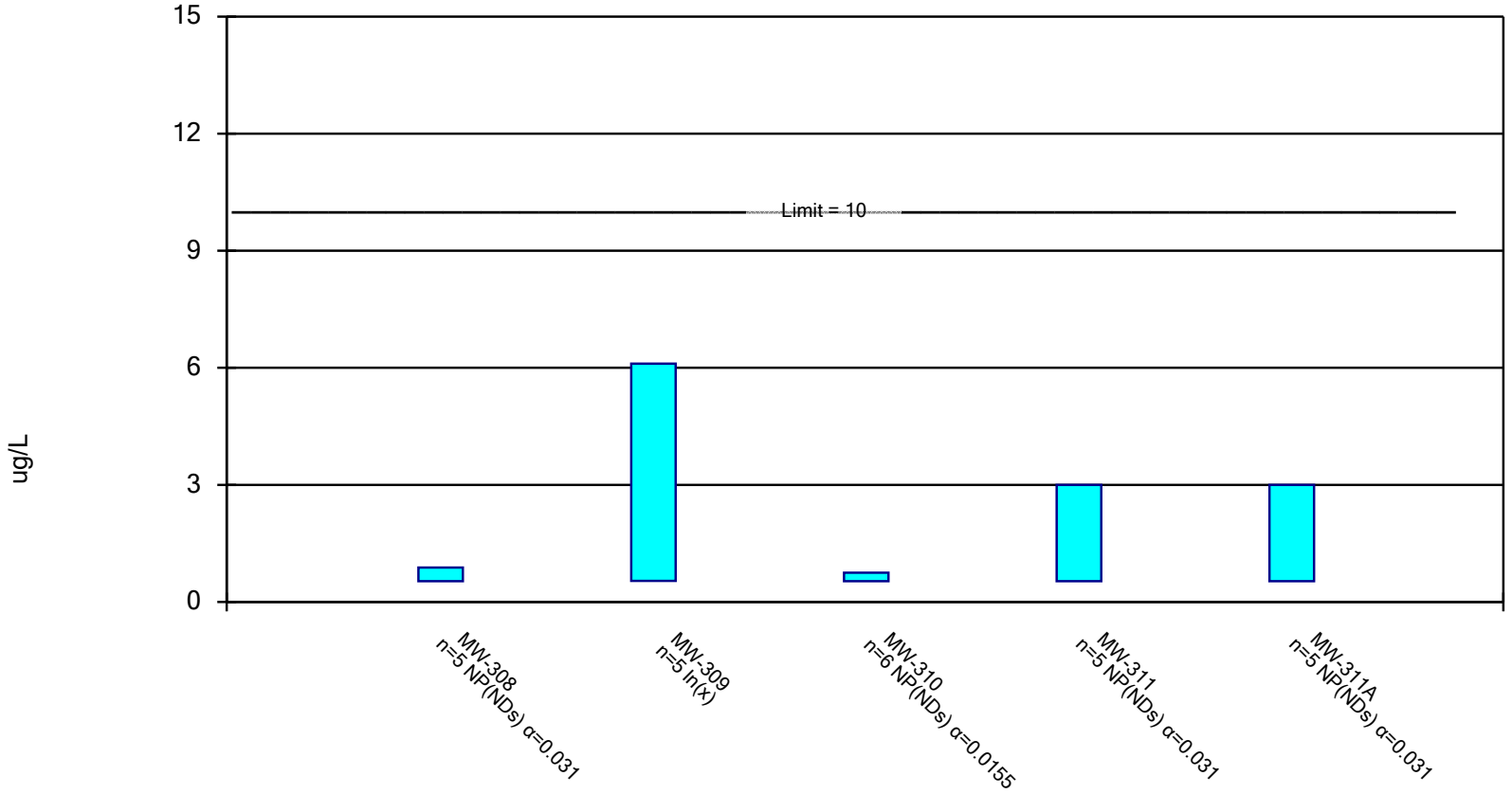
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A
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)	
7/22/2021							0.98 (J)	
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)	
4/18/2022	<3 (U)	6.6 (J)	34	3.3 (J)	<3 (U)			1.4 (J)
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)		1.5 (J)
11/3/2022							1.1 (J)	
5/1/2023		<2 (U)						
5/2/2023	<1.1 (U)		44	4.1 (J)	<1.1 (U)	<0.53 (U)	3.1	1.4 (J)
Mean	1.487	6.578	31	5.57	2.2	1.31	1.214	1.75
Std. Dev.	1.05	2.238	27.89	4.477	0.946	1.112	0.6746	0.493
Upper Lim.	3.5	8.6	57.93	6.6	3.5	3.5	1.7	2.7
Lower Lim.	0.75	1	4.072	3.3	1.1	0.53	0.75	1.4

ND substitution: RL or RL/2 if <15% NDs.

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 7/10/2023 10:01 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Arsenic (ug/L) Analysis Run 7/10/2023 10:03 AM

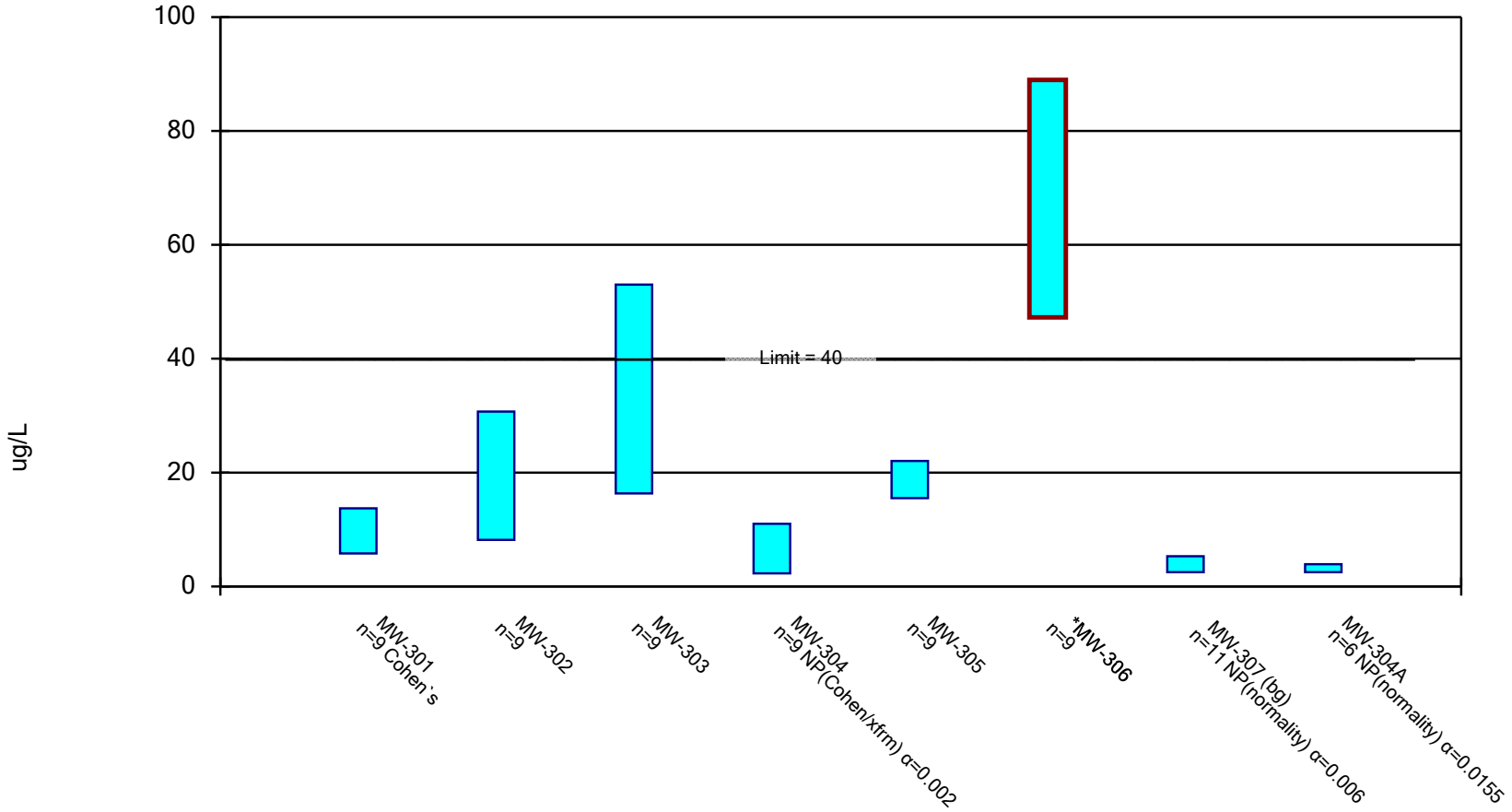
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-308	MW-309	MW-310	MW-311	MW-311A
6/17/2021	<0.75 (U)	0.84 (J)			
10/5/2021			<0.75 (U)		
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)
4/19/2022	<0.75 (U)	2.3	<0.75 (U)	<3 (U)	<3 (U)
11/2/2022	0.88 (J)	1.3 (J)			
11/3/2022			<0.75 (U)	<0.75 (U)	<0.75 (U)
5/3/2023	<0.53 (U)	5.6		<0.53 (U)	<0.53 (U)
5/4/2023			<0.53 (U)		
Mean	0.732	2.288	0.7133	1.156	1.156
Std. Dev.	0.1262	1.926	0.08981	1.035	1.035
Upper Lim.	0.88	6.108	0.75	3	3
Lower Lim.	0.53	0.5393	0.53	0.53	0.53

ND substitution: RL or RL/2 if <15% NDs.

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 7/10/2023 10:01 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Lithium (ug/L) Analysis Run 7/10/2023 10:03 AM

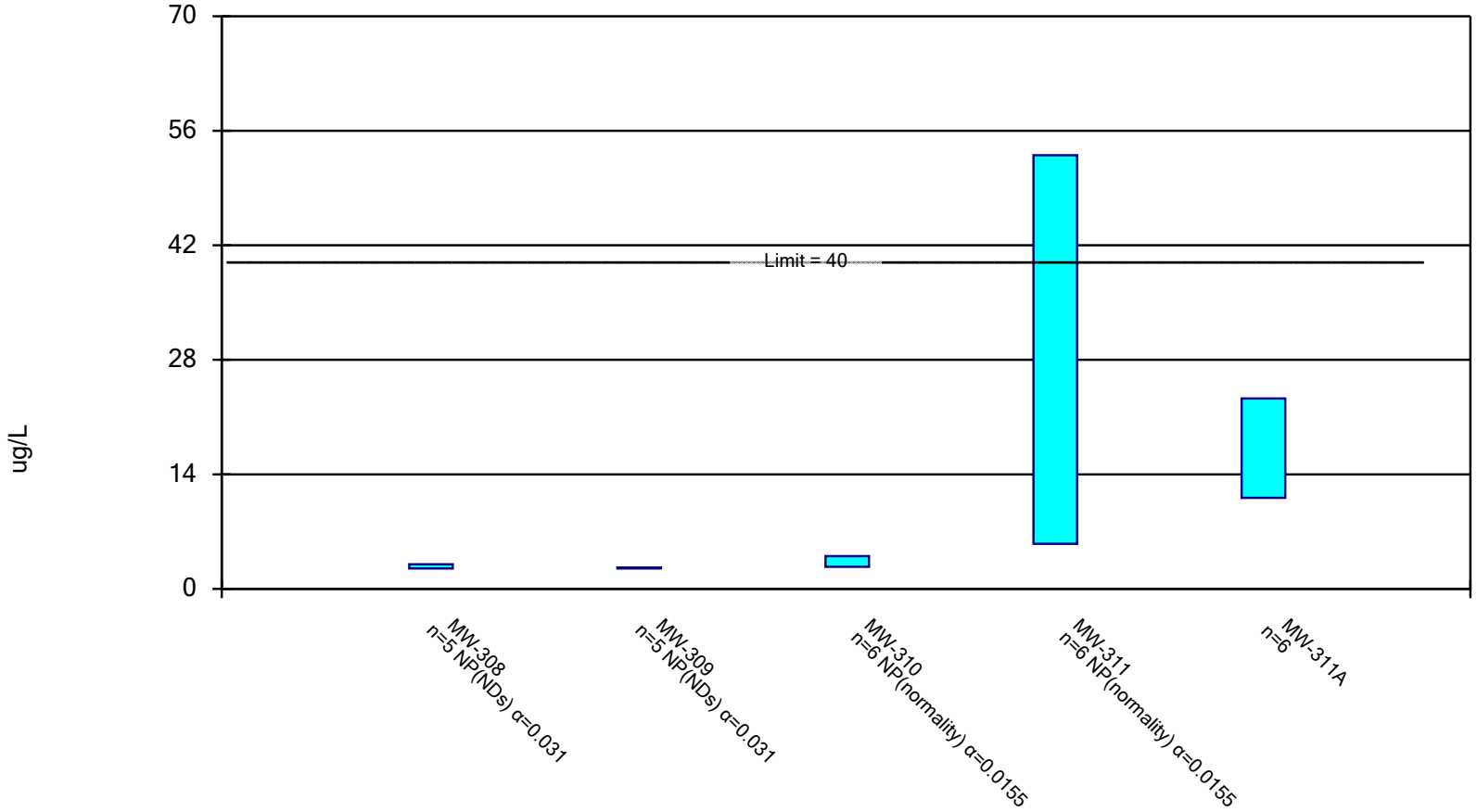
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A
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)	
7/22/2021							<2.5 (U)	
10/18/2021			14	<2.5 (U)	13	89		<2.5 (U)
10/19/2021	5.8 (J)	20					4.8 (J)	
4/18/2022	<10 (U)	19 (J)	67	<10 (U)	21 (J)			<2.5 (U)
4/19/2022						51	5.3 (J)	
11/1/2022		25	53					
11/2/2022	7.9 (J)			4.2 (J)	20	100		<2.5 (U)
11/3/2022							7 (J)	
5/1/2023		46 (J)						
5/2/2023	<8.2 (J)		30	<5 (U)	15 (J)	26	<2.5 (U)	<2.5 (U)
Mean	7.956	19.44	34.67	5.678	18.78	68.11	3.491	2.733
Std. Dev.	2.133	11.66	18.99	3.6	3.383	21.6	1.532	0.5715
Upper Lim.	13.72	30.71	53	11	22.04	88.96	5.3	3.9
Lower Lim.	5.805	8.184	16.34	2.3	15.51	47.26	2.5	2.5

ND substitution: RL or RL/2 if <15% NDs. Substitution method for trace values of the form <PQL(J): PQL.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 7/10/2023 10:01 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Lithium (ug/L) Analysis Run 7/10/2023 10:03 AM

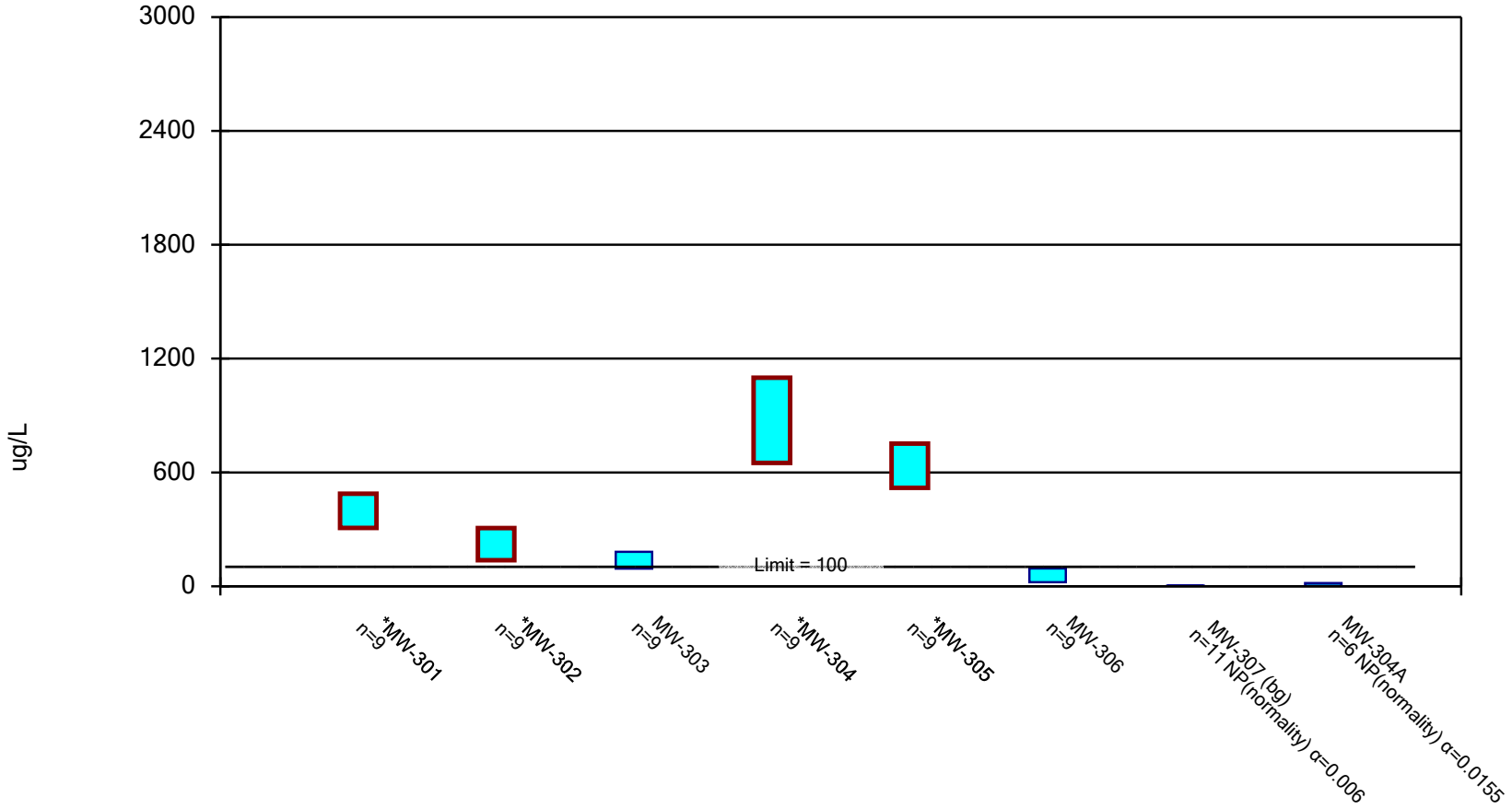
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-308	MW-309	MW-310	MW-311	MW-311A
6/17/2021	<2.5 (U)	<2.5 (U)			
10/5/2021			4 (J)		
10/19/2021	<2.5 (U)	<2.5 (U)	3 (J)		
12/30/2021				43	15
2/21/2022			2.8 (J)	34	19
4/19/2022	<2.5 (U)	<2.5 (U)	2.7 (J)	45	21 (J)
8/22/2022				45	19
11/2/2022	3 (J)	<2.5 (U)			
11/3/2022			3.1 (J)	53	20
5/3/2023	<2.5 (U)	2.6 (J)		5.5 (J)	9.2 (J)
5/4/2023			2.9 (J)		
Mean	2.6	2.52	3.083	37.58	17.2
Std. Dev.	0.2236	0.04472	0.4708	16.85	4.418
Upper Lim.	3	2.6	4	53	23.27
Lower Lim.	2.5	2.5	2.7	5.5	11.13

ND substitution: RL or RL/2 if <15% NDs.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/10/2023 10:02 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Molybdenum (ug/L) Analysis Run 7/10/2023 10:03 AM

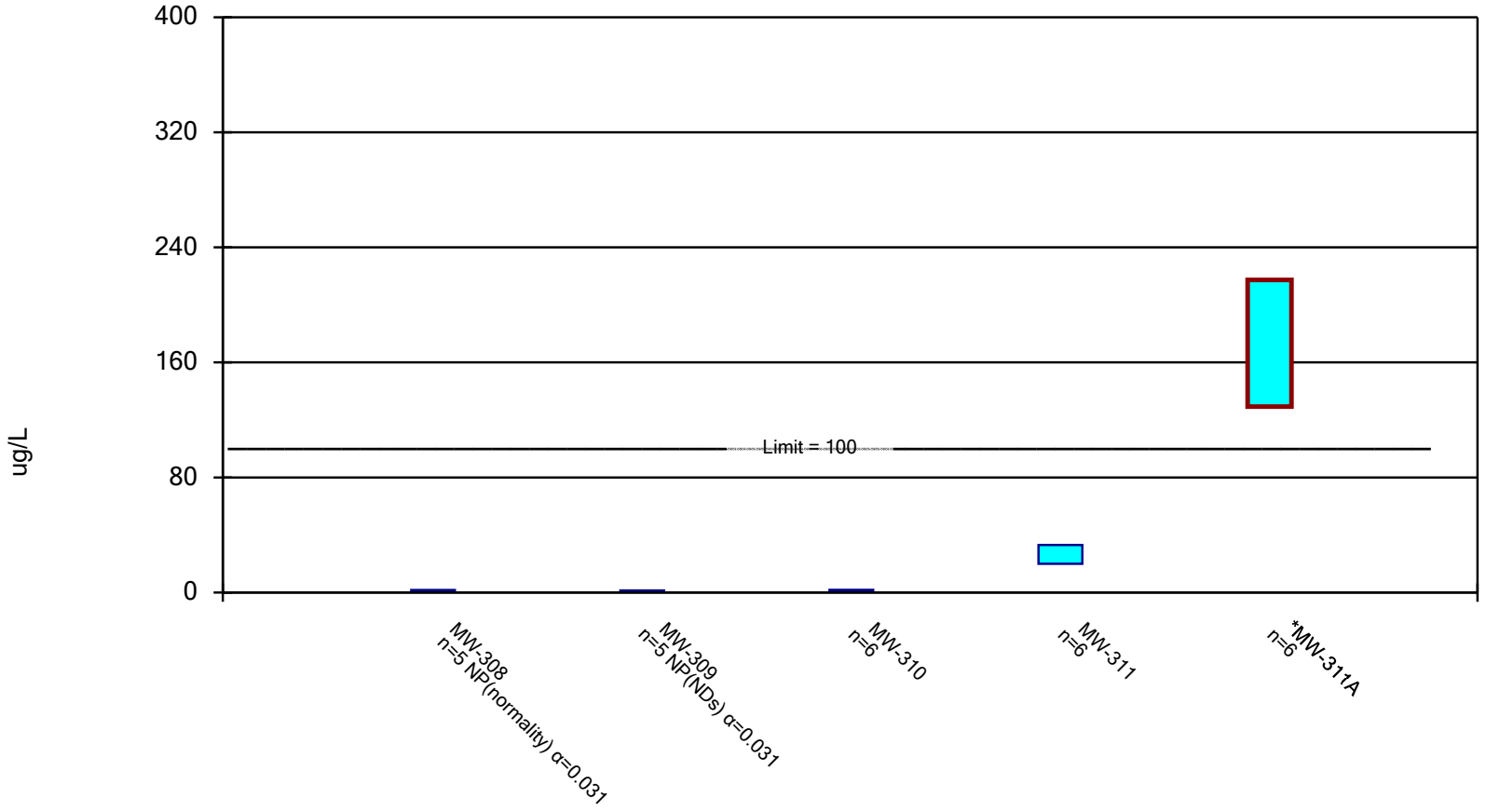
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)	MW-304A
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)	
7/22/2021							<1.3 (U)	
10/18/2021			190	1200	810	57		6
10/19/2021	430	200					<1.3 (U)	
4/18/2022	380	140	96	500	560			3.2
4/19/2022						8.8	<1.2 (U)	
11/1/2022		170	200					
11/2/2022	490			880	690	25		3.8
11/3/2022							5.1	
5/1/2023		98						
5/2/2023	480		110	740	380	27	2.2	3.4
Mean	397.8	222	137.3	874.4	635.6	57.87	1.982	6.083
Std. Dev.	93.11	87.64	45.91	232.5	120.9	37.42	1.268	5.455
Upper Lim.	487.7	306.6	181.7	1099	752.3	94	3.4	17
Lower Lim.	307.9	137.4	93	650	518.8	21.73	1.1	3.1

ND substitution: RL or RL/2 if <15% NDs.

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 7/10/2023 10:02 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Molybdenum (ug/L) Analysis Run 7/10/2023 10:03 AM

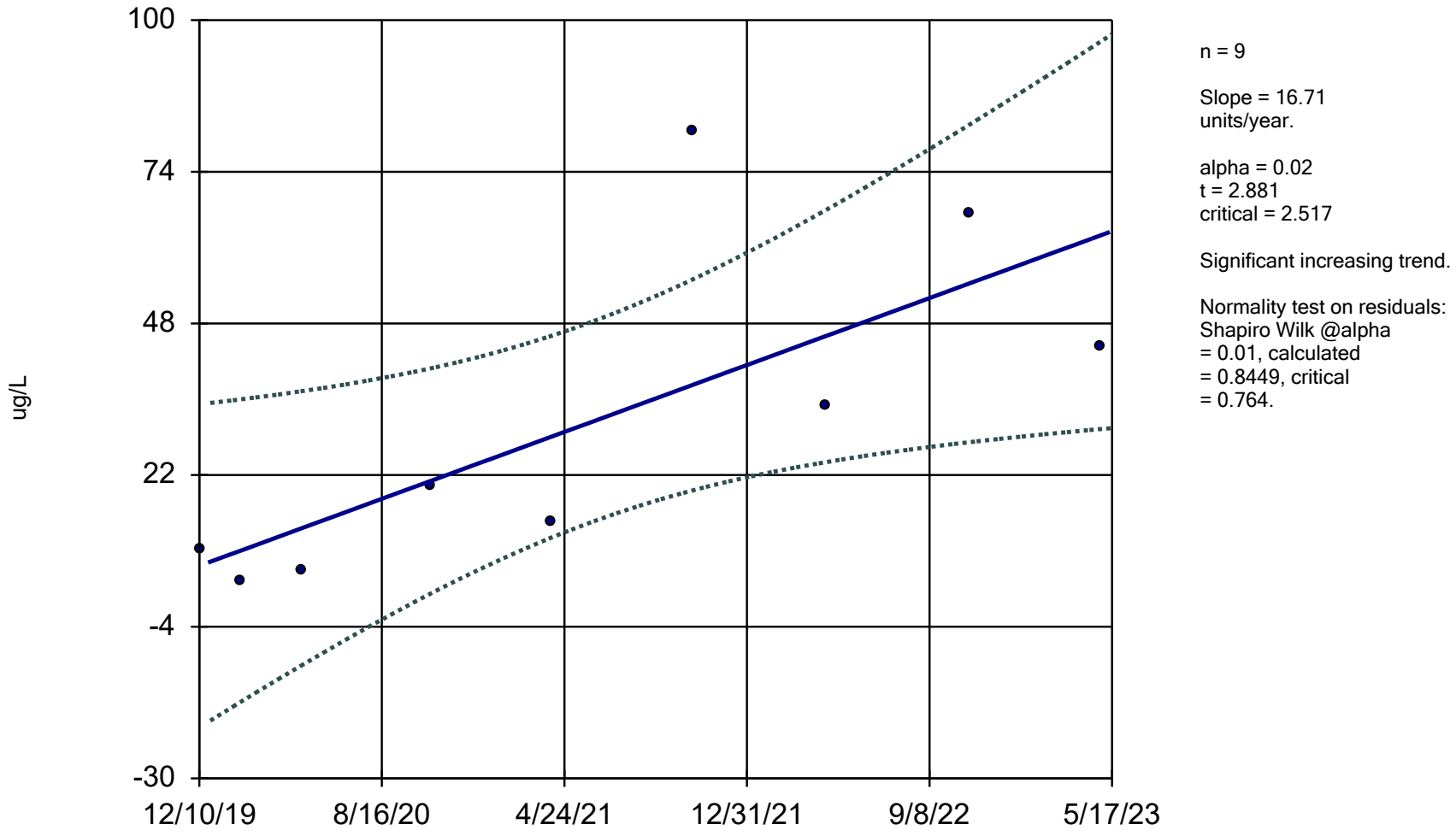
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-308	MW-309	MW-310	MW-311	MW-311A
6/17/2021	<1.3 (U)	<1.3 (U)			
10/5/2021			2		
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
4/19/2022	<1.2 (U)	<1.2 (U)	1.5 (J)	25	140
8/22/2022				29	180
11/2/2022	1.3 (J)	1.4 (J)			
11/3/2022			<1.2 (U)	26	140
5/3/2023	1.7 (J)	<0.91 (U)		18	210
5/4/2023			<0.91 (U)		
Mean	1.36	1.222	1.352	26.5	173.3
Std. Dev.	0.1949	0.1882	0.3704	4.764	32.04
Upper Lim.	1.7	1.4	1.861	33.05	217.3
Lower Lim.	1.2	0.91	0.8428	19.95	129.3

ND substitution: RL or RL/2 if <15% NDs.

Arsenic and 95% Confidence Band

MW-303



n = 9

Slope = 16.71
units/year.

alpha = 0.02
t = 2.881
critical = 2.517

Significant increasing trend.

Normality test on residuals:
Shapiro Wilk @alpha
= 0.01, calculated
= 0.8449, critical
= 0.764.

Linear Regression Analysis Run 7/10/2023 10:43 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Linear Regression

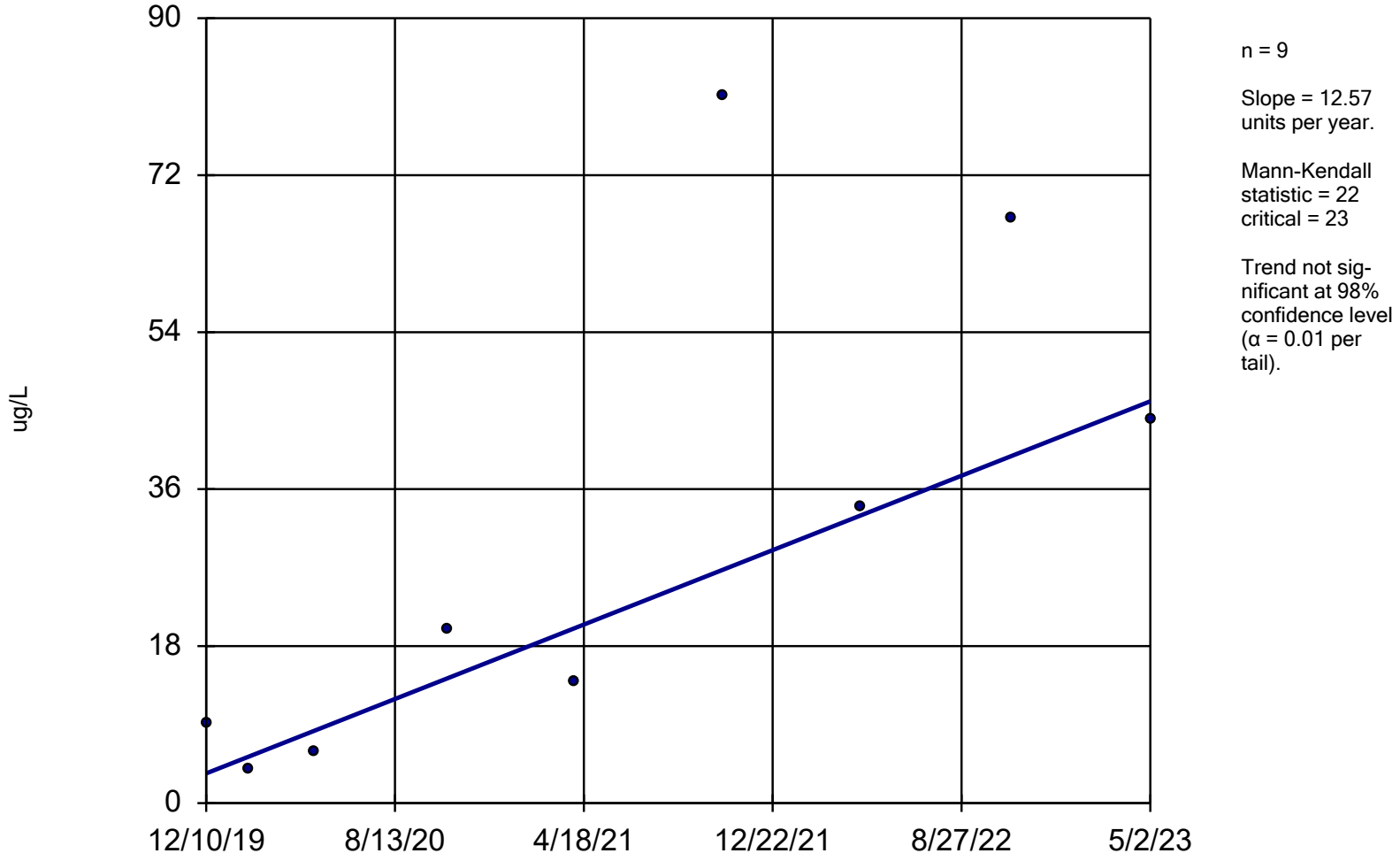
Constituent: Arsenic (ug/L) Analysis Run 7/10/2023 10:44 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-303	LCL	UCL
12/10/2019	9.2	-21.25	34.15
2/4/2020	4	-16.95	34.97
4/29/2020	5.8	-10.58	36.38
10/22/2020	20	1.625	40.28
4/5/2021	14	11.2	45.8
10/18/2021	81	19.38	55.55
4/18/2022	34	24.2	67.38
11/1/2022	67	27.62	81.99
5/2/2023	44	29.89	96.36

Arsenic

MW-303



Sen's Slope and 95% Confidence Band Analysis Run 7/10/2023 10:41 AM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Sen's Slope Estimator

Constituent: Arsenic (ug/L) Analysis Run 7/10/2023 10:43 AM

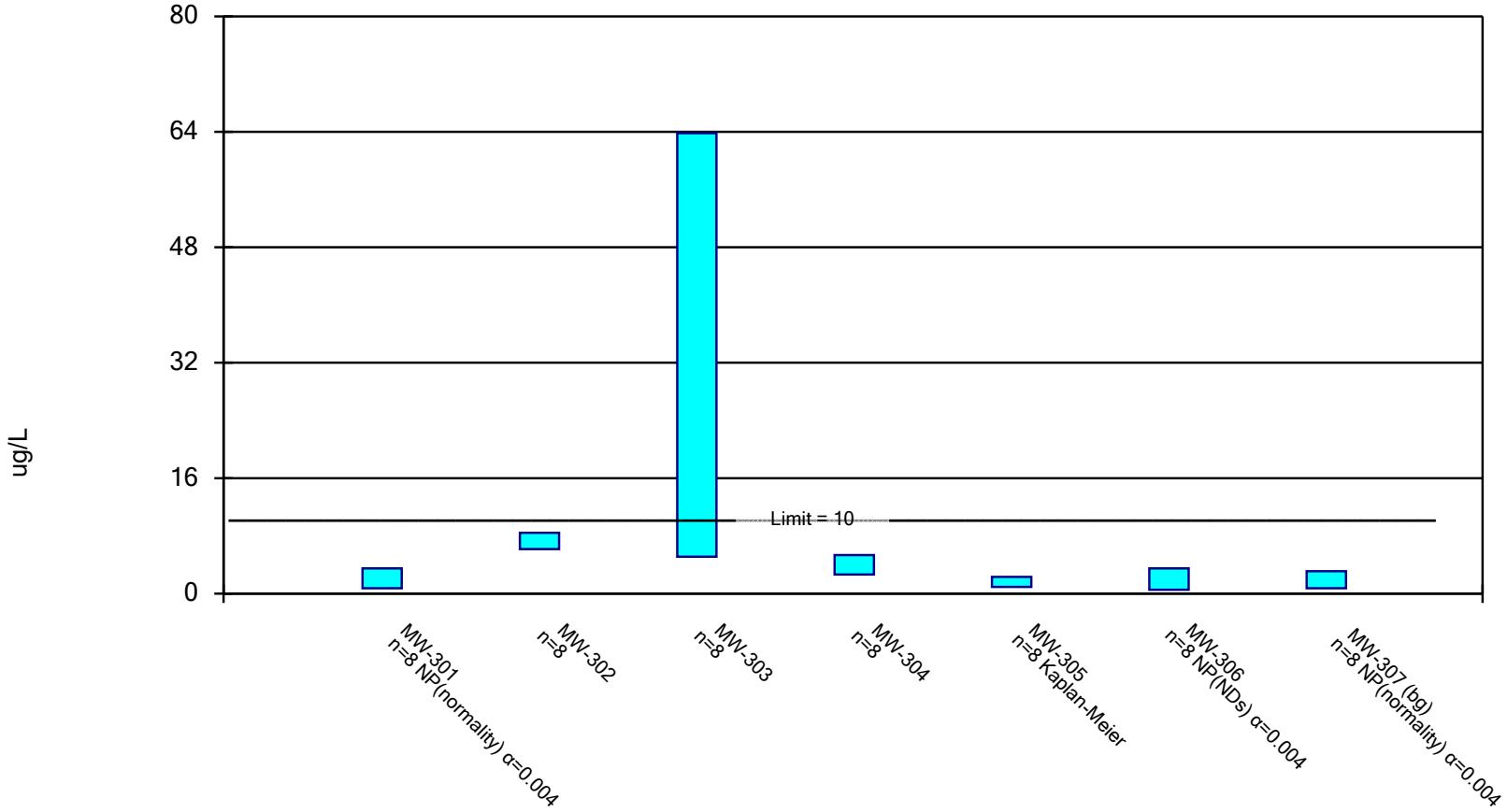
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-303
12/10/2019	9.2
2/4/2020	4
4/29/2020	5.8
10/22/2020	20
4/5/2021	14
10/18/2021	81
4/18/2022	34
11/1/2022	67
5/2/2023	44

E2 LCL Evaluation – October 2023 Event

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 2/16/2024 5:07 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Arsenic (ug/L) Analysis Run 2/16/2024 5:09 PM

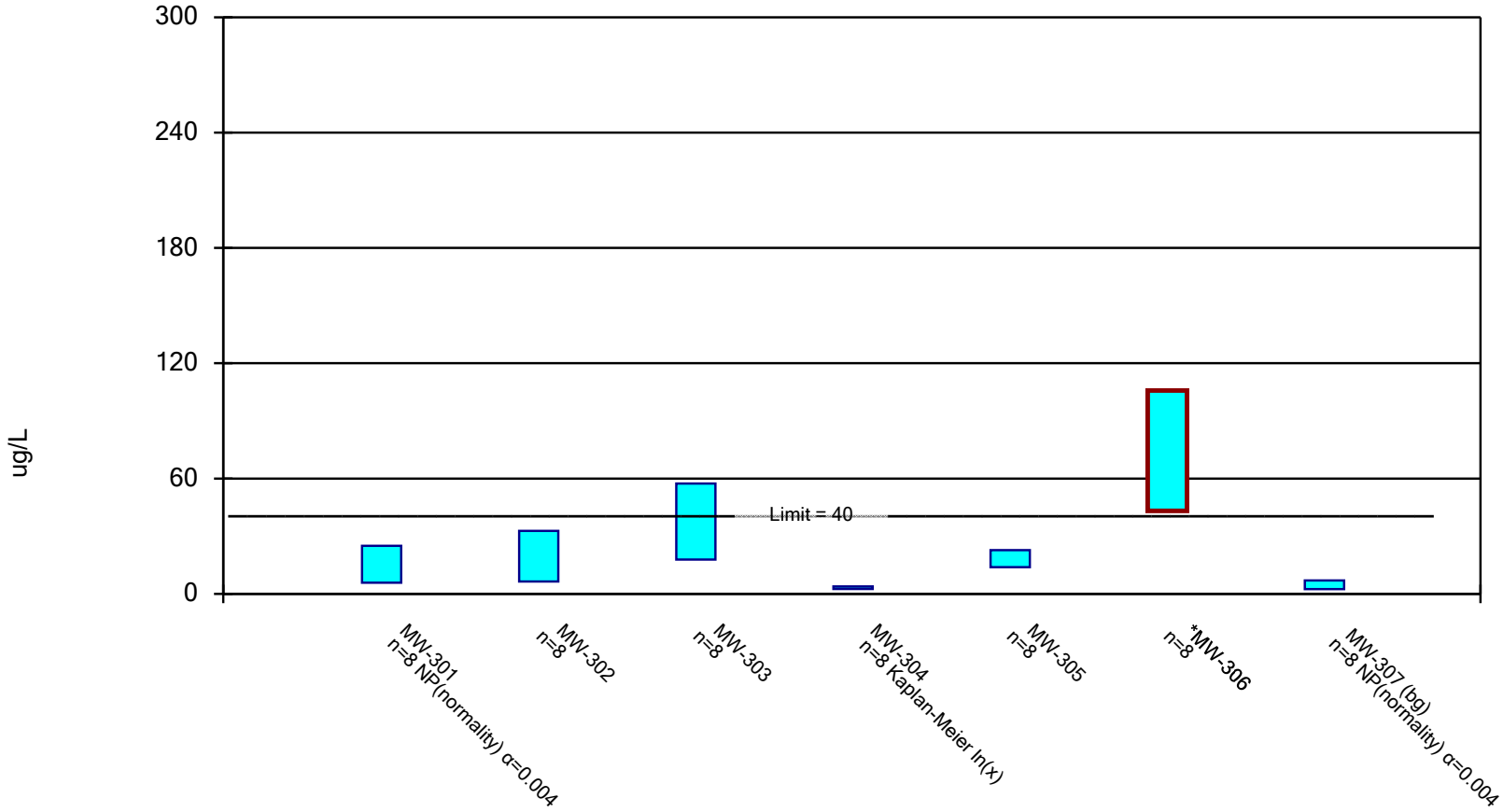
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)
4/29/2020	0.95 (J)	8.6	5.8		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)	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)
5/1/2023		5.2					
5/2/2023	<1.1 (U)		44	4.1	<1.1 (U)	<0.53 (U)	3.1
10/24/2023							0.99 (J)
10/25/2023	0.75 (J)	7.8	9.9	2.4	1.7 (J)	<0.53 (U)	
Mean	1.563	7.3	34.46	3.988	2.338	1.336	1.234
Std. Dev.	1.096	1.064	27.69	1.27	0.9242	1.195	0.7604
Upper Lim.	3.5	8.427	63.82	5.334	2.317	3.5	3.1
Lower Lim.	0.75	6.173	5.11	2.641	0.9262	0.53	0.75

ND substitution: RL or RL/2 if <15% NDs.

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 2/16/2024 5:08 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Lithium (ug/L) Analysis Run 2/16/2024 5:09 PM

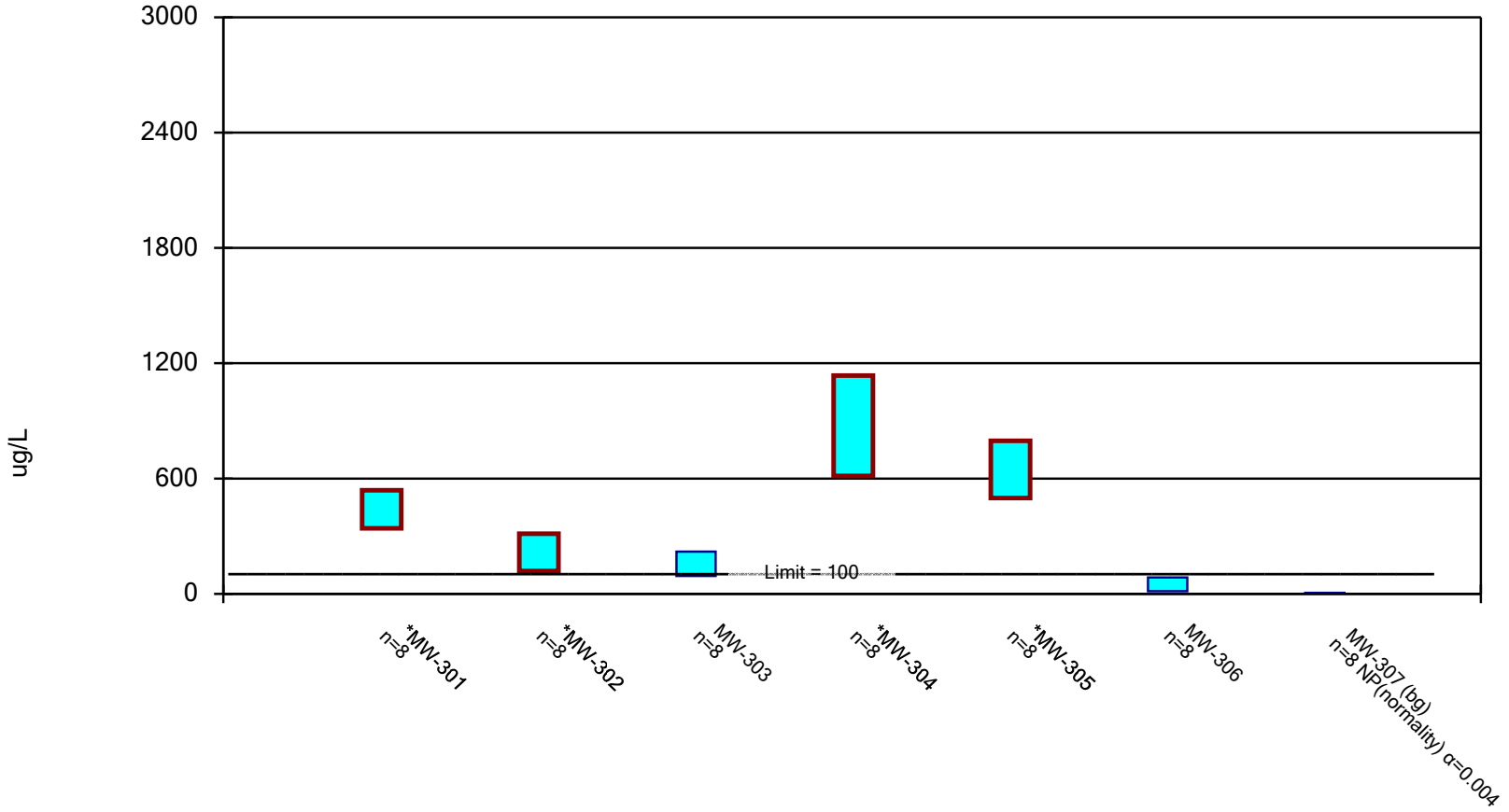
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-301	MW-302	MW-303	MW-304	MW-305	MW-306	MW-307 (bg)
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	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)
5/1/2023		46					
5/2/2023	<8.2 (J)		30	<5 (U)	15 (J)	26	<2.5 (U)
10/24/2023							6.5 (J)
10/25/2023	<25 (U)	<25 (U)	32 (J)	<25 (U)	<25 (U)	120	
Mean	10.15	19.56	37.63	7.85	18.31	74.5	4.2
Std. Dev.	6.17	12.43	18.65	7.555	4.166	29.51	1.937
Upper Lim.	25	32.73	57.39	3.84	22.73	105.8	7
Lower Lim.	5.8	6.392	17.86	2.571	13.9	43.22	2.5

ND substitution: RL or RL/2 if <15% NDs. Substitution method for trace values of the form <PQL(J): PQL.

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 2/16/2024 5:08 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Molybdenum (ug/L) Analysis Run 2/16/2024 5:09 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	MW-307 (bg)
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	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
5/1/2023		98					
5/2/2023	480		110	740	380	27	2.2
10/24/2023							4.5
10/25/2023	550	270	250	900	790	63	
Mean	440	216	156.3	875	647.5	49.48	2.537
Std. Dev.	93.35	91.54	59.74	246.2	140.2	33.77	1.588
Upper Lim.	538.9	313	219.6	1136	796.1	85.27	5.1
Lower Lim.	341.1	119	92.93	614	498.9	13.68	1.2

ND substitution: RL or RL/2 if <15% NDs.

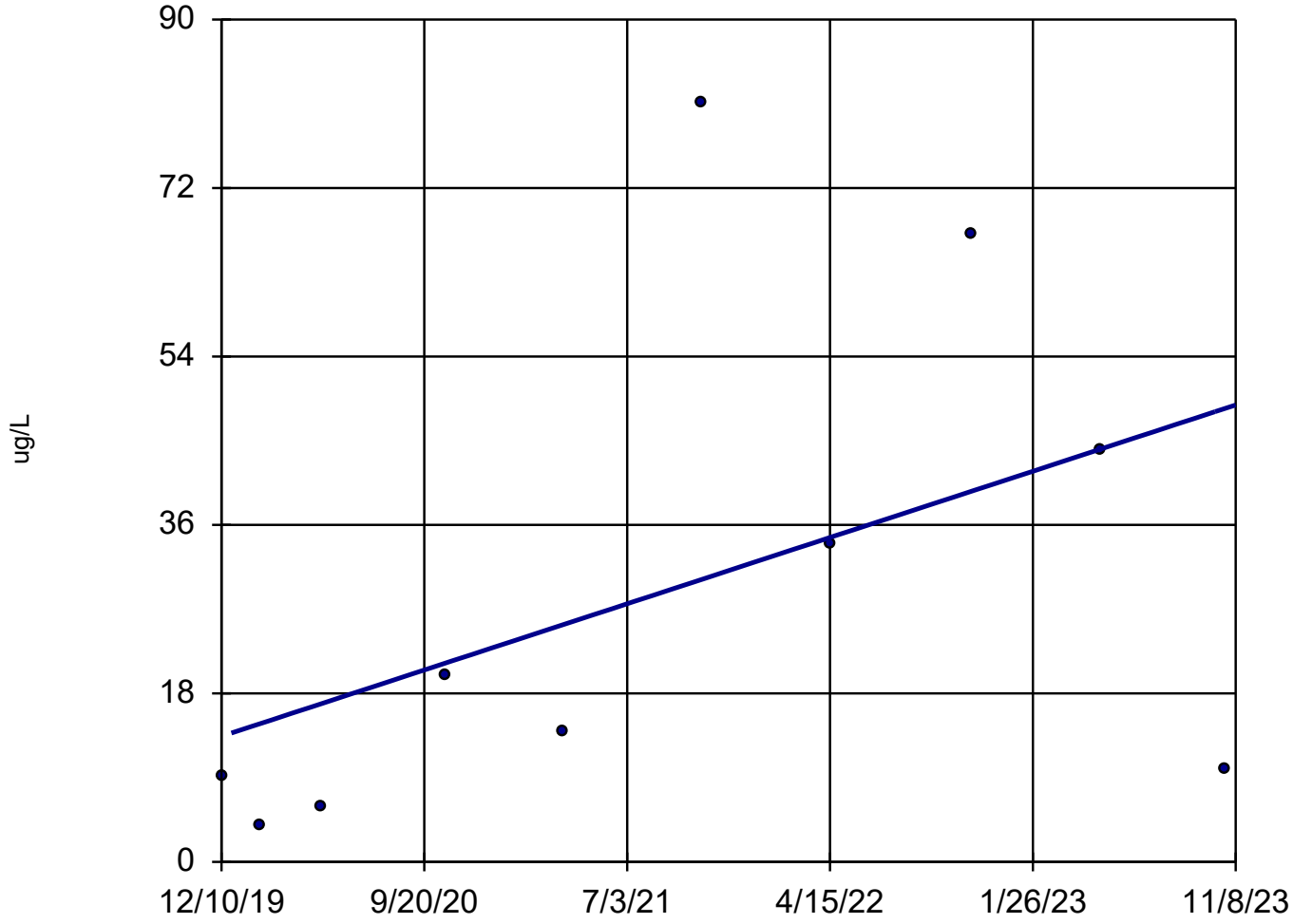
Confidence Interval

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020 Printed 2/16/2024, 5:09 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (ug/L)	MW-301	3.5	0.75	10	No	8	62.5	None	No	0.004	NP (normality)
Arsenic (ug/L)	MW-302	8.427	6.173	10	No	8	0	None	No	0.01	Param.
Arsenic (ug/L)	MW-303	63.82	5.11	10	No	8	0	None	No	0.01	Param.
Arsenic (ug/L)	MW-304	5.334	2.641	10	No	8	0	None	No	0.01	Param.
Arsenic (ug/L)	MW-305	2.317	0.9262	10	No	8	37.5	Kapla...	No	0.01	Param.
Arsenic (ug/L)	MW-306	3.5	0.53	10	No	8	100	Kapla...	No	0.004	NP (NDs)
Arsenic (ug/L)	MW-307 (bg)	3.1	0.75	10	No	8	12.5	None	No	0.004	NP (normality)
Lithium (ug/L)	MW-301	25	5.8	40	No	8	50	None	No	0.004	NP (normality)
Lithium (ug/L)	MW-302	32.73	6.392	40	No	8	12.5	None	No	0.01	Param.
Lithium (ug/L)	MW-303	57.39	17.86	40	No	8	0	None	No	0.01	Param.
Lithium (ug/L)	MW-304	3.84	2.571	40	No	8	62.5	Kapla...	ln(x)	0.01	Param.
Lithium (ug/L)	MW-305	22.73	13.9	40	No	8	12.5	None	No	0.01	Param.
Lithium (ug/L)	**MW-306**	**105.8**	**43.22**	**40**	**Yes**	**8**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (ug/L)	MW-307 (bg)	7	2.5	40	No	8	37.5	None	No	0.004	NP (normality)
Molybdenum (ug/L)	**MW-301**	**538.9**	**341.1**	**100**	**Yes**	**8**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	**MW-302**	**313**	**119**	**100**	**Yes**	**8**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	MW-303	219.6	92.93	100	No	8	0	None	No	0.01	Param.
Molybdenum (ug/L)	**MW-304**	**1136**	**614**	**100**	**Yes**	**8**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	**MW-305**	**796.1**	**498.9**	**100**	**Yes**	**8**	**0**	**None**	**No**	**0.01**	**Param.**
Molybdenum (ug/L)	MW-306	85.27	13.68	100	No	8	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-307 (bg)	5.1	1.2	100	No	8	50	None	No	0.004	NP (normality)

Arsenic

MW-303



n = 10

Slope = 9.047
units/year.

alpha = 0.02
t = 1.474
critical = 2.449

No significant trend.

Normality test on residuals:
Shapiro Wilk @alpha
= 0.01, calculated
= 0.8814, critical
= 0.781.

Linear Regression Analysis Run 1/11/2024 2:00 PM

M. L. Kapp Generating Station Data: KAP - Chempoint- export-Dec2020

Linear Regression

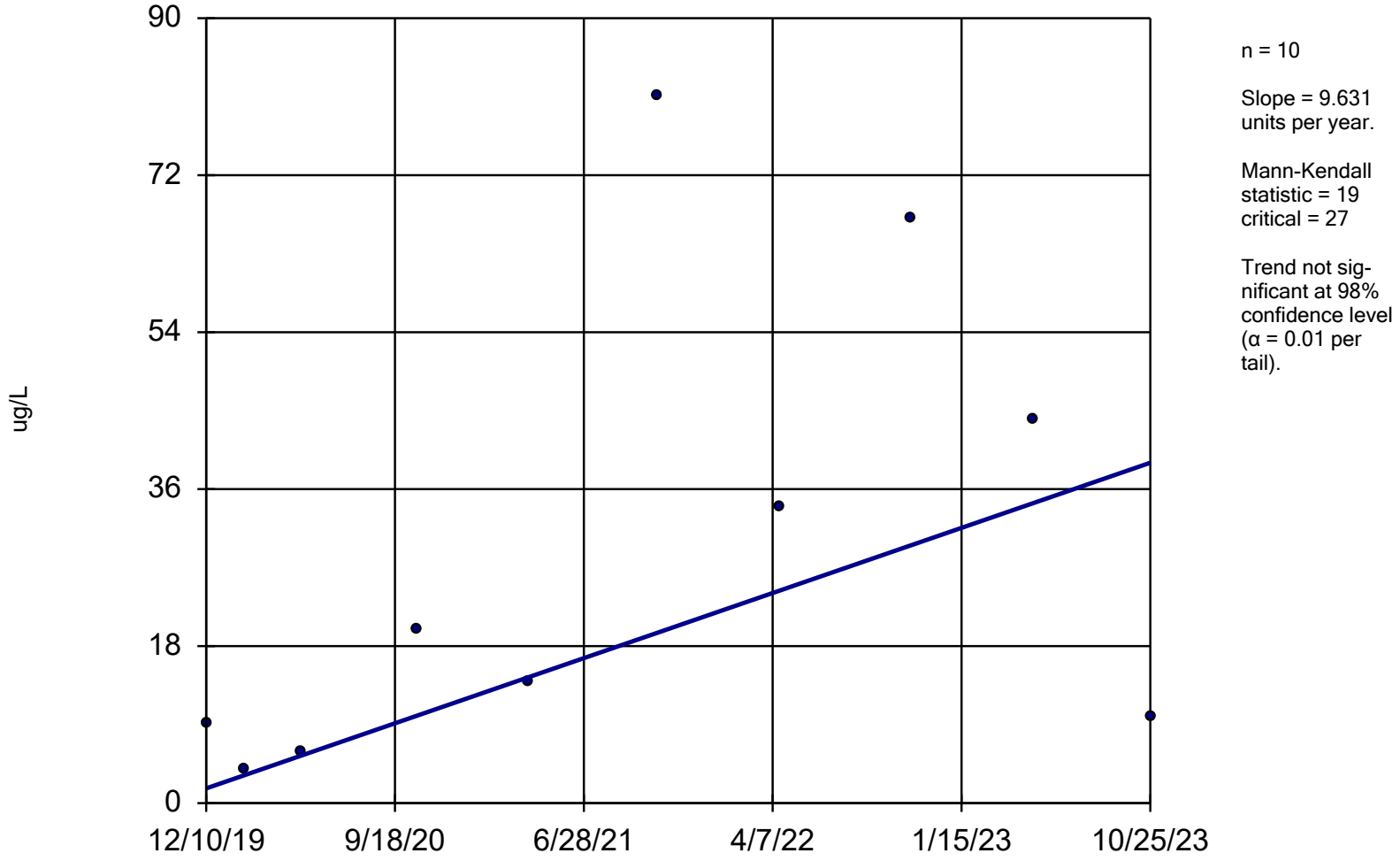
Constituent: Arsenic (ug/L) Analysis Run 1/11/2024 2:01 PM

M. L. Kapp Generating Station Data: KAP - Chempoint- export-Dec2020

	MW-303
12/10/2019	9.2
2/4/2020	4
4/29/2020	5.8
10/22/2020	20
4/5/2021	14
10/18/2021	81
4/18/2022	34
11/1/2022	67
5/2/2023	44
10/25/2023	9.9

Arsenic

MW-303



n = 10

Slope = 9.631 units per year.

Mann-Kendall statistic = 19
critical = 27

Trend not significant at 98% confidence level (α = 0.01 per tail).

Sen's Slope and 95% Confidence Band Analysis Run 1/11/2024 2:01 PM

M. L. Kapp Generating Station Data: KAP - Chempoint- export-Dec2020

Sen's Slope Estimator

Constituent: Arsenic (ug/L) Analysis Run 1/11/2024 2:01 PM

M. L. Kapp Generating Station Data: KAP - Chempoint- export-Dec2020

	MW-303
12/10/2019	9.2
2/4/2020	4
4/29/2020	5.8
10/22/2020	20
4/5/2021	14
10/18/2021	81
4/18/2022	34
11/1/2022	67
5/2/2023	44
10/25/2023	9.9

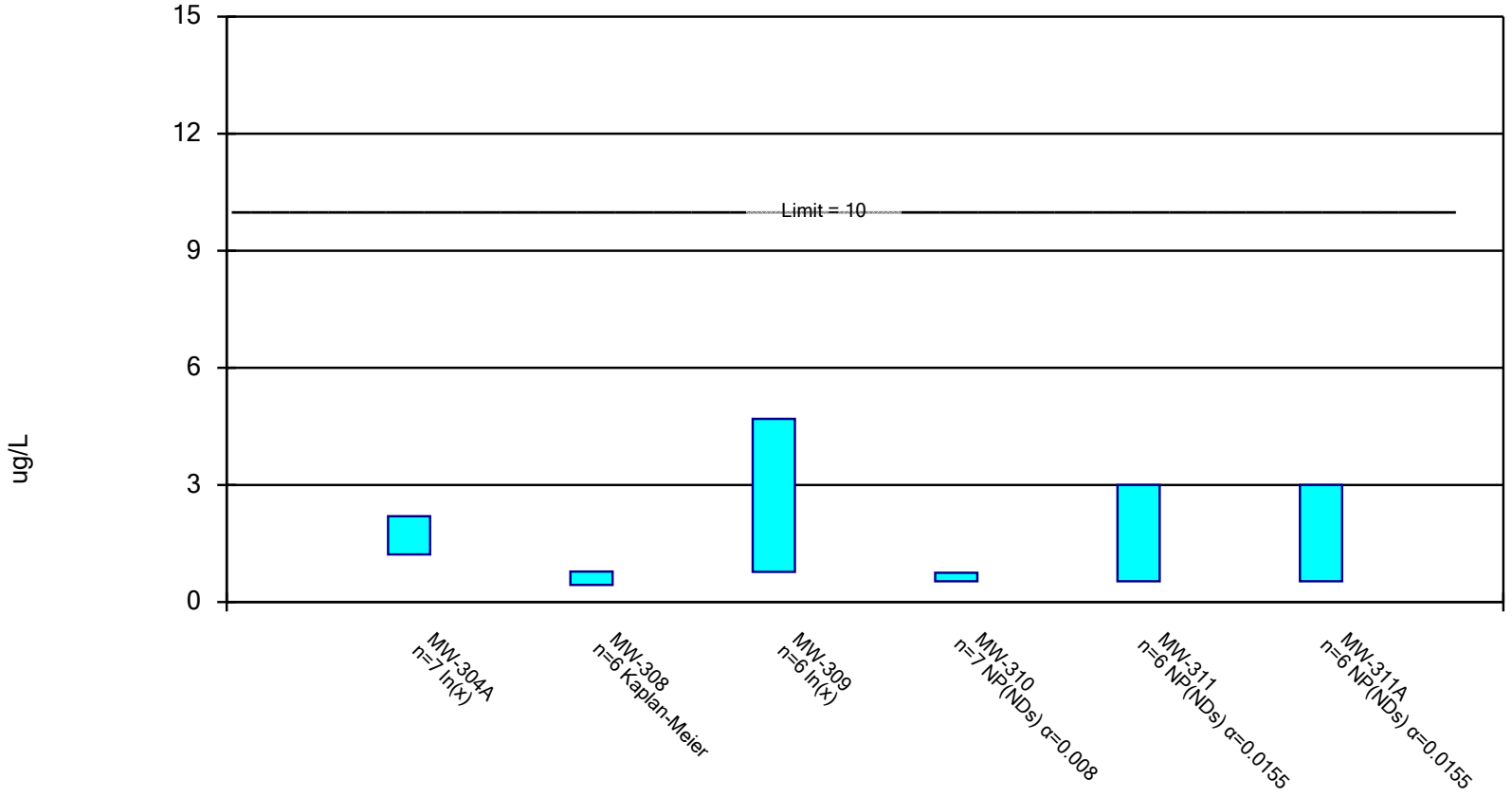
Confidence Interval

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020 Printed 2/16/2024, 5:11 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (ug/L)	MW-304A	2.2	1.219	10	No	7	0	None	ln(x)	0.01	Param.
Arsenic (ug/L)	MW-308	0.7785	0.4399	10	No	6	66.67	Kapla...	No	0.01	Param.
Arsenic (ug/L)	MW-309	4.693	0.7704	10	No	6	0	None	ln(x)	0.01	Param.
Arsenic (ug/L)	MW-310	0.75	0.53	10	No	7	100	None	No	0.008	NP (NDs)
Arsenic (ug/L)	MW-311	3	0.53	10	No	6	100	None	No	0.0155	NP (NDs)
Arsenic (ug/L)	MW-311A	3	0.53	10	No	6	100	None	No	0.0155	NP (NDs)
Lithium (ug/L)	MW-304A	3.9	2.5	40	No	7	71.43	None	No	0.008	NP (normality)
Lithium (ug/L)	MW-308	3	2.5	40	No	6	83.33	None	No	0.0155	NP (NDs)
Lithium (ug/L)	MW-309	2.6	2.5	40	No	6	83.33	None	No	0.0155	NP (NDs)
Lithium (ug/L)	MW-310	3.818	2.624	40	No	7	0	None	ln(x)	0.01	Param.
Lithium (ug/L)	MW-311	65.15	18.99	40	No	7	0	None	No	0.01	Param.
Lithium (ug/L)	MW-311A	22.46	8.887	40	No	7	0	None	No	0.01	Param.
Molybdenum (ug/L)	MW-304A	42	3.1	100	No	7	0	None	No	0.008	NP (normality)
Molybdenum (ug/L)	MW-308	1.642	1.084	100	No	6	50	Kapla...	ln(x)	0.01	Param.
Molybdenum (ug/L)	MW-309	1.4	0.91	100	No	6	83.33	Kapla...	No	0.0155	NP (NDs)
Molybdenum (ug/L)	MW-310	1.628	0.6721	100	No	7	71.43	Kapla...	No	0.01	Param.
Molybdenum (ug/L)	MW-311	31	18	100	No	7	0	None	No	0.008	NP (normality)
Molybdenum (ug/L)	MW-311A	227.8	75.95	100	No	7	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 2/16/2024 5:09 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Arsenic (ug/L) Analysis Run 2/16/2024 5:11 PM

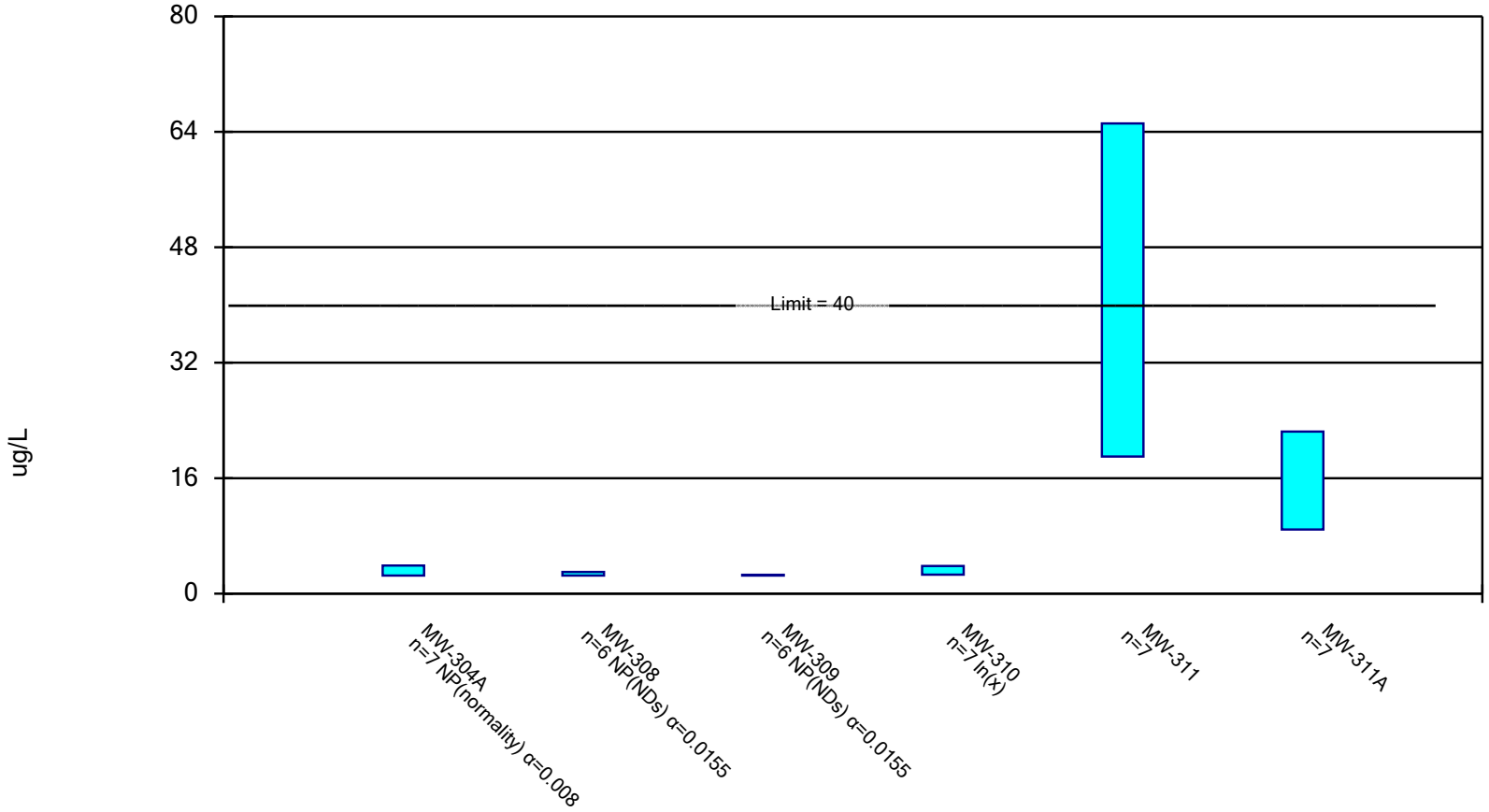
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-304A	MW-308	MW-309	MW-310	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)
5/2/2023	1.4 (J)					
5/3/2023		<0.53 (U)	5.6		<0.53 (U)	<0.53 (U)
5/4/2023				<0.53 (U)		
10/24/2023		0.58 (J)	2.4		<0.53 (U)	<0.53 (U)
10/25/2023	1.3 (J)					
10/26/2023				<0.53 (U)		
Mean	1.686	0.7067	2.307	0.6871	1.052	1.052
Std. Dev.	0.4811	0.1288	1.723	0.1073	0.9606	0.9606
Upper Lim.	2.2	0.7785	4.693	0.75	3	3
Lower Lim.	1.219	0.4399	0.7704	0.53	0.53	0.53

ND substitution: RL or RL/2 if <15% NDs.

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 2/16/2024 5:10 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Lithium (ug/L) Analysis Run 2/16/2024 5:11 PM

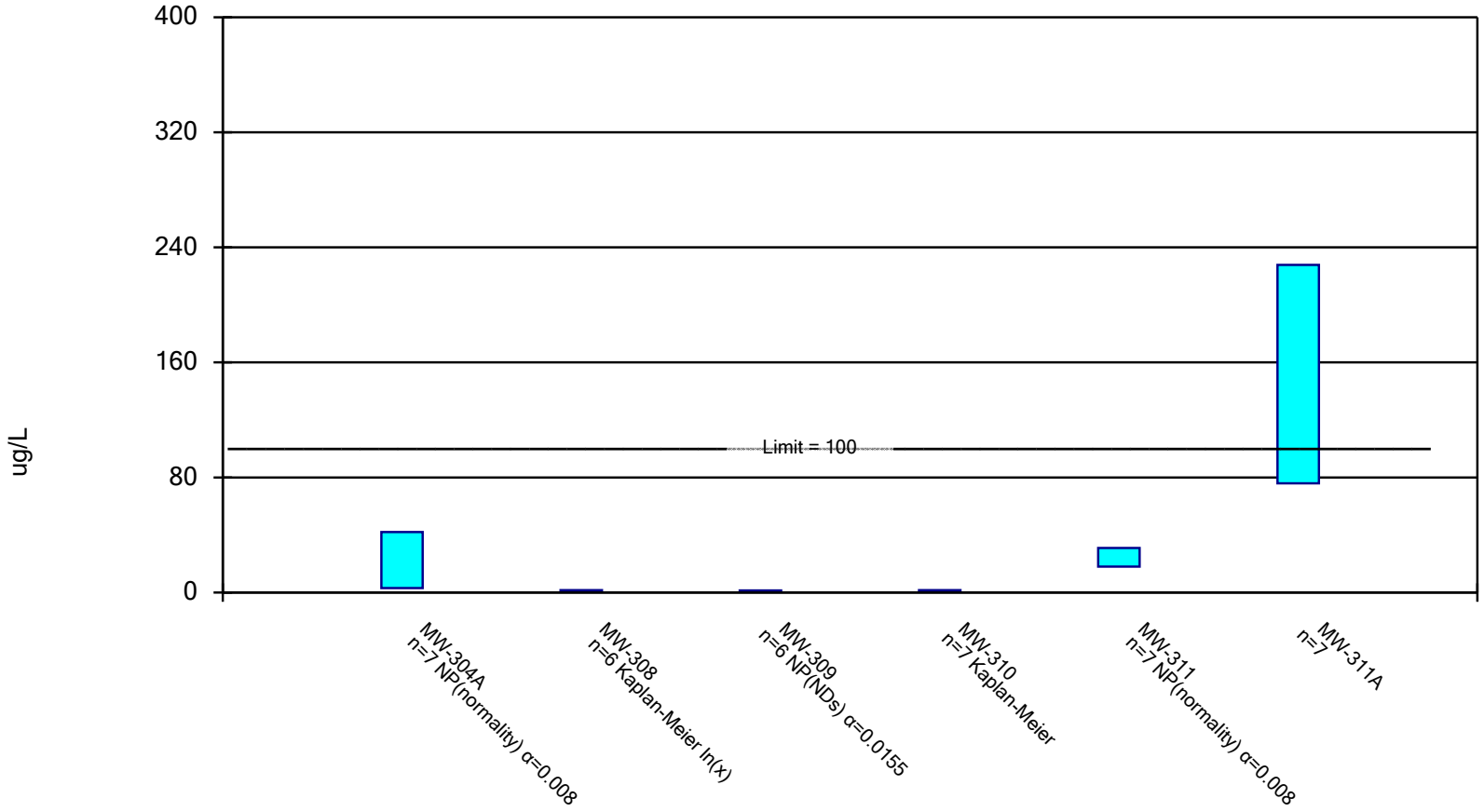
M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-304A	MW-308	MW-309	MW-310	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
5/2/2023	<2.5 (U)					
5/3/2023		<2.5 (U)	2.6 (J)		5.5 (J)	9.2 (J)
5/4/2023				2.9 (J)		
10/24/2023		<2.5 (U)	<2.5 (U)		69	6.5 (J)
10/25/2023	<2.5 (U)					
10/26/2023				3.9 (J)		
Mean	2.7	2.583	2.517	3.2	42.07	15.67
Std. Dev.	0.5292	0.2041	0.04082	0.5292	19.43	5.712
Upper Lim.	3.9	3	2.6	3.818	65.15	22.46
Lower Lim.	2.5	2.5	2.5	2.624	18.99	8.887

ND substitution: RL or RL/2 if <15% NDs.

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 2/16/2024 5:10 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

Confidence Interval

Constituent: Molybdenum (ug/L) Analysis Run 2/16/2024 5:11 PM

M. L. Kapp Generating Station Client: SCS Engineers Data: KAP - Chempoint- export-Dec2020

	MW-304A	MW-308	MW-309	MW-310	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
5/2/2023	3.4					
5/3/2023		1.7 (J)	<0.91 (U)		18	210
5/4/2023				<0.91 (U)		
10/24/2023		1.6 (J)	<0.91 (U)		30	23
10/25/2023	42					
10/26/2023				<0.91 (U)		
Mean	11.21	1.4	1.17	1.289	27	151.9
Std. Dev.	14.46	0.2	0.2111	0.3771	4.546	63.91
Upper Lim.	42	1.642	1.4	1.628	31	227.8
Lower Lim.	3.1	1.084	0.91	0.6721	18	75.95

ND substitution: RL or RL/2 if <15% NDs.